

ORMAT TECHNOLOGIES, INC.  
Form 10-K  
February 29, 2012  
Table of Contents

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**Form 10-K**

þ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT  
OF 1934

For the fiscal year ended December 31, 2011

or

.. TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE  
ACT OF 1934

Commission file number: 001-32347

**ORMAT TECHNOLOGIES, INC.**

*(Exact name of registrant as specified in its charter)*

**DELAWARE**

*(State or other jurisdiction of*

*incorporation or organization)*

**88-0326081**

*(I.R.S. Employer*

*Identification Number)*

**6225 Neil Road, Reno, Nevada 89511-1136**

*(Address of principal executive offices)*

**Registrant's telephone number, including area code:**

**(775) 356-9029**

**Securities Registered Pursuant to Section 12(b) of the Act:**

**Title of Each Class**

**Name of Each Exchange on Which Registered**

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Ormat Technologies, Inc. Common Stock \$0.001 Par Value

New York Stock Exchange

Securities Registered Pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company   
(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

As of June 30, 2011, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was \$401,116,975 based on the closing price as reported on the New York Stock Exchange.

The number of outstanding shares of common stock of the registrant, as of February 24, 2012, was 45,430,886.

Documents Incorporated by Reference: Part III (Items 10, 11, 12, 13 and 14) incorporates by reference portions of the Registrant's Proxy Statement for its Annual Meeting of Stockholders, which will be filed not later than 120 days after December 31, 2011.

**Table of Contents**

**ORMAT TECHNOLOGIES, INC.**

**FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2011**

**TABLE OF CONTENTS**

	<b>Page No</b>
<b>PART I</b>	
ITEM 1. <u>BUSINESS</u>	10
ITEM 1A. <u>RISK FACTORS</u>	75
ITEM 1B. <u>UNRESOLVED STAFF COMMENTS</u>	93
ITEM 2. <u>PROPERTIES</u>	93
ITEM 3. <u>LEGAL PROCEEDINGS</u>	94
ITEM 4. <u>MINE SAFETY DISCLOSURES</u>	96
<b>PART II</b>	
ITEM 5. <u>MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES</u>	97
ITEM 6. <u>SELECTED FINANCIAL DATA</u>	99
ITEM 7. <u>MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</u>	100
ITEM 7A. <u>QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK</u>	133
ITEM 8. <u>FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA</u>	134
ITEM 9. <u>CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE</u>	195
ITEM 9A. <u>CONTROLS AND PROCEDURES</u>	195
ITEM 9B. <u>OTHER INFORMATION</u>	195
<b>PART III</b>	
ITEM 10. <u>DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE</u>	196
ITEM 11. <u>EXECUTIVE COMPENSATION</u>	200
ITEM 12. <u>SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS</u>	200
ITEM 13. <u>CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE</u>	200
ITEM 14. <u>PRINCIPAL ACCOUNTANT FEES AND SERVICES</u>	200
<b>PART IV</b>	
ITEM 15. <u>EXHIBITS, FINANCIAL STATEMENT SCHEDULES</u>	200
<u>SIGNATURES</u>	215

**Table of Contents**

**Glossary of Terms**

When the following terms and abbreviations appear in the text of this report, they have the meanings indicated below:

<b>Term</b>	<b>Definition</b>
Amatitlan Loan	Initial \$42,000,000 in aggregate principal amount borrowed by our subsidiary Ortiltan from TCW Global Project Fund II, Ltd.
AMM	Administrador del Mercado Mayorista (administrator of the wholesale market Guatemala)
ARRA	American Recovery and Reinvestment Act of 2009
Auxiliary Power	The power needed to operate a geothermal power plant's auxiliary equipment such as pumps and cooling towers
Availability	The ratio of the time a power plant is ready to be in service, or is in service, to the total time interval under consideration, expressed as a percentage, independent of fuel supply (heat or geothermal) or transmission accessibility
Balance of Plant equipment	Power plant equipment other than the generating units including items such as transformers, valves, interconnection equipment, cooling towers for water cooled power plants, etc.
BLM	Bureau of Land Management of the U.S. Department of the Interior
BOT	Build, operate and transfer
Capacity	The maximum load that a power plant can carry under existing conditions, less auxiliary power
Capacity Factor	The ratio of the average load on a generating resource to its generating capacity during a specified period of time, expressed as a percentage
CARB	California Air Resources Board
CDC	Commonwealth Development Corporation
CGC	Crump Geothermal Company LLC
CNE	National Energy Commission of Nicaragua
CNEE	National Electric Energy Commission of Guatemala
COD	Commercial Operation Date
Company	Ormat Technologies, Inc., a Delaware corporation, and its consolidated subsidiaries
COSO	Committee of Sponsoring Organizations of the Treadway Commission
CPI	Consumer Price Index
CPUC	California Public Utilities Commission
DEG	Deutsche Investitions-und Entwicklungsgesellschaft mbH
DFIs	Development Finance Institutions
DISNORTE	Empresa Distribudora de Electricidad del Norte (a Nicaragua distribution company)

**Table of Contents**

<b>Term</b>	<b>Definition</b>
DISSUR	Empresa Distribudora de Electricidad del Sur (a Nicaragua distribution company)
DOE	U.S. Department of Energy
DOGGR	California Division of Oil, Gas, and Geothermal Resources
DSCR	Debt Service Coverage Ratio
EBITDA	Earnings before interest, taxes, depreciation and amortization
EGS	Enhanced Geothermal Systems
EIS	Environmental Impact Statement
ENATREL	Empresa Nicaraguense de Transmision
ENEL	Empresa Nicaraguense de Electricidad
Enthalpy	The total energy control of a fluid; the heat plus the mechanical energy content of a fluid (such as a geothermal brine), which, for example, can be partially converted to mechanical energy in an Organic Rankine Cycle.
EPA	U.S. Environmental Protection Agency
EPC	Engineering, procurement and construction
EPS	Earnings per share
ERC	Kenyan Energy Regulatory Commission
ESC	Energy Sales Contract
Exchange Act	U.S. Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
FERC	U.S. Federal Energy Regulatory Commission
Flip Date	Date on which the holders of Class B membership units in OPC achieve a target after-tax yield on their investment in OPC.
FPA	U.S. Federal Power Act, as amended
GAAP	Generally accepted accounting principles
GDC	Geothermal Development Company
GDL	Geothermal Development Limited
Geothermal Power Plant	The power generation facility and the geothermal field
Geothermal Steam Act	U.S. Geothermal Steam Act of 1970, as amended
GHG	Greenhouse gas
GNP	Gross National Product
HELCO	Hawaii Electric Light Company
IFC	International Finance Corporation
IID	Imperial Irrigation District
ILA	Israel Land Administration

**Table of Contents**

<b>Term</b>	<b>Definition</b>
INDE	Instituto Nacional de Electrification
INE	Nicaragua Institute of Energy
IPPs	Independent Power Producers
ISO	International Organization for Standardization
ITC	Investment tax credit
ITC Cash Grant	Payment for Specified Renewable Energy property in lieu of Tax Credits under Section 1603 of the ARRA
John Hancock	John Hancock Life Insurance Company (U.S.A.)
KenGen	Kenya Electricity Generating Company Ltd.
Kenyan Energy Act	Kenyan Energy Act, 2006
KETRACO	Kenya Electricity Transmission Company Limited
KLP	Kapoho Land Partnership
kVa	Kilovolt-ampere
KPLC	Kenya Power and Lighting Co. Ltd.
kW	Kilowatt A unit of electrical power that is equal to 1,000 watts
kWh	Kilowatt hour(s), a measure of power produced
LNG	Liquefied natural gas
Mammoth Pacific	Mammoth-Pacific, L.P.
MACRS	Modified Accelerated Cost Recovery System
MW	Megawatt One MW is equal to 1,000 kW or one million watts
MWh	Megawatt hour(s), a measure of power produced
NBPL	Northern Border Pipe Line Company
NIS	New Israeli Shekel
NGP	Nevada Geothermal Power Inc.
NV Energy	NV Energy, Inc.
NYSE	New York Stock Exchange
OEC	Ormat Energy Converter
OFC	Ormat Funding Corp., a wholly owned subsidiary of the Company
OFC Senior Secured Notes	8.25% Senior Secured Notes Due 2020 issued by OFC
OFC 2	OFC 2 LLC, a wholly owned subsidiary of the Company
OFC 2 Senior Secured Notes	Senior Secured Notes Due 2034 issued by OFC 2
Olkaria Loan	Initial \$105,000,000 in aggregate principal amount borrowed by OrPower 4 from a group of European DFIs
OMPC	Ormat Momotombo Power Company, a wholly owned subsidiary of the Company
OPIC	Overseas Private Investment Corporation

**Table of Contents**

<b>Term</b>	<b>Definition</b>
OPC	OPC LLC, a consolidated subsidiary of the Company
OPC Transaction	Financing transaction involving four of our Nevada power plants in which institutional equity investors purchased an interest in our special purpose subsidiary that owns such plants.
OrCal	OrCal Geothermal Inc., a wholly owned subsidiary of the Company
OrCal Senior Secured Notes	6.21% Senior Secured Notes Due 2020 issued by OrCal
Organic Rankine Cycle	A process in which an organic fluid such as a hydrocarbon or fluorocarbon (but not water) is boiled in an evaporator to generate high pressure vapor. The vapor powers a turbine to generate mechanical power. After the expansion in the turbine, the low pressure vapor is cooled and condensed back to liquid in a condenser. A cycle pump is then used to pump the liquid back to the vaporizer to complete the cycle. The cycle is illustrated in the figure below:
Ormat International	Ormat International Inc., a wholly owned subsidiary of the Company
Ormat Nevada	Ormat Nevada Inc., a wholly owned subsidiary of the Company
Ormat Systems	Ormat Systems Ltd., a wholly owned subsidiary of the Company
OrPower 4	OrPower 4 Inc., a wholly owned subsidiary of the Company
Ortitlan	Ortitlan Limitada, a wholly owned subsidiary of the Company
Orzunil	Orzunil I de Electricidad, Limitada, a wholly owned subsidiary of the Company
Parent	Ormat Industries Ltd.
PGV	Puna Geothermal Venture, a wholly owned subsidiary of the Company
PLN	PT Perusahaan Listrik Negara
Power plant equipment	Interconnection equipment, cooling towers for water cooled power plant, etc.
PPA	Power purchase agreement
ppm	Part per million

**Table of Contents**

<b>Term</b>	<b>Definition</b>
PTC	Production tax credit
PUA	Israeli Public Utility Authority
PUCH	Public Utilities Commission of Hawaii
PUCN	Public Utilities Commission of Nevada
PUHCA	U.S. Public Utility Holding Company Act of 1935
PUHCA 2005	U.S. Public Utility Holding Company Act of 2005
PURPA	U.S. Public Utility Regulatory Policies Act of 1978
Qualifying Facility(ies)	Certain small power production facilities are eligible to be Qualifying Facilities under PURPA, provided that they meet certain power and thermal energy production requirements and efficiency standards. Qualifying Facility status provides an exemption from PUHCA 2005 and grants certain other benefits to the Qualifying Facility.
REC	Renewable Energy Credit
REG	Recovered Energy Generation
RGGI	Regional Greenhouse Gas Initiative
RPM	Revolutions Per Minute
RPS	Renewable Portfolio Standards
SCPPA	Southern California Public Power Authority
SEC	U.S. Securities and Exchange Commission
Senior Unsecured Bonds	7% Senior Unsecured Bonds Due 2017 issued by the Company
Securities Act	U.S. Securities Act of 1933, as amended
SOX Act	Sarbanes-Oxley Act of 2002
Solar PV	Solar photovoltaic
Southern California Edison	Southern California Edison Company
SPE(s)	Special purpose entity(ies)
SRAC	Short Run Avoided Costs
Sunday Energy	Sunday Energy Ltd.
TGL	Tikitere Geothermal Power Limited
Union Bank	Union Bank, N.A.
U.S.	United States of America
U.S. Treasury	U.S. Department of the Treasury
W&M	Watts & More Ltd.
WHOH	Waste Heat Oil Heaters

## Table of Contents

### **Cautionary Note Regarding Forward-Looking Statements**

This annual report includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, included in this report that address activities, events or developments that we expect or anticipate will or may occur in the future, including such matters as our projections of annual revenues, expenses and debt service coverage with respect to our debt securities, future capital expenditures, business strategy, competitive strengths, goals, development or operation of generation assets, market and industry developments and the growth of our business and operations, are forward-looking statements. When used in this annual report, the words may, will, could, should, expects, plans, anticipates, believes, estimates, predicts, projects, potential, or the negative of these terms or other comparable terminology are intended to identify forward-looking statements, although not all forward-looking statements contain such words or expressions. The forward-looking statements in this report are primarily located in the material set forth under the headings Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations contained in Part II, Item 1A Risk Factors contained in Part I, and Notes to Financial Statements contained in Part II, Item 8 Financial Statements and Supplementary Data contained in Part II of this annual report, but are found in other locations as well. These forward-looking statements generally relate to our plans, objectives and expectations for future operations and are based upon management's current estimates and projections of future results or trends. Although we believe that our plans and objectives reflected in or suggested by these forward-looking statements are reasonable, we may not achieve these plans or objectives. You should read this annual report completely and with the understanding that actual future results and developments may be materially different from what we expect due to a number of risks and uncertainties, many of which are beyond our control. We will not update forward-looking statements even though our situation may change in the future.

Specific factors that might cause actual results to differ from our expectations include, but are not limited to:

significant considerations, risks and uncertainties discussed in this annual report;

operating risks, including equipment failures and the amounts and timing of revenues and expenses;

geothermal resource risk (such as the heat content of the reservoir, useful life and geological formation);

financial market conditions and the results of financing efforts;

the impact of fluctuations in natural gas prices on the energy price component under certain of our PPAs;

environmental constraints on operations and environmental liabilities arising out of past or present operations, including the risk that we may not have, and in the future may be unable to procure, any necessary permits or other environmental authorizations;

construction or other project delays or cancellations;

political, legal, regulatory, governmental, administrative and economic conditions and developments in the United States and other countries in which we operate;

the enforceability of the long-term PPAs for our power plants;

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

contract counterparty risk;

weather and other natural phenomena;

the impact of recent and future federal, state and local regulatory proceedings and changes, including legislative and regulatory initiatives regarding deregulation and restructuring of the electric utility industry incentives for the production of renewable energy at the federal and state level in the United States and elsewhere, and carbon-related legislation;

changes in environmental and other laws and regulations to which our company is subject, as well as changes in the application of existing laws and regulations;

current and future litigation;

**Table of Contents**

our ability to successfully identify, integrate and complete acquisitions;

competition from other similar geothermal energy projects, including any such new geothermal energy projects developed in the future, and from alternative electricity producing technologies;

the effect of and changes in economic conditions in the areas in which we operate;

market or business conditions and fluctuations in demand for energy or capacity in the markets in which we operate;

the direct or indirect impact on our company's business resulting from the threat or occurrence of terrorist incidents or cyber-attacks or responses to such threatened or actual incidents or attacks, including the effect on the availability of and premiums on insurance;

the effect of and changes in current and future land use and zoning regulations, residential, commercial and industrial development and urbanization in the areas in which we operate;

other uncertainties which are difficult to predict or beyond our control and the risk that we may incorrectly analyze these risks and forces or that the strategies we develop to address them may be unsuccessful; and

development and construction of the Solar PV projects may not materialize as planned.

**Table of Contents**

**PART I**

**ITEM 1. BUSINESS**

**Certain Definitions**

Unless the context otherwise requires, all references in this annual report to Ormat , the Company , we , us , our company , Ormat Technologies, Inc. and its consolidated subsidiaries. A glossary of certain terms and abbreviations used in this annual report appears at the beginning of this report.

**Overview**

We are a leading vertically integrated company primarily engaged in the geothermal and recovered energy power business. We design, develop, build, own, and operate clean, environmentally friendly geothermal and recovered energy-based power plants, usually using equipment that we design and manufacture. Our geothermal power plants include both power plants that we have built and power plants that we have acquired, while all of our recovered energy-based plants have been constructed by us. We conduct our business activities in two business segments, which we refer to as our Electricity Segment and Product Segment. In our Electricity Segment, we develop, build, own and operate geothermal and recovered energy-based power plants in the United States and geothermal power plants in other countries around the world and sell the electricity they generate. We have expanded our activities in the Electricity Segment to include the ownership and operation of power plants that produce electricity generated by Solar PV systems that we do not manufacture. In our Product Segment, we design, manufacture and sell equipment for geothermal and recovered energy-based electricity generation, remote power units and other power generating units and provide services relating to the engineering, procurement, construction, operation and maintenance of geothermal and recovered energy-based power plants.

The map below shows our current worldwide portfolio of operating geothermal power plants and recovered energy plants, as well as the geothermal and recovered energy-based power plants and a Solar PV power plant that are under construction, and countries with projects under development and exploration.

**Table of Contents**

The charts below show the relative contributions of the Electricity Segment and the Product Segment to our consolidated revenues and the geographical breakdown of our segment revenues for our fiscal year ended December 31, 2011. Additional information concerning our segment operations, including year-to-year comparisons of revenues, the geographical breakdown of revenues, cost of revenues, results of operations, and trends and uncertainties is provided below in Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations and Item 8 Financial Statements and Supplementary Data .

The following chart sets forth a breakdown of revenues for the year ended December 31, 2011:

The following chart sets forth the geographical breakdown of the revenues attributable to our Electricity Segment for the year ended December 31, 2011:

## **Table of Contents**

All of our revenues attributable to our Product Segment for the year ended December 31, 2011 were from foreign operations.

Most of the power plants that we currently own or operate produce electricity from geothermal energy sources. Geothermal energy is a clean, renewable and generally sustainable form of energy derived from the natural heat of the earth. Unlike electricity produced by burning fossil fuels, electricity produced from geothermal energy sources is produced without emissions of certain pollutants such as nitrogen oxide, and with far lower emissions of other pollutants such as carbon dioxide. Therefore, electricity produced from geothermal energy sources contributes significantly less to local and regional incidences of acid rain and global warming than energy produced by burning fossil fuels. Geothermal energy is also an attractive alternative to other sources of energy as part of a national diversification strategy to avoid dependence on any one energy source or politically sensitive supply sources.

In addition to our geothermal energy business, we manufacture products that produce electricity from recovered energy or so-called waste heat. We also construct, own, and operate recovered energy-based power plants. Recovered energy represents residual heat that is generated as a by-product of gas turbine-driven compressor stations, solar thermal units and a variety of industrial processes, such as cement manufacturing. Such residual heat, which would otherwise be wasted, may be captured in the recovery process and used by recovered energy power plants to generate electricity without burning additional fuel and without additional emissions.

We have expanded our activity to the Solar PV industry. We are constructing a new utility-scale Solar PV project near our Heber complex in California and we are developing other Solar PV projects in Israel.

## **Company Contact and Sources of Information**

We file annual, quarterly and periodic reports, proxy statements and other information with the SEC. You may obtain and copy any document we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington D.C. 20549. You may obtain information on the operation of the SEC's Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet website at <http://www.sec.gov> that contains reports, proxy and other information statements, and other information regarding issuers that file electronically with the SEC. Our SEC filings are accessible via the internet at that website.

Our reports on Form 10-K, 10-Q and 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act are available through our website at [www.ormat.com](http://www.ormat.com) for downloading, free of charge, as soon as reasonably practicable after these reports are filed with the SEC. Our Code of Business Conduct and Ethics, Code of Ethics Applicable to Senior Executives, Audit Committee Charter, Corporate Governance Guidelines, Nominating and Corporate Governance Committee Charter, Compensation Committee Charter, and Insider Trading Policy, as amended, are also available at our website address mentioned above. If we make any amendments to our Code of Business Conduct and Ethics or Code of Ethics Applicable to Senior Executives or grant any waiver, including any implicit waiver, from a provision of either code applicable to our Chief Executive Officer, Chief Financial Officer or principal accounting officer requiring disclosure under applicable SEC rules, we intend to disclose the nature of such amendment or waiver on our website. The content of our website, however, is not part of this annual report.

You may request a copy of our SEC filings, as well as the foregoing corporate documents, at no cost to you, by writing to the Company address appearing in this annual report or by calling us at (775) 356-9029.

**Table of Contents****Our Power Generation Business (Electricity Segment)****Power Plants in Operation**

The table below summarizes certain key non-financial information relating to our power plants as of February 24, 2012. The generating capacity of certain of our power plants listed below has been updated to reflect changes in the resource temperature and other factors that impact resource capabilities:

<b>Power Plant</b>	<b>Location</b>	<b>Ownership<sup>(1)</sup></b>	<b>Generating Capacity in MW<sup>(2)</sup></b>
<b>Domestic</b>			
<b><u>Geothermal</u></b>			
Brady Complex	Nevada	100%	25.0
Heber Complex	California	100%	92.0
Jersey Valley <sup>(3)</sup>	Nevada	100%	12.0
Mammoth Complex	California	100%	29.0
North Brawley <sup>(4)</sup>	California	100%	33.0
Ormesa Complex	California	100%	54.0
Puna Complex	Hawaii	100%	38.0
Steamboat Complex	Nevada	100%	86.0
Tuscarora <sup>(5)</sup>	Nevada	100%	18.0
<b><u>REG</u></b>			
OREG 1	North and South Dakota	100%	22.0
OREG 2	Montana, North Dakota and Minnesota	100%	22.0
OREG 3	Minnesota	100%	5.5
OREG 4	Colorado	100%	3.5
<b>Total for domestic power plants</b>			<b>440.0</b>
<b>Foreign</b>			
<b><u>Geothermal</u></b>			
Amatitlan	Guatemala	100%	18.0
Momotombo	Nicaragua	100%	22.0
Olkaria III Complex	Kenya	100%	52.0
Zunil	Guatemala	100%	24.0
<b>Total for foreign power plants</b>			<b>116.0</b>
<b>Total for all power plants</b>			<b>556.0</b>

(1) We own and operate all of our power plants other than the Momotombo power plant in Nicaragua, which we do not own but which we control and operate through a concession arrangement with the Nicaraguan government. Two financial institutions hold equity interests in one of our consolidated subsidiaries (OPC) that owns the Desert Peak 2 power plant in our Brady complex and the Steamboat Hills, Galena 2 and Galena 3 power plants in our Steamboat complex. In the above table, we show these power plants as being 100% owned because all of the generating capacity is owned by OPC and we control the operation of the power plants. The nature of the equity interests held by the financial institution is described in Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations under the heading OPC Transaction.

(2) References to generating capacity generally refer to the gross capacity less auxiliary power, in the case of all of our existing domestic and foreign power plants, except for the Zunil power plant. We determine the generating capacity figures in these power plants by taking into

account resource capabilities. In the case of

## **Table of Contents**

the Zunil power plant, the energy output of the power plant was sold, until September 2011, under a take or pay arrangement, under which the revenues are calculated based on 24 MW capacity unrelated to the actual performance of the reservoir. This column represents our net ownership in such generating capacity.

In any given year, the actual power generation of a particular power plant may differ from that power plant's generating capacity due to variations in ambient temperature, the availability of the resource, and operational issues affecting performance during that year. The Capacity Factor of the geothermal power plants in commercial operation in 2011, excluding the North Brawley power plant, which operates at partial load, was approximately 88%. The Capacity Factor of the REG power plants in 2011 was approximately 85%.

- (3) The Jersey Valley power plant is not operating at full capacity. Detailed information on the Jersey Valley power plant is provided under Description of our Power Plants below.
- (4) The North Brawley power plant is not operating at full capacity. Detailed information on the North Brawley power plant is provided under Description of our Power Plants below.
- (5) The Tuscarora power plant commenced commercial operation on January 11, 2012. Substantially all of the revenues that we currently derive from the sale of electricity are pursuant to long-term PPAs. Approximately 53.2% of our total revenues in the year ended December 31, 2011 from the sale of electricity by our domestic power plants were derived from power purchasers that currently have investment grade credit ratings. The purchasers of electricity from our foreign power plants are either state-owned or private entities.

## **New Power Plants**

We are currently in various stages of development of new power plants, construction of new power plants and expansion of existing power plants. Our growth plan includes our share of approximately 175 MW in generating capacity from geothermal power plants in the United States and Kenya that are expected to come on-line in the next two years. In addition, we expect to add, in three phases, a total of approximately 42 MW, which is our share in the Sarulla project in Indonesia.

In addition, we are constructing a 10 MW Solar PV project in the U.S. and are developing approximately 18 ground-mounted and roof-top Solar PV projects in Israel. Our share of the expected generation capacity of these projects is 130 MW. However, due to the competition in the Solar PV market in Israel, combined with a relatively low cap on the feed-in-tariff, we expect that only a portion of the Solar PV projects in our Israeli development pipeline will be ultimately constructed.

We have a substantial land position that is expected to support future geothermal development on, which we have started or plan to start exploration activity. This land position is approximately 675,000 acres in 42 sites. This is comprised of various leases and concessions, exploration concessions for geothermal resources and an option to enter into geothermal leases. We have started or plan to start exploration activity at a number of these sites.

## **Our Product Business (Product Segment)**

We design, manufacture and sell products for electricity generation and provide the related services described below. Generally, we manufacture products only against customer orders and do not manufacture products for our own inventory.

*Power Units for Geothermal Power Plants.* We design, manufacture and sell power units for geothermal electricity generation, which we refer to as OECs. Our customers include contractors and geothermal power plant owners and operators.

## **Table of Contents**

*Power Units for Recovered Energy-Based Power Generation.* We design, manufacture and sell power units used to generate electricity from recovered energy, or so-called waste heat. This heat is generated as a residual by-product of gas turbine-driven compressor stations, solar thermal units and a variety of industrial processes, such as cement manufacturing, and is not otherwise used for any purpose. Our existing and target customers include interstate natural gas pipeline owners and operators, gas processing plant owners and operators, cement plant owners and operators, and other companies engaged in other energy-intensive industrial processes.

*EPC of Power Plants.* We engineer, procure, and construct, as an EPC contractor, geothermal and recovered energy power plants on a turnkey basis, using power units we design and manufacture. Our customers are geothermal power plant owners as well as the same customers described above that we target for the sale of our power units for recovered energy-based power generation. Unlike many other companies that provide EPC services, we have an advantage in that we are using our own manufactured equipment and thus have better control over the timing and delivery of required equipment and its related costs.

*Remote Power Units and Other Generators.* We design, manufacture and sell fossil fuel powered turbo-generators with a capacity ranging between 200 watts and 5,000 watts, which operate unattended in extreme climate conditions, whether hot or cold. Our customers include contractors installing gas pipelines in remote areas. In addition, we design, manufacture, and sell generators for various other uses, including heavy duty direct-current generators.

## **History**

We were formed as a Delaware corporation in 1994 by Ormat Industries Ltd. (also referred to in this annual report as the Parent, Ormat Industries, the parent company, or our parent). Ormat Industries was one of the first companies to focus on the development of equipment for the production of clean, renewable and generally sustainable forms of energy. Ormat Industries owns approximately 60% of our outstanding common stock.

## **Industry Background**

### ***Geothermal Energy***

Most of our power plants in operation produce electricity from geothermal energy. There are several different sources or methods to obtain geothermal energy, which are described below.

*Hydrothermal geothermal-electricity generation* Hydrothermal geothermal energy is derived from naturally occurring hydrothermal reservoirs that are formed when water comes sufficiently close to hot rock to heat the water to temperatures of 300 degrees Fahrenheit or more. The heated water then ascends toward the surface of the earth where, if geological conditions are suitable for its commercial extraction, it can be extracted by drilling geothermal wells. The energy necessary to operate a geothermal power plant is typically obtained from several such wells which are drilled using established technology that is in some respects similar to that employed in the oil and gas industry. Geothermal production wells are normally located within approximately one to two miles of the power plant as geothermal fluids cannot be transported economically over longer distances due to heat and pressure loss. The geothermal reservoir is a renewable source of energy if natural ground water sources and reinjection of extracted geothermal fluids are adequate over the long-term to replenish the geothermal reservoir following the withdrawal of geothermal fluids and if the well field is properly operated. Geothermal energy power plants typically have higher capital costs (primarily as a result of the costs attributable to well field development) but tend to have significantly lower variable operating costs (principally consisting of maintenance expenditures) than fossil fuel-fired power plants that require ongoing fuel expenses. In addition, because geothermal energy power plants produce 24hr/day weather independent power, the variable operating costs are lower.

*EGS* An EGS has been broadly defined as a subsurface system that may be artificially created to extract heat from hot rock where the characteristics required for a hydrothermal system, i.e., permeability and aquifers,

## **Table of Contents**

are non-existent. A geothermal power plant that uses EGS techniques recovers the thermal energy from the subsurface rocks by creating or accessing a system of open fractures in the rock through which water can be injected, heated through contact with the hot rock, returned to the surface in production wells and transferred to a power unit.

*Co-produced Geothermal from Oil and Gas fields, geo-pressurized resources* Another source of geothermal energy is hot water produced from oil and gas production. This application is referred to as Co-produced Fluids. In some oil and gas fields, water is produced as a by-product of the oil and gas extraction. When the wells are deep the fluids are often at high temperatures and if the water volume is significant, the hot water can be used for power generation in equipment similar to a geothermal power plant.

### ***Geothermal Power Plant Technologies***

Geothermal power plants generally employ either binary systems or conventional flash design systems, as described below. In our geothermal power plants, we also employ our proprietary technology of combined geothermal cycle systems.

#### ***Binary System***

In a geothermal power plant using a binary system, geothermal fluid, either hot water (also called brine) or steam or both, is extracted from the underground reservoir and flows from the wellhead through a gathering system of insulated steel pipelines to a heat exchanger, which heats a secondary working fluid which has a low boiling point. This is typically an organic fluid, such as isopentane or isobutene, which is vaporized and is used to drive the turbine. The organic fluid is then condensed in a condenser which may be cooled by air or by water from a cooling tower. The condensed fluid is then recycled back to the heat exchanger, closing the cycle within the sealed system. The cooled geothermal fluid is then reinjected back into the reservoir. The binary technology is depicted in the graphic below.

#### ***Flash Design System***

In a geothermal power plant using flash design, geothermal fluid is extracted from the underground reservoir and flows from the wellhead through a gathering system of insulated steel pipelines to flash tanks and/or separators. There, the steam is separated from the brine and is sent to a demister in the plant, where any

## **Table of Contents**

remaining water droplets are removed. This produces a stream of dry saturated steam, which drives a turbine generator to produce electricity. In some cases, the brine at the outlet of the separator is flashed a second time (dual flash), providing additional steam at lower pressure used in the low pressure section of the steam turbine to produce additional electricity. Steam exhausted from the steam turbine is condensed in a surface or direct contact condenser cooled by cold water from a cooling tower. The non-condensable gases (such as carbon dioxide) are removed through the removal system in order to optimize the performance of the steam turbines. The condensate is used to provide make-up water for the cooling tower. The hot brine remaining after separation of steam is injected back into the geothermal resource through a series of injection wells. The flash technology is depicted in the graphic below.

In some instances, the wells directly produce dry steam (the flashing occurring underground). In such cases, the steam is fed directly to the steam turbine and the rest of the system is similar to the flash power plant described above.

## **Ormat's Proprietary Technology**

Our proprietary technology may be used in power plants operating according to the Organic Rankine Cycle, only or in combination with, various other commonly used thermodynamic technologies that convert heat to mechanical power. It can be used with a variety of thermal energy sources, such as geothermal, recovered energy, biomass, solar energy and fossil fuels. Specifically, our technology involves original designs of turbines, pumps, and heat exchangers, as well as formulation of organic motive fluids. All of our motive fluids are non-ozone-depleting substances. Using advanced computerized fluid dynamics and other computer aided design software as well as our test facilities, we continuously seek to improve power plant components, reduce operations and maintenance costs, and increase the range of our equipment and applications. In particular, we are examining ways to increase the output of our plants by utilizing evaporative cooling, cold reinjection, performance simulation programs, and topping turbines. In the geothermal as well as the recovered energy (waste heat) areas, we are examining two-level recovered energy systems and new motive fluids.

**Table of Contents**

We also construct combined cycle geothermal power plants in which the steam first produces power in a backpressure steam turbine and is subsequently condensed in a vaporizer of a binary plant, which produces additional power. Our combined cycle technology is depicted in the graphic below.

In the conversion of geothermal energy into electricity, our technology has a number of advantages compared with conventional geothermal steam turbine plants. A conventional geothermal steam turbine plant consumes significant quantities of water, causing depletion of the aquifer, and also requires cooling water treatment with chemicals and thus a need for the disposal of such chemicals. A conventional geothermal steam turbine plant also creates a significant visual impact in the form of an emitted plume from the cooling tower during cold weather. By contrast, our binary and combined cycle geothermal power plants have a low profile with minimum visual impact and do not emit a plume when they use air cooled condensers. Our binary and combined cycle geothermal power plants reinject all of the geothermal fluids utilized in the respective processes into the geothermal reservoir. Consequently, such processes generally have no emissions.

Other advantages of our technology include simplicity of operation and easy maintenance, low RPM, temperature and pressure in the OEC, a high efficiency turbine, and the fact that there is no contact between the turbine itself and often corrosive geothermal fluids.

We use the same elements of our technology in our recovered energy products. The heat source may be exhaust gases from a simple cycle gas turbine, low pressure steam, or medium temperature liquid found in the process industry. In most cases, we attach an additional heat exchanger in which we circulate thermal oil to transfer the heat into the OEC's own vaporizer in order to provide greater operational flexibility and control. Once this stage of each recovery is completed, the rest of the operation is identical to the OEC used in our geothermal power plants. The same advantages of using the Organic Rankine Cycle apply here as well. In addition, our technology allows for better load following than conventional steam turbines exhibit, requires no water treatment as it is air cooled, and does not require the continuous presence of a steam licensed operator on site.

## **Table of Contents**

Our REG technology is depicted in the graphic below.

### ***Patents***

We have been granted 82 U.S. patents (and about 20 pending patents) that cover our products (mainly power units based on the Organic Rankine Cycle) and systems (mainly geothermal power plants and industrial waste heat recovery plants for electricity production). The system-related patents cover not only a particular component but also the overall effectiveness of the plant's systems from the fuel (e.g., geothermal fluid, waste heat, biomass or solar) to generated electricity. The duration of such patents ranges from one year to seventeen years. No single patent on its own is material to our business.

The products-related patents cover components which include turbines, heat exchangers, seals and controls. The system patents cover subjects such as waste heat recovery related to gas pipelines compressors, disposal of non-condensable gases present in geothermal fluids, power plants for very high pressure geothermal resources, and use of two-phase fluids as well as processes related to EGS. A number of patents cover the combined cycle geothermal power plants, in which the steam first produces power in a backpressure steam turbine and is subsequently condensed in a vaporizer of a binary plant, which produces additional power.

### ***Research and Development***

We are conducting research and development of new EGS technologies and their application to enhance our power plants without using any additional fluid supply. We are undertaking this development effort at our Desert Peak 2 and Brady power plants in Nevada in cooperation with GeothermEx Inc., and a number of universities and national laboratories, with funding support from the DOE.

We are also continuing with our research and development activities intended to improve plant performance, reduce costs, and increase the breadth of product offerings. The primary focus of our research and development efforts includes continued improvements to our evaporative cooling system, condensing equipment with improved performance and lower land usage, developing new turbine products, and specialized power units designed to reduce fuel consumption and associated costs during a project's development phase.

Additionally, we are continuing to evaluate investment opportunities in new companies with product offerings for renewable energy markets, such as our investment in W&M, a company with whom we are engaged for the development of energy harvesting and system balancing solutions for electrical sources and, in particular, Solar PV.

## **Table of Contents**

### **Market Opportunity**

Interest in geothermal energy in the United States remains strong as a result of legislative and regulatory support for renewable energy, and the baseload nature of geothermal energy generation.

Although electricity generation from geothermal resources is currently concentrated mainly in California, Nevada, Hawaii, Idaho and Utah, there are opportunities for development in other states such as Alaska, Arizona, New Mexico, Washington and Oregon due to the availability of geothermal resources and, in some cases, a favorable regulatory environment in such states.

The Western Governors Association estimates that 13,000 MW of identified geothermal resources will be developed by 2025. In a report issued in April 2010 for the World Geothermal Congress, Ruggero Bertani of Enel Green Power forecasted that by 2015 the worldwide installed capacity will increase by approximately 73% from 10,715 MW in 2010 to 18,500 MW in 2015. The report identifies the U.S., Indonesia, the Philippines, New Zealand and Mexico as the main contributors to the forecasted growth.

In a report issued in April 2011, the Geothermal Energy Association identified a total of 146 confirmed and unconfirmed geothermal projects under various phases of consideration or development in 15 U.S. states that have between 4,448 MW and 5,040 MW potential capacity.

The assessments conducted by the Western Governors Association and the Geothermal Energy Association are estimates only. We refer to them only as two possible reference points, but we do not necessarily concur with those estimates.

An additional factor fueling recent growth in the renewable energy industry is global concern about the environment. Power plants that use fossil fuels generate higher levels of air pollution and their emissions have been linked to acid rain and global warming. In response to an increasing demand for green energy, many countries have adopted legislation requiring, and providing incentives for, electric utilities to sell electricity generated from renewable energy sources. In the United States, Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin and the District of Columbia have all adopted RPS, renewable portfolio goals, or similar laws requiring or encouraging electric utilities in such states to generate or buy a certain percentage of their electricity from renewable energy sources or recovered heat sources.

According to the Database of State Incentives for Renewables and Efficiency (DSIRE), twenty nine states (including California, Nevada, and Hawaii, where we have been the most active in our geothermal energy development and in which all of our U.S. geothermal power plants in operation are located) and the District of Columbia define geothermal resources as renewable.

According to DSIRE, seventeen states have enacted RPS and Alternative Portfolio Standards that include some form of combined heat and power and/or waste heat recovery. The seventeen states are: Arizona, Colorado, Connecticut, Hawaii, Indiana, Maine, Michigan, Nevada, New York, North Carolina, North Dakota, Ohio, Pennsylvania, South Dakota, Utah, Washington, and West Virginia.

We believe that these legislative measures and initiatives present a significant market opportunity for us. In California, on April 12, 2011, Governor Jerry Brown signed Senate Bill X1-2 (SBX1-2) to increase California's RPS to 33% by December 31, 2020, among the most aggressive renewable energy goals in the United States. We expect that the additional demand for renewable energy from utilities in states with RPS will outpace a possible reduction in general demand for energy (if any) due to the effect of general economic conditions. We see this increased demand and, in particular, the impact of the increase in California's RPS, as one of the most significant opportunities for us to expand existing projects and build new power plants. In 2010, California's RPS target was to supply at least 20% of the total retail electricity sales from eligible renewable energy resources; California's three large investor-owned utilities collectively served 17% of their 2010 retail electricity sales with renewable

---

**Table of Contents**

power. Due to flexible compliance, California utilities must average 20% through years 2011-2013. The investor-owned utilities have interim targets each year, with a requirement of 25% by 2016. Due to the new 33% target, publicly-owned utilities in California must also procure 33% of retail electricity sales from eligible renewable energy resources by 2020, opening up a significant new market of potential off-takers in years ahead. These utilities do not have interim targets. Nevada's RPS requires NV Energy to supply at least 15% of the total electricity it sells from eligible renewable energy resources by 2013, which will increase to 25% by 2025. In 2010, 14.8% of the electricity retail sales in Nevada were from renewable energy sources. Hawaii's RPS requires each Hawaiian electric utility that sells electricity for consumption in Hawaii to obtain 15% of its net electricity sales from renewable energy sources by December 31, 2015, 20% by December 31, 2020, and 40% by 2030. In 2010, Hawaiian Electric Company and its subsidiaries achieved a consolidated RPS of 20.7%.

In 2006, California passed a state climate change law, AB 32. The goal of AB 32 is to reduce GHG emissions to 1990 levels by the end of 2020. In 2008, CARB approved a Scoping Plan to carry out regulations implementing AB 32. In December 2010, CARB approved cap-and-trade regulations to reduce California's GHG emissions under AB 32. The cap-and-trade regulation, the first phase of which was initiated in January 2012 with compliance obligations commencing in January 2013, will set a statewide limit on emissions from sources responsible for emitting 80% of California's GHGs and, according to CARB, will help establish a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. However, implementation of this cap-and-trade program under AB 32 has been the subject of legal challenges that may hinder and/or ultimately thwart its implementation. At the federal level as of 2011, the EPA's Tailoring Rule sets thresholds for when permitting requirements under the Clean Air Act's Prevention of Significant Deterioration and Title V programs apply to certain major sources of GHG emissions. Regional initiatives are also being developed to reduce GHG emissions and to develop trading systems for renewable energy credits. For example, nine Northeast and Mid-Atlantic States are part of the RGGI, a regional cap-and-trade system to limit carbon dioxide. The RGGI is the first mandatory, market-based carbon dioxide emissions reduction program in the United States. The first-in-the-nation auction of carbon dioxide allowances was held in September 2008. Under RGGI, the participating states plan to reduce carbon emissions from power plants by 10%, at a rate of 2.5% per year between 2015 and 2018.

In addition to RGGI, other states have also established the Midwestern Regional Greenhouse Gas Reduction Accord and the Western Climate Initiative. Although individual and regional programs will take some time to develop, their requirements, particularly the creation of any market-based trading mechanism to achieve compliance with emissions caps, should be advantageous to in-state and in-region (and, in some cases, such as RGGI and the State of California, inter-regional) energy generating sources that have low carbon emissions such as geothermal energy. Although it is currently difficult to quantify the direct economic benefit of these efforts to reduce GHG emissions, we believe they will prove advantageous to us.

The federal government also encourages production of electricity from geothermal resources through certain tax subsidies. We are permitted to claim 30% of certain eligible costs of a new geothermal power plant put into service prior to December 31, 2013 in the United States as a one-time credit against our federal income taxes. Projects put into service after that date continue to qualify, but the credit is reduced to 10% (certain tax benefits are impacted by these tax credits as described in the section below). Alternatively, we are permitted to claim a tax credit based on the power produced from a geothermal power plant. These production-based credits, which in 2011 were 2.2 cents per kWh, are adjusted annually for inflation and may be claimed for ten years on the electricity produced by a new geothermal power plant put into service prior to December 31, 2013. The production-based credits are allowed only to the extent the power is sold to a third party. The owner of the power plant must choose between these two types of tax credits described above. In either case, under current tax rules, any unused tax credit has a one-year carry back and a twenty-year carry forward. Another alternative available is a cash grant for Specified Energy Projects in Lieu of Tax Credits from the U.S. Treasury. It is available for certain power plants placed in service by the end of 2011, or on which construction began in 2009, 2010 or 2011 and that are completed by the end of 2013. Please refer to Item 7 Management's Discussion and Analysis of Financial Condition and Result of Operations regarding the valuation allowance we recorded in the year ended December 31, 2011 against deferred tax assets related to the abovementioned tax credits.

---

**Table of Contents**

Whether we claim tax credits or a cash grant, we are also permitted to depreciate, or write off, most of the cost of the plant. If we claim the one-time 30% (or 10%) tax credit or receive the ITC cash grant, our tax basis in the plant that we can recover through depreciation must be reduced by one-half of the tax credit or cash grant; if we claim other tax credits, there is no reduction in the tax basis for depreciation. For projects that we placed into service after September 8, 2010 and before January 1, 2012, a depreciation bonus will permit us to write off 100% of the cost of certain equipment that is part of the geothermal power plant in the year the plant is placed into service, if certain requirements are met. For projects that are placed into service after December 31, 2011 and before January 1, 2013, a similar bonus will permit us to write off 50% of the cost of that equipment in the year the power plant is placed into service. After applying any depreciation bonus that is available, we can write off the remainder of our tax basis in the plant, if any, over five years on an accelerated basis, meaning that more of the cost may be deducted in the first few years than during the remainder of the depreciation period.

Collectively, these benefits (to the extent fully utilized) have a present value equivalent to approximately 30% to 40% of the capital cost of a new power plant.

Production of electricity from geothermal resources may also be supported under the Temporary Program For Rapid Deployment of Renewable Energy and Electric Power Transmission Projects established with the DOE as part of the DOE's existing Innovative Technology Loan Guarantee Program. The Temporary Program (i) extends the scope of the existing federal loan guarantee program to cover renewable energy projects, renewable energy component manufacturing facilities and electricity transmission projects that embody established commercial, as well as innovative, technologies; and (ii) provides an appropriation to cover the credit subsidy cost of such projects (meaning estimated average costs to the federal government from issuing the loan guarantee, equivalent to a lending bank's loan loss reserve). Although the Temporary Program was subject to a September 30, 2011 sunset, Congress has enacted further authorizations and appropriations to provide for a limited amount of subsidized support beyond that date for projects that would have qualified for the Temporary Program. A project supported by the federal guarantee under the new program must pay prevailing federal wages.

Operations outside of the United States may be subject to and/or benefit from requirements under the Kyoto Protocol. In December 2011, the United Nations Climate Change Conference was held in Durban, South Africa. The conference encompassed the 17th Conference of the Parties to the United Nations Framework Convention on Climate Change and the seventh meeting of the Parties to the Kyoto Protocol. Negotiators agreed to start work on a new climate deal that would have legal force and, crucially, require both developed and developing countries to cut their carbon emissions. The terms now need to be agreed by 2015 and will come into effect from 2020. The next Conference of the Parties is scheduled to take place in Qatar in November 2012. Before the Qatar conference in November 2012, the Rio +20 United Nations Conference will take place in Rio de Janeiro in June 2012. The first Rio summit 20 years ago is seen as one of the most ambitious gatherings in the history of the United Nations. More than 100 heads of state signed up to a raft of actions, including efforts to halt the deterioration of the ozone layer, tackle climate change and reduce the loss of biodiversity. These issues have taken center stage in international negotiations over the past two decades.

Outside of the United States, the majority of power generating capacity has historically been owned and controlled by governments. Since the early 1990s, however, many foreign governments have privatized their power generation industries through sales to third parties and have encouraged new capacity development and/or refurbishment of existing assets by independent power developers. These foreign governments have taken a variety of approaches to encourage the development of competitive power markets, including awarding long-term contracts for energy and capacity to independent power generators and creating competitive wholesale markets for selling and trading energy, capacity, and related products. Some countries have also adopted active governmental programs designed to encourage clean renewable energy power generation. Several Latin American countries have rural electrification programs and renewable energy programs. For example, Guatemala, where our Zunil and Amatitlan power plants are located, approved in November 2003 a law which created incentives for power generation from renewable energy sources by, among other things, providing economic and fiscal incentives such as exemptions from taxes on the importation of relevant equipment and various tax exemptions for companies

## Table of Contents

implementing renewable energy projects. Another example is New Zealand, where we (and our Parent before us) have been actively designing and supplying geothermal power solutions since 1986. The New Zealand government's policies to fight climate change include a target for GHG emissions reductions of between 10% and 20% below 1990 levels by 2020 and the target of increasing renewable electricity generation to 90% of New Zealand's total electricity generation by 2025. In Indonesia, the government has implemented policies and regulations intended to accelerate the development of renewable energy and geothermal projects in particular. These include designating approximately 4,000 MW of geothermal projects in its second phase of power acceleration projects to be implemented by 2014, of which the majority is IPP projects and the remaining state utility PLN projects. For the IPP sector, certain regulations for geothermal projects have been implemented providing for incentives such as investment tax credits and accelerated depreciation, and pricing guidelines intended to allow preferential power prices for generators; other regulation are being discussed. In addition, there is a regulation providing feed-in tariffs for small scale renewable energy projects up to 10 MW. On a macro level, the Government of Indonesia committed at the United Nations Climate Change Conference 2009 in Copenhagen to reduce its CO<sub>2</sub> emissions by 20% by 2020, which is intended to be achieved mainly through prevention of deforestation and accelerated renewable energy development. Another example is Chile, where we were recently awarded six exploration concessions. The Chilean Renewable Energy Act of 2008 requires that 5% of electricity sold come from renewable sources beginning in 2010, increasing gradually to 10% by 2024.

We believe that these developments and governmental plans will create opportunities for us to acquire and develop geothermal power generation facilities internationally, as well as create additional opportunities for our Product Segment.

In addition to our geothermal power generation activities, we are pursuing recovered energy-based power generation opportunities in North America and the rest of the world. We believe recovered energy-based power generation may benefit from the increased attention to energy efficiency. For example, in the United States, the FERC has expressed its position that one of the goals of new natural gas pipeline design should be to facilitate the efficient, low-cost transportation of fuel through the use of waste heat (recovered energy) from combustion turbines or reciprocating engines that drive station compressors to generate electricity for use at compressor stations or for commercial sale. FERC has, as a matter of policy, requested natural gas pipeline operators filing for a certificate of approval for new pipeline construction or expansion projects to examine opportunities to enhance efficiencies for any energy consumption processes in the development and operation of the new pipeline. We have initially targeted the North American market, where we have built over 20 power plants which generate electricity from waste heat from gas turbine-driven compressor stations along interstate natural gas pipelines, from midstream gas processing facilities, and from processing industries in general.

Several states, and to a certain extent, the federal government, have recognized the environmental benefits of recovered energy-based power generation. For example, Colorado, Connecticut, Indiana, Louisiana, Michigan, Nevada, North Dakota, Ohio, Oklahoma, Pennsylvania, South Dakota, Utah, and West Virginia allow electric utilities to include recovered energy-based power generation in calculating their compliance with their mandatory or voluntary RPS. In addition, California recently modified the Self Generation Incentive Program (SGIP) which allows recovered energy-based generation to qualify for a per watt incentive. North Dakota, South Dakota, and the U.S. Department of Agriculture (through the Rural Utilities Service) have approved recovered energy-based power generation units as renewable energy resources, which qualifies recovered energy-based power generators (whether in those two states or elsewhere in the United States) for federally funded, low interest loans, but currently do not qualify for an ITC, PTC, or ITC cash grant. Recovery of waste heat is also considered environmentally friendly in the western Canadian provinces. We believe that Europe and other markets worldwide may offer similar opportunities in recovered energy-based power generation.

The market for solar power grew significantly in recent years, driven by a combination of favorable government policies and a decline in equipment prices. We are monitoring market drivers in various regions with a view to developing Solar PV power plants in those locations where we can offer competitively priced power generation, particularly where we can develop a Solar PV plant next to one of our existing power plants, and thereby leverage existing infrastructure and otherwise take advantage of operating efficiencies.

## **Table of Contents**

### **Competitive Strengths**

*Competitive Assets.* Our assets are competitive for the following reasons:

*Contracted Generation.* All of the electricity generated by our geothermal power plants is currently sold pursuant to long-term PPAs.

*Baseload Generation.* All of our geothermal power plants supply all or a part of the baseload capacity of the electric system in their respective markets. This means they supply electric power on an around-the-clock basis. We have a competitive advantage over other renewable energy sources, such as wind power, solar power or hydro-electric power (to the extent dependent on precipitation), which compete with us to meet electric utilities' renewable portfolio requirements but which cannot serve baseload capacity because of their weather dependence and thus intermittent nature of these other renewable energy sources.

*Competitive Pricing.* Geothermal power plants, while site specific, are economically feasible to develop, construct, own, and operate in many locations, and the electricity they generate is generally price competitive compared to electricity generated from fossil fuels or other renewable sources under existing economic conditions and existing tax and regulatory regimes.

*Ability to Finance Our Activities from Internally Generated Cash Flow.* The cash flow generated by our portfolio of operating geothermal and REG power plants provides us with a robust and predictable base for our exploration, development, and construction activities, to a certain level. We believe that this gives us a competitive advantage over certain competitors whose activities are more dependent on external credit and financing sources that may be subject to availability constraints depending on prevailing global credit and market conditions.

*Growing Legislative Demand for Environmentally-Friendly Renewable Resource Assets.* Most of our currently operating power plants produce electricity from geothermal energy sources. The clean and sustainable characteristics of geothermal energy give us a competitive advantage over fossil fuel-based electricity generation as countries increasingly seek to balance environmental concerns with demands for reliable sources of electricity.

*High Efficiency from Vertical Integration.*

Unlike our competitors in the geothermal industry, we are a fully-integrated geothermal equipment, services, and power provider. We design, develop, and manufacture equipment that we use in our geothermal and REG power plants. Our intimate knowledge of the equipment that we use in our operations allows us to operate and maintain our power plants efficiently and to respond to operational issues in a timely and cost-efficient manner. Moreover, given the efficient communications among our subsidiary that designs and manufactures the products we use in our operations and our subsidiaries that own and operate our power plants, we are able to quickly and cost effectively identify and repair mechanical issues and to have technical assistance and replacement parts available to us as and when needed.

We design, manufacture, and sell to third parties power units and other power generating equipment for geothermal and recovered energy-based electricity generation. Our extensive experience in the development of state-of-the-art, environmentally sound power solutions enables our customers to relatively easily finance their power plants.

*Exploration and Drilling Capabilities.* We have in-house capabilities to explore and develop geothermal resources. We have established a drilling subsidiary that currently owns nine drilling rigs. We employ an experienced resource group that includes engineers, geologists, and drillers. This resource group executes our exploration and drilling plans for projects that we develop.

*Highly Experienced Management Team.* We have a highly qualified senior management team with extensive experience in the geothermal power sector. Key members of our senior management team have worked in the power industry for most of their careers and average over 25 years of industry experience.



## **Table of Contents**

*Technological Innovation.* We have been granted 82 U.S. patents (additionally approximately 20 patents are pending) relating to various processes and renewable resource technologies. All of our patents are internally developed. Our ability to draw upon internal resources from various disciplines related to the geothermal power sector, such as geological expertise relating to reservoir management, and equipment engineering relating to power units, allows us to be innovative in creating new technologies and technological solutions.

*Limited Exposure to Fuel Price Risk.* A geothermal power plant does not need to purchase fuel (such as coal, natural gas, or fuel oil) in order to generate electricity. Thus, once the geothermal reservoir has been identified and estimated to be sufficient for use in a geothermal power plant and the drilling of wells is complete, the plant is not exposed to fuel price or fuel delivery risk apart from the impact fuel prices may have on the price at which we sell power under PPAs that are based on the relevant power purchaser's avoided costs.

Although we are confident in our competitive position in light of the strengths described above, we face various challenges in the course of our business operations, including as a result of the risks described in Item 1A "Risk Factors" below, the trends and uncertainties discussed under Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" below, and the competition we face in our different business segments described under "Competition" below.

## **Business Strategy**

Our strategy is to continue building a geographically balanced portfolio of geothermal and recovered energy assets, and to continue to be a leading manufacturer and provider of products and services related to renewable energy. We intend to implement this strategy through:

*Development and Construction of New Geothermal Power Plants* continuously seeking out commercially exploitable geothermal resources, developing and constructing new geothermal power plants and entering into long-term PPAs providing stable cash flows in jurisdictions where the regulatory, tax and business environments encourage or provide incentives for such development and which meet our investment criteria;

*Development and Construction of Recovered Energy Power Plants* establishing a first-to-market leadership position in recovered energy power plants in North America and building on that experience to expand into other markets worldwide;

*Acquisition of New Assets* acquiring from third parties additional geothermal and other renewable assets that meet our investment criteria;

*Manufacturing and Providing Products and Service Related to Renewable Energy* designing, manufacturing and contracting power plants for our own use and selling to third parties power units and other generation equipment for geothermal and recovered energy-based electricity generation;

*Increasing Output from Our Existing Power Plants* increasing output from our existing geothermal power plants by adding additional generating capacity, upgrading plant technology, and improving geothermal reservoir operations, including improving methods of heat source supply and delivery; and

*Technological Expertise* investing in research and development of renewable energy technologies and leveraging our technological expertise to continuously improve power plant components, reduce operations and maintenance costs, develop competitive and environmentally friendly products for electricity generation and target new service opportunities.

In addition, we are considering various opportunities in the solar energy market and recently commenced construction of the Heber Solar project in Imperial Valley, California. There are several reasons for entering the solar energy market including:

the recent decline in the cost of Solar PV technologies;

the attractive electricity prices that may be achieved in certain regions;

## **Table of Contents**

our ability to leverage EPC and development expertise in geothermal and recovered energy power generation facilities; and

cost efficiencies we can derive from sharing infrastructure and related facilities, as well as operations and maintenance, with our existing power plants.

Among other things, we have considered, and expect to continue to consider, a number of different opportunities including:

acquisitions and joint ventures;

expanding our internal research and development activity, or acquiring other companies engaged in solar research and development activities; and

constructing and operating solar electric power generation facilities.

## **Recent Developments**

On February 16, 2012, Geothermal Development Company (GDC) that is owned by the Government of Kenya, has awarded our subsidiary the first well head power plant project in the Menengai geothermal field in Kenya on a Build-Own-Transfer basis. The award is the result of an international tender for the design, manufacturing, procurement, construction and commissioning of the 6 MW geothermal well head power plant. GDC will supply the steam for conversion to electricity by Ormat's power plant. The Menengai geothermal field is located on the outskirts of the town of Nakuru, about 180 kilometers west of Nairobi.

On January 30, 2012, the PUCN approved the 20-year PPA that we signed in February 2011 with NV Energy to sell 30 MW from the Dixie Meadows geothermal project that we are developing in Churchill County, Nevada.

In December 2011, the PUCH approved the 20-year PPA we signed in February 2011 with HELCO to sell to the Hawaii Island grid an additional 8 MW of dispatchable geothermal power. The power is generated from the Puna complex and is sold at a fixed price (subject to escalation) independent of oil prices. Further information on the terms of the PPA is described in [Operation of our Electricity Segment](#) under [Puna Complex](#).

In December 2011, we signed a termination agreement with respect to the PPA and joint operating agreement with NV Energy for the Carson Lake geothermal project in Churchill County, Nevada. Further information is provided under [Operation of our Electricity Segment](#) under [Carson Lake Project](#).

In December 2011, we signed a 20-year PPA with IID for 10 MW of Solar PV energy from a project located near the Heber geothermal complex in Imperial Valley, California. This will be our first utility-scale Solar PV project. Construction started in 2011 and commercial operation is expected within 18 months, subject to timely completion of the interconnection, for which IID is responsible.

On December 20, 2011, our subsidiary, Ormat Nevada signed a \$21.4 million EPC contract and a credit agreement with Thermo No. 1 BE-01, LLC (Thermo I), a subsidiary of Cyrq Energy, Inc. (Cyrq), in connection with the construction of an OEC at Thermo I's existing geothermal power plant in Utah to increase the plant's output and reduce operating costs. Under the credit agreement, we will provide financing in an aggregate principal amount not to exceed \$22.7 million that will be used to finance the project construction costs under

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

the EPC contract with Thermo I. The project is expected to have a relatively short completion schedule and could come online by the middle of 2013.

On November 22, 2011, our subsidiary, Ormat Nevada, signed a \$65.0 million EPC contract and a credit agreement with Lightning Dock Geothermal HI-01, LLC (LDG), a subsidiary of Cyrq, in connection with the construction of LDG's geothermal project in New Mexico. The EPC contract work is scheduled to be released in stages based on LDG's progress in the well field drilling and development necessary to support the project. Early engineering will be released as soon as the basic well field characteristics are

---

**Table of Contents**

confirmed in order to maintain the project schedule. Further work will be released based on the progress of the well field development. Under the credit agreement we will provide financing in an aggregate principal amount not to exceed \$66.0 million that will be used to finance the project construction costs under the EPC contract with LDG. The project is expected to come online by the end of 2013.

In October 2011, the Chilean Committee on Geothermal Energy Analysis recommended that the Chilean Ministry of Energy award us five exploration concessions in Chile. Under the applicable regulatory framework governing the concessions, in order to maintain the development rights granted under these concessions, we will need to make certain investments in an exploration program over the next two years. Following compliance with these exploration commitments, we may receive an exploitation license, which is the first step toward power plant construction.

In September 2011, our wholly owned indirect subsidiary, OFC 2, and its project subsidiaries (the Issuers), finalized and signed loan documentation for a 20-year loan for up to \$350.0 million aggregate principal amount of OFC 2 Senior Secured Notes due December 31, 2034 under a financing agreement with John Hancock. The transaction will be guaranteed by the DOE's Loan Programs Office in accordance with and subject to the DOE's Loan Guarantee Program under Section 1705 of Title XVII of the Energy Policy Act of 2005. The financing will support power generation from three Nevada-based facilities built in two phases that are expected to generate up to 113 MW of power. The three facilities, Jersey Valley, McGinness Hills, and Tuscarora, will provide baseload power through 20-year PPAs with Nevada Power Company, a subsidiary of NV Energy. The capacity of the first phase is expected to be up to approximately 60 MW. The second phase of development is subject to a feasibility assessment of the geothermal resource, which will be performed following completion of the first phase of each facility and fulfillment of other conditions in the loan documents. On October 31, 2011, OFC 2 and the Issuers completed the sale of \$151.7 million aggregate principal amount of Series A of OFC 2 Senior Secured Notes due 2032. The net proceeds from the sale of the Series A of OFC 2 Senior Secured Notes, after deducting transaction fees and expenses, were approximately \$141.1 million, and will be used to finance a portion of the construction costs of Phase I of the McGinness Hills and Tuscarora facilities.

In September 2011, our wholly owned subsidiary, Ormat International, signed a commitment letter with OPIC to provide project financing of up to \$310.0 million to refinance and expand our 48 MW Olkaria III geothermal complex located in Naivasha, Kenya. Under the agreed term sheet attached to the commitment letter, the loan will be comprised of a refinancing tranche of up to \$85.0 million to prepay the existing loan and fund transaction costs, a construction loan tranche of up to \$165.0 million to finance the construction of an additional 36 MW expansion currently underway, and a \$60.0 million stand-by facility to finance an additional optional 16 MW capacity expansion, that, if exercised by us, could bring the total capacity of the complex to approximately 100 MW. The maturity dates of the construction tranche and the refinancing tranche are expected to be June 2030 and December 2030, respectively. The maturity date and certain other terms of the stand-by facility will be finalized following our decision, if any, to exercise the option to construct the additional 16 MW expansion.

We have completed the modification of the 20 MW Burdette (Galena 1) power plant into an evaporative cooling configuration. Evaporative cooling provides increased power generation from air-cooled facilities, compared to regular air-cooled facilities by as much as 30% during the peak heat hours of the day. The implementation of this system in moderate to dry climates, especially in the high desert, generates more energy per year than water-cooled systems, and with a fraction of the water and chemical consumption of traditional water-cooled systems.

In June 2011, we signed a lease agreement for approximately 300 acres with Kibbutz Revivim in Israel. We plan to use the land to build a Solar PV power plant.

In June 2011, we entered into a BOT agreement with TGL to explore, develop, supply, construct, own and operate a geothermal power plant in the Tikitere geothermal area near Rotorua, New Zealand. Under the BOT agreement, the parties will jointly develop a geothermal power plant with an estimated capacity of approximately 45 MW. We will own and operate the project for an initial period of 14 years following

---

## **Table of Contents**

commercial operation and then the ownership interests in the project will be transferred to TGL. The project will utilize Ormat's generating units. The BOT agreement is conditional upon receiving regulatory approval and resolution of internal arrangements, such as royalties, between the trusts owning the land. Construction of the power plant will commence following the obtaining of local permits, as well as satisfactory feasibility results following exploration and development activities to be carried out by us.

In June 2011, two of our subsidiaries signed a supply contract and an EPC contract with Mighty River Power Limited of New Zealand, for the first stage of the Ngatamariki geothermal project valued at a total of approximately \$130.0 million. The new power plant is to be constructed on the Ngatamariki Geothermal Field in New Zealand. Construction of the power plant is expected to be completed within 24 months from the contract date. Mighty River Power Limited, a state-owned enterprise, is a New Zealand electricity generation and electricity retailing company.

In May 2011, we entered into a supply contract with Norske Skog Tasman Limited of New Zealand to supply a new geothermal power plant that is to be constructed in the Kawerau Geothermal Field in New Zealand. The contract is valued at a total of approximately \$20.0 million and delivery of the power plant is expected to be completed within 13 months from the contract date.

In April 2011, we amended and restated the PPA with KPLC, the off-taker of the Olkaria III complex located in Naivasha, Kenya. The amended and restated PPA governs our construction of, and KPLC's purchase of electricity from, a new 36 MW power plant at the Olkaria III complex. The new power plant is scheduled to come online in 2013. The PPA amendment includes an option to increase the combined 84 MW capacity from the new and existing plants to a maximum of 100 MW, subject to monitoring and assessment of the geothermal reservoir capacity.

In March 2011, we entered into an agreement with the Weyerhaeuser Company granting us an option to enter into geothermal leases covering approximately 264,000 acres of land in Oregon and Washington. Under this agreement we have the exclusive right to explore the land for geothermal resources and may enter into one or more geothermal leases within the optioned land.

On March 31, 2011, Southern California Edison Company (Southern California Edison) set the demonstrated capacity of the North Brawley power plant at 33 MW. Southern California Edison also agreed to modify the North Brawley PPA to allow us the option of performing an additional capacity demonstration within one year from the first capacity demonstration on March 31, 2011, which may enable us to increase the demonstrated capacity of the plant.

### **Operations of our Electricity Segment**

*How We Own Our Power Plants.* We customarily establish a separate subsidiary to own interests in each power plant. Our purpose in establishing a separate subsidiary for each plant is to ensure that the plant, and the revenues generated by it, will be the only source for repaying indebtedness, if any, incurred to finance the construction or the acquisition (or to refinance the acquisition) of the relevant plant. If we do not own all of the interest in a power plant, we enter into a shareholders agreement or a partnership agreement that governs the management of the specific subsidiary and our relationship with our partner in connection with the specific power plant. Our ability to transfer or sell our interest in certain power plants may be restricted by certain purchase options or rights of first refusal in favor of our power plant partners or the power plant's power purchasers and/or certain change of control and assignment restrictions in the underlying power plant and financing documents. All of our domestic geothermal and REG power plants, with the exception of the Puna complex, which is an Exempt Wholesale Generator, are Qualifying Facilities under the PURPA, and are eligible for regulatory exemptions from most provisions of the FPA and certain state laws and regulations.

*How We Explore and Evaluate Geothermal Resources.* Since 2006, we have expanded our exploration activities, particularly in Nevada. These activities generally involve:

Identifying and evaluating potential geothermal resources using information available to us from public and private resources as described under "Initial Evaluation" below.



## **Table of Contents**

Acquisition of land rights to any geothermal resources our initial evaluation indicates could potentially support a commercially viable power plant, taking into account various factors described under **Land Acquisition** below.

Conducting geophysical and geochemical surveys on some or all of the sites acquired, as described under **Surveys** below.

Obtaining permits to conduct exploratory drilling, as described under **Environmental Permits** below.

Drilling one or more exploratory wells on some or all of the sites to confirm and/or define the geothermal resource where indicated by our surveys, creating access roads to drilling locations and related activities, as described under **Exploratory Drilling** below.

Drilling a full-size well (as described below) if our exploratory drilling indicates the geothermal resource can support a commercially viable power plant taking into account various factors described under **Exploratory Drilling** below. Drilling a full-size well is the point at which we usually consider a site moves from exploration to construction.

It normally takes us one to two years from the time we start active exploration of a particular geothermal resource to the time we have an operating production well, assuming we conclude the resource is commercially viable.

*Initial Evaluation.* As part of our initial evaluation, we generally follow the following process, although our process can vary from site to site depending on the particular circumstances involved:

We evaluate historic, geologic and geothermal information available from public and private databases.

For some sites, we may obtain and evaluate additional information from other industry participants, such as where oil or gas wells may have been drilled on or near a site.

We generally create a digital, spatial geographic information systems database containing all pertinent information, including thermal water temperature gradients derived from historic drilling, geologic mapping information (e.g., formations, structure and topography), and any available archival information about the geophysical properties of the potential resource.

We assess other relevant information, such as infrastructure (e.g., roads and electric transmission lines), natural features (e.g., springs and lakes), and man-made features (e.g., old mines and wells).

Our initial evaluation is usually conducted by our own staff, although we might engage outside service providers for some tasks from time to time. The costs associated with an initial evaluation vary from site to site, based on various factors, including the acreage involved and the costs, if any, of obtaining information from private databases or other sources. On average, our expenses for an initial evaluation of a site range from approximately \$20,000 to \$100,000.

If we conclude, based on the information considered in the initial evaluation, that the geothermal resource can support a commercially viable power plant, taking into account various factors described below, we proceed to land rights acquisition.

*Land Acquisition.* For domestic power plants, we either lease or own the sites on which our power plants are located. In our foreign power plants, our lease rights for the plant site are generally contained in the terms of a concession agreement or other contract with the host government or an agency thereof. In certain cases, we also enter into one or more geothermal resource leases (or subleases) or a concession or other agreement granting us the exclusive right to extract geothermal resources from specified areas of land, with the owners (or sublessors) of such land. This documentation will usually give us the right to explore, develop, operate, and maintain the geothermal field, including, among other things, the right to drill wells (and if there are existing wells in the area, to alter them) and build pipelines for transmitting geothermal fluid. In certain cases, the holder of rights in the geothermal resource is a governmental entity and in other cases a private entity. Usually the duration

of the lease

---

## Table of Contents

(or sublease) and concession agreement corresponds to the duration of the relevant PPA, if any. In certain other cases, we own the land where the geothermal resource is located, in which case there are no restrictions on its utilization. Leasehold interests in federal land in the United States are regulated by the BLM and the Minerals Management Service. These agencies have rules governing the geothermal leasing process as discussed under the heading *Description of Our Leases and Lands*.

For most of our current exploration sites in Nevada, we acquire rights to use geothermal resource through land leases with the BLM, with various states, or through private leases. Under these leases, we typically pay an up-front non-refundable bonus payment, which is a component of the competitive lease process. In addition, we undertake to pay nominal, fixed annual rent payments for the period from the commencement of the lease through the completion of construction. Upon the commencement of power generation, we begin to pay to the lessors long-term royalty payments based on the use of the geothermal resources as defined in the respective agreements. These payments are contingent on the power plant's revenues. There is a summary of our typical lease terms under the heading *Description of our Leases and Lands*.

The up-front bonus and royalty payments vary from site to site and are based, among other things, on current market conditions.

*Surveys.* Following the acquisition of land rights for a potential geothermal resource, we conduct surface water analyses and soil surveys to determine proximity to possible heat flow anomalies and up-flow/permeable zones and augment our digital database with the results of those analyses. We then initiate a suite of geophysical surveys (e.g., gravity, magnetics, resistivity, magnetotellurics, and spectral surveys) to assess surface and sub-surface structure (e.g., faults and fractures) and develop a roadmap of fluid-flow conduits and overall permeability. All pertinent geophysical data are then used to create three-dimensional geothermal reservoir models that are used to identify drill locations.

We make a further determination of the commercial viability of the geothermal resource based on the results of this process, particularly the results of the geochemical and geophysical surveys. If the results from the geochemical and geophysical surveys are poor (i.e., low derived resource temperatures or poor permeability), we will re-evaluate the commercial viability of the geothermal resource and may not proceed to exploratory drilling.

*Exploratory Drilling.* If we proceed to exploratory drilling, we generally will use outside contractors to create access roads to drilling sites. After obtaining drilling permits, we generally drill temperature gradient holes and/or slim holes using either our own drilling equipment or outside contractors. However, exploration of some geothermal resources can require drilling a full-size well, particularly where the resource is deep underground. If the slim hole is "dry", it may be capped and the area reclaimed if we conclude that the geothermal resource will not support a commercially viable power project. If the slim hole supports a conclusion that the geothermal resource will support a commercially viable power plant, it may either be:

Converted to a full-size commercial well, used either for extraction or reinjection of geothermal fluids (Production Well).

Used as an observation well to monitor and define the geothermal resource.

The costs we incur for exploratory drilling vary from site to site based on various factors, including market demand for drilling contractors and equipment (which may be affected by on-shore oil and gas exploration activities, etc.), the accessibility of the drill site, the geology of the site, and the depth of the resource, among other things. However, on average, exploration drilling costs are approximately \$5 million for each site.

At various points during our exploration activities, we re-assess whether the geothermal resource involved will support a commercially viable power plant. In each case, this re-assessment is based on information available at that time. Among other things, we consider the following factors:

New information obtained concerning the geothermal resource as our exploration activities proceed, and particularly the expected MW capacity power plant the resource can be expected to support.

## **Table of Contents**

Current and expected market conditions and rates for contracted and merchant electric power in the market(s) to be serviced.

Anticipated costs associated with further exploration activities.

Anticipated costs for design and construction of a power plant at the site.

Anticipated costs for operation of a power plant at the site, particularly taking into account the ability to share certain types of costs (such as control rooms) with one or more other power plants that are, or are expected to be, operating near the site.

If we conclude that the geothermal resource involved will support a commercially viable power plant, we proceed to constructing a power plant at the site.

*How We Construct Our Power Plants.* The principal phases involved in constructing one of our geothermal power plants are as follows:

Drilling Production Wells.

Designing the well field, power plant, equipment, controls, and transmission facilities.

Obtaining any required permits.

Manufacturing (or in the case of equipment we do not manufacture ourselves, purchasing) the equipment required for the power plant.

Assembling and constructing the well field, power plant, transmission facilities, and related facilities.

It generally takes approximately two years from the time we drill a Production Well, until the power plant becomes operational.

*Drilling Production Wells.* As noted above, we consider drilling the first Production Well as the beginning of our construction phase for a power plant. The number of Production Wells varies from plant to plant depending, among other things, on the geothermal resource, the projected capacity of the power plant, the power generation equipment to be used and the way geothermal fluids will be re-injected to maintain the geothermal resource and surface conditions. The Production Wells are normally drilled by our own drilling equipment. In some cases we use outside contractors, generally firms that service the on-shore oil and gas industry.

The cost for each Production Well varies depending, among other things, on the depth and size of the well and market conditions affecting the supply and demand for drilling equipment, labor and operators. On average, however, our costs for each Production Well range from \$3 million to \$5 million.

*Design.* We use our own employees to design the well field and the power plant, including equipment that we manufacture. The designs vary based on various factors, including local laws, required permits, the geothermal resource, the expected capacity of the power plant and the way geothermal fluids will be re-injected to maintain the geothermal resource and surface conditions.

*Permits.* We use our own employees and outside consultants to obtain any required permits and licenses for our power plants that are not already covered by the terms of our site leases. The permits and licenses required vary from site to site, and are described below under the heading Environmental Permits.

*Manufacturing.* Generally, we manufacture most of the power generating unit equipment we use at our power plants. Multiple sources of supply are available for all other equipment we do not manufacture.

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

*Construction.* We use our own employees to manage the construction work. For site grading, civil, mechanical, and electrical work we use subcontractors.

---

**Table of Contents**

During the year ended December 31, 2011, one site (Olkaria III Phase III) moved to construction, and during each of the years ended December 31, 2010 and 2009, two sites moved to construction. In 2010 the sites were CD4 at the Mammoth complex and Wild Rose (formerly DH Wells), and in 2009, the sites were Carson Lake and McGinness Hills. During the years ended December 31, 2010 and 2009, we discontinued exploration activities at one site each year. Those sites were Gabbs Valley and Rock Hills, in Nevada. After conducting exploratory drilling in those sites, we concluded that the geothermal resource at those sites would not support commercially viable power plants at this time. The costs associated with exploration activities at those sites were expensed during the years ended December 31, 2010 and 2009, respectively, (see *Write-off of Unsuccessful Exploration Activities* under Item 7 *Management Discussion and Analysis of Financial Condition and Results of Operations* ). Thirteen new sites were added to our exploration and development activities in the year ended December 31, 2011, compared with seven sites in the year ended December 31, 2010 and with six sites in the year ended December 31, 2009.

*How We Operate and Maintain Our Power Plants.* In the U.S. we usually employ our subsidiary, Ormat Nevada, to act as operator of our power plants pursuant to the terms of an operation and maintenance agreement. Operation and maintenance of our foreign projects are generally provided by our subsidiary that owns the relevant project. Our operations and maintenance practices are designed to minimize operating costs without compromising safety or environmental standards while maximizing plant flexibility and maintaining high reliability. Our operations and maintenance practices for geothermal power plants seek to preserve the sustainable characteristics of the geothermal resources we use to produce electricity and maintain steady-state operations within the constraints of those resources reflected in our relevant geologic and hydrologic studies. Our approach to plant management emphasizes the operational autonomy of our individual plant or complex managers and staff to identify and resolve operations and maintenance issues at their respective power plants; however, each power plant or complex draws upon our available collective resources and experience, and that of our subsidiaries. We have organized our operations such that inventories, maintenance, backup, and other operational functions are pooled within each power plant complex and provided by one operation and maintenance provider. This approach enables us to realize cost savings and enhances our ability to meet our power plant availability goals.

Safety is a key area of concern to us. We believe that the most efficient and profitable performance of our power plants can only be accomplished within a safe working environment for our employees. Our compensation and incentive program includes safety as a factor in evaluating our employees, and we have a well-developed reporting system to track safety and environmental incidents, if any, at our power plants.

*How We Sell Electricity.* In the United States, the purchasers of power from our power plants are typically investor-owned electric utility companies. Outside of the United States, the purchaser is either a state-owned utility or a privately-owned entity and we typically operate our facilities pursuant to rights granted to us by a governmental agency pursuant to a concession agreement. In each case, we enter into long-term contracts (typically called PPAs) for the sale of electricity or the conversion of geothermal resources into electricity. A power plant's revenues under a PPA used to consist of two payments—energy payments and capacity payments; however our recent PPAs provide for energy payments only. Energy payments are normally based on a power plant's electrical output actually delivered to the purchaser measured in kilowatt hours, with payment rates either fixed or indexed to the power purchaser's avoided power costs (i.e., the costs the power purchaser would have incurred itself had it produced the power it is purchasing from third parties, such as us) or rates that escalate at a predetermined percentage each year. Capacity payments are normally calculated based on the generating capacity or the declared capacity of a power plant available for delivery to the purchaser, regardless of the amount of electrical output actually produced or delivered. In addition, most of our domestic power plants located in California are eligible for capacity bonus payments under the respective PPAs upon reaching certain levels of generation.

*How We Finance Our Power Plants.* Historically we have funded our power plants with a combination of non-recourse or limited recourse debt, lease financing, parent company loans, and internally generated cash,

## **Table of Contents**

which includes funds from operation, as well as proceeds from loans under corporate credit facilities, sale of securities, and other sources of liquidity. Such leveraged financing permits the development of power plants with a limited amount of equity contributions, but also increases the risk that a reduction in revenues could adversely affect a particular power plant's ability to meet its debt obligations. Leveraged financing also means that distributions of dividends or other distributions by plant subsidiaries to us are contingent on compliance with financial and other covenants contained in the financing documents.

Non-recourse debt or lease financing refers to debt or lease arrangements involving debt repayments or lease payments that are made solely from the power plant's revenues (rather than our revenues or revenues of any other power plant) and generally are secured by the power plant's physical assets, major contracts and agreements, cash accounts and, in many cases, our ownership interest in our affiliate that owns that power plant. These forms of financing are referred to as project financing. Project financing transactions generally are structured so that all revenues of a power plant are deposited directly with a bank or other financial institution acting as escrow or security deposit agent. These funds are then payable in a specified order of priority set forth in the financing documents to ensure that, to the extent available, they are used to first pay operating expenses, senior debt service (including lease payments) and taxes, and to fund reserve accounts. Thereafter, subject to satisfying debt service coverage ratios and certain other conditions, available funds may be disbursed for management fees or dividends or, where there are subordinated lenders, to the payment of subordinated debt service.

In the event of a foreclosure after a default, our affiliate that owns the power plant would only retain an interest in the assets, if any, remaining after all debts and obligations have been paid in full. In addition, incurrence of debt by a power plant may reduce the liquidity of our equity interest in that power plant because the interest is typically subject both to a pledge in favor of the power plant's lenders securing the power plant's debt and to transfer and change of control restrictions set forth in the relevant financing agreements.

Limited recourse debt refers to project financing as described above with the addition of our agreement to undertake limited financial support for our affiliate that owns the power plant in the form of certain limited obligations and contingent liabilities. These obligations and contingent liabilities may take the form of guarantees of certain specified obligations, indemnities, capital infusions and agreements to pay certain debt service deficiencies. To the extent we become liable under such guarantees and other agreements in respect of a particular power plant, distributions received by us from other power plants and other sources of cash available to us may be required to be used to satisfy these obligations. To the extent of these limited recourse obligations, creditors of a project financing of a particular power plant may have direct recourse to us.

We have also used a financing structure to monetize PTCs and other favorable tax benefits derived from the financed power plants and an operating lease arrangement for one of our power plants.

*How We Mitigate International Political Risk.* We generally purchase insurance policies to cover our exposure to certain political risks involved in operating in developing countries, as described below under the heading *Insurance*. To date, our political risk insurance contracts are with the Multilateral Investment Guaranty Agency (MIGA), a member of the World Bank Group, and Zurich Re, a private insurance and re-insurance company. Such insurance policies generally cover, subject to the limitations and restrictions contained therein, 80% to 90% of our revenue loss derived from a specified governmental act such as confiscation, expropriation, riots, the inability to convert local currency into hard currency, and, in certain cases, the breach of agreements. We have obtained such insurance for all of our foreign power plants in operation.

## **Description of Our Leases and Lands**

We have domestic leases on approximately 481,000 acres of federal, state, and private land in California, Nevada, Utah, Alaska, Hawaii, Oregon, and Idaho. The approximate breakdown between federal, state, and private leases is as follows:

72% are leases with the U.S. government, acting through the BLM;

---

## **Table of Contents**

15% are leases with various states, none of which is currently material; and

13% are leases with private landowners and/or leaseholders.

Each of the leases within each of the categories has standard terms and requirements, as summarized below. We own approximately 6,700 acres of land in Nevada and California. Internationally, our land position includes approximately 365,000 acres, most of which are geothermal exploration licenses in six prospects in Chile. In addition, we own land, a portion of which is used for our Heber Solar PV project.

### ***Bureau of Land Management Geothermal Leases***

Certain of our domestic project subsidiaries have entered into geothermal resources leases with the U.S. government, pursuant to which they have obtained the right to conduct their geothermal development and operations on federally-owned land. These leases are made pursuant to the Geothermal Steam Act and the lessor under such leases is the U.S. government, acting through the BLM.

BLM geothermal leases grant the geothermal lessee the right and privilege to drill for, extract, produce, remove, utilize, sell, and dispose of geothermal resources on certain lands, together with the right to build and maintain necessary improvements thereon. The actual ownership of the geothermal resources and other minerals beneath the land is retained in the federal mineral estate. The geothermal lease does not grant to the geothermal lessee the exclusive right to develop the lands, although the geothermal lessee does hold the exclusive right to develop geothermal resources within the lands. The geothermal lessee does not have the right to develop minerals unassociated with geothermal production and cannot prohibit others from developing the minerals present in the lands. The BLM may grant multiple leases for the same lands and, when this occurs, each lessee is under a duty to not unreasonably interfere with the development rights of the other. Because BLM leases do not grant to the geothermal lessee the exclusive right to use the surface of the land, BLM may grant rights to others for activities that do not unreasonably interfere with the geothermal lessee's uses of the same land; such other activities may include recreational use, off-road vehicles, and/or wind or solar energy developments.

Certain BLM leases issued before August 8, 2005 include covenants that require the projects to conduct their operations under the lease in a workmanlike manner and in accordance with all applicable laws and BLM directives and to take all mitigating actions required by the BLM to protect the surface of and the environment surrounding the land. Additionally, certain leases contain additional requirements, some of which concern the mitigation or avoidance of disturbance of any antiquities, cultural values or threatened or endangered plants or animals, the payment of royalties for timber, and the imposition of certain restrictions on residential development on the leased land.

BLM leases entered into after August 8, 2005 require the geothermal lessee to conduct operations in a manner that minimizes impacts to the land, air, water, to cultural, biological, visual, and other resources, and to other land uses or users. The BLM may require the geothermal lessee to perform special studies or inventories under guidelines prepared by the BLM. The BLM reserves the right to continue existing leases and to authorize future uses upon or in the leased lands, including the approval of easements or rights-of-way. Prior to disturbing the surface of the leased lands, the geothermal lessee must contact the BLM to be apprised of procedures to be followed and modifications or reclamation measures that may be necessary. Subject to BLM approval, geothermal lessees may enter into unit agreements to cooperatively develop a geothermal resource. The BLM reserves the right to specify rates of development and to require the geothermal lessee to commit to a communalization or unitization agreement if a common geothermal resource is at risk of being overdeveloped.

Typical BLM leases issued to geothermal lessees before August 8, 2005 have a primary term of ten years and will renew so long as geothermal resources are being produced or utilized in commercial quantities, but cannot exceed a period of forty years after the end of the primary term. If at the end of the forty-year period geothermal steam is still being produced or utilized in commercial quantities and the lands are not needed for other purposes, the geothermal lessee will have a preferential right to renew the lease for a second forty-year term, under terms and conditions as the BLM deems appropriate.

---

## **Table of Contents**

BLM leases issued after August 8, 2005 have a primary term of ten years. If the geothermal lessee does not reach commercial production within the primary term the BLM may grant two five-year extensions if the geothermal lessee: (i) satisfies certain minimum annual work requirements prescribed by the BLM for that lease, or (ii) makes minimum annual payments. Additionally, if the geothermal lessee is drilling a well for the purposes of commercial production, the primary term (as it may have been extended) may be extended for five years and as long thereafter as steam is being produced and used in commercial quantities (meaning the geothermal lessee either begins producing geothermal resources in commercial quantities or has a well capable of producing geothermal resources in commercial quantities and is making diligent efforts to utilize the resource) for thirty-five years. If, at the end of the extended thirty-five year term, geothermal steam is still being produced or utilized in commercial quantities and the lands are not needed for other purposes, the geothermal lessee will have a preferential right to renew the lease for fifty-five years, under terms and conditions as the BLM deems appropriate.

For BLM leases issued before August 8, 2005, the geothermal lessee is required to pay an annual rental fee (on a per acre basis), which escalates according to a schedule described therein, until production of geothermal steam in commercial quantities has commenced. After such production has commenced, the geothermal lessee is required to pay royalties (on a monthly basis) on the amount or value of (i) steam, (ii) by-products derived from production, and (iii) commercially de-mineralized water sold or utilized by the project (or reasonably susceptible to such sale or use).

For BLM leases issued after August 8, 2005, (i) a geothermal lessee who has obtained a lease through a non-competitive bidding process will pay an annual rental fee equal to \$1.00 per acre for the first ten years and \$5.00 per acre each year thereafter; and (ii) a geothermal lessee who has obtained a lease through a competitive process will pay a rental equal to \$2.00 per acre for the first year, \$3.00 per acre for the second through tenth year and \$5.00 per acre each year thereafter. Rental fees paid before the first day of the year for which the rental is owed will be credited towards royalty payments for that year. For BLM leases issued, effective, or pending on August 5, 2005 or thereafter, royalty rates are fixed between 1-2.5% of the gross proceeds from the sale of electricity during the first ten years of production under the lease. The royalty rate set by the BLM for geothermal resources produced for the commercial generation of electricity but not sold in an arm's length transaction is 1.75% for the first ten years of production and 3.5% thereafter. The royalty rate for geothermal resources sold by the geothermal lessee or an affiliate in an arm's length transaction is 10% of the gross proceeds from the arm's length sale. The BLM may readjust the rental or royalty rates at not less than twenty year intervals beginning thirty-five years after the date geothermal steam is produced.

In the event of a default under any BLM lease, or the failure to comply with any of the provisions of the Geothermal Steam Act or regulations issued under the Geothermal Steam Act or the terms or stipulations of the lease, the BLM may, 30 days after notice of default is provided to the relevant project, (i) suspend operations until the requested action is taken, or (ii) cancel the lease.

### ***Private Geothermal Leases***

Certain of our domestic project subsidiaries have entered into geothermal resources leases with private parties, pursuant to which they have obtained the right to conduct their geothermal development and operations on privately owned land. In many cases, the lessor under these private geothermal leases owns only the geothermal resource and not the surface of the land.

Typically, the leases grant our project subsidiaries the exclusive right and privilege to drill for, produce, extract, take and remove from the leased land water, brine, steam, steam power, minerals (other than oil), salts, chemicals, gases (other than gases associated with oil), and other products produced or extracted by such project subsidiary. The project subsidiaries are also granted certain non-exclusive rights pertaining to the construction and operation of plants, structures, and facilities on the leased land. Additionally, the project subsidiaries are granted the right to dispose of waste brine and other waste products as well as the right to reinject into the leased

## **Table of Contents**

land water, brine, steam, and gases in a well or wells for the purpose of maintaining or restoring pressure in the productive zones beneath the leased land or other land in the vicinity. Because the private geothermal leases do not grant to the lessee the exclusive right to use the surface of the land, the lessor reserves the right to conduct other activities on the leased land in a manner that does not unreasonably interfere with the geothermal lessee's uses of the same land, which other activities may include agricultural use (farming or grazing), recreational use and hunting, and/or wind or solar energy developments.

The leases provide for a term consisting of a primary term in the range of five to 30 years, depending on the lease, and so long thereafter as lease products are being produced or the project subsidiary is engaged in drilling, extraction, processing, or reworking operations on the leased land.

As consideration under most of our project subsidiaries' private leases, the project subsidiary must pay to the lessor a certain specified percentage of the value at the well (which is not attributable to the enhanced value of electricity generation), gross proceeds, or gross revenues of all lease products produced, saved, and sold on a monthly basis. In certain of our project subsidiaries' private leases, royalties payable to the lessor by the project subsidiary are based on the gross revenues received by the lessee from the sale or use of the geothermal substances, either from electricity production or the value of the geothermal resource at the well.

In addition, pursuant to the leases, the project subsidiary typically agrees to commence drilling, extraction or processing operations on the leased land within the primary term, and to conduct such operations with reasonable diligence until lease products have been found, extracted and processed in quantities deemed "paying quantities" by the project subsidiary, or until further operations would, in such project subsidiary's judgment, be unprofitable or impracticable. The project subsidiary has the right at any time within the primary term to terminate the lease and surrender the relevant land. If the project subsidiary has not commenced any such operations on said land (or on the unit area, if the lease has been unitized), or terminated the lease within the primary term, the project subsidiary must pay to the lessor, in order to maintain its lease position, annually in advance, a rental fee until operations are commenced on the leased land.

If the project subsidiary fails to pay any installment of royalty or rental when due and if such default continues for a period of fifteen days specified in the lease, for example, after its receipt of written notice thereof from the lessor, then at the option of the lessor, the lease will terminate as to the portion or portions thereof as to which the project subsidiary is in default. If the project subsidiary defaults in the performance of any obligations under the lease, other than a payment default, and if, for a period of 90 days after written notice is given to it by the lessor of such default, the project subsidiary fails to commence and thereafter diligently and in good faith take remedial measures to remedy such default, the lessor may terminate the lease.

We do not regard any property that we lease as material unless and until we begin construction of a power plant on the property, that is, until we drill a production well on the property.

### ***Exploration Concessions in Chile***

We have been awarded six exploration concessions in Chile, under which we have the rights to start exploration work with an original term of two years. Prior to the last six months of the original term of each exploration concession, we can request its extension for an additional period of two years. According to applicable regulations, the extension of the exploration concession is subject to the receipt by the Ministry of Energy of evidence that at least 25% of the planned investments for the execution of the project, as reflected in the relevant proposal submitted during the tender process, has been invested. Following submission of the request, the Ministry of Energy has three months in which it may grant or deny the extension.

---

**Table of Contents**

**Description of Our Power Plants**

**Domestic Power Plants**

The following descriptions summarize certain industry metrics for our domestic power plants:

**Brady Complex**

<i>Location</i>	Churchill County, Nevada
<i>Generating Capacity</i>	25 MW
<i>Number of Power Plants</i>	2 (Brady and Desert Peak 2 power plants).
<i>Technology</i>	The Brady complex utilizes binary and flash systems. The complex uses air and water cooled systems.
<i>Subsurface Improvements</i>	12 production wells and 6 injection wells are connected to the plants through a gathering system.
<i>Major Equipment</i>	Three OEC units and three steam turbines along with Balance of Plant equipment.
<i>Age</i>	The Brady power plant commenced commercial operations in 1992 and a new OEC unit was added in 2004. The Desert Peak 2 power plant commenced commercial operation in 2007.
<i>Land and Mineral Rights</i>	The Brady complex area is comprised of mainly BLM leases. The leases are held by production. The scheduled expiration dates for all of these leases are after the end of the expected useful life of the power plants. The complex's rights to use the geothermal and surface rights under the leases are subject to various conditions, as described in Description of Our Leases and Lands.
<i>Access to Property</i>	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases, and the Brady power plant holds right of ways from the BLM and from the private owner that allows access to and from the plant.
<i>Resource Information</i>	The resource temperature at Brady is 278 degrees Fahrenheit and at Desert Peak 2 is 370 degrees Fahrenheit.

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

The Brady and Desert Peak geothermal systems are located within the Hot Springs Mountains, approximately 60 miles northeast of Reno, Nevada, in northwestern Churchill County.

The dominant geological feature of the Brady area is a linear NNE-trending band of hot ground that extends for a distance of two miles.

The Desert Peak geothermal field is located within the Hot Springs Mountains, which form part of the western boundary of the Carson Sink. The structure is characterized by east-titled fault blocks and NNE-trending folds.

Geologic structure in the area is dominated by high-angle normal faults of varying displacement.

**Table of Contents**

<i>Resource Cooling</i>	Approximately 4 degrees Fahrenheit per year was observed at Brady during the past 15 years of production. The temperature decline at Desert Peak is less than 1 degree Fahrenheit per year.
<i>Sources of Makeup Water</i>	Condensed steam is used for makeup water.
<i>Power Purchaser</i>	Brady power plant Sierra Pacific Power Company. Desert Peak 2 power plant Nevada Power Company.
<i>PPA Expiration Date</i>	Brady power plant 2022. Desert Peak 2 power plant 2027.
<i>Financing</i> <b><u>Heber Complex</u></b>	OFC Senior Secured Notes (Brady) and OPC Transaction (Desert Peak 2).
<i>Location</i>	Heber, Imperial County, California
<i>Generating Capacity</i>	92 MW
<i>Number of Power Plants</i>	5 (Heber 1, Heber 2, Heber South, G-1 and G-2).
<i>Technology</i>	The Heber 1 plant utilizes dual flash and the Heber 2, Heber South, G-1 and G-2 plants utilize binary systems. The complex uses a water cooled system.
<i>Subsurface Improvements</i>	31 production wells and 34 injection wells connected to the plants through a gathering system.
<i>Major Equipment</i>	17 OEC units and 1 steam turbine with the Balance of Plant equipment.
<i>Age</i>	The Heber 1 plant commenced commercial operations in 1985 and the Heber 2 plant in 1993. The G-1 plant commenced commercial operation in 2006 and the G-2 plant in 2005. The Heber South plant commenced commercial operation in 2008.
<i>Land and Mineral Rights</i>	The total Heber area is comprised of mainly private leases. The leases are held by production. The scheduled expiration dates for all of these leases are after the end of the expected useful life of the power plants.  The complex's rights to use the geothermal and surface rights under the leases are subject to various conditions, as described in Description of Our Leases and Lands.

*Access to Property*

Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases.

*Resource Information*

The resource supplying the flash flowing Heber 1 wells averages 350 degrees Fahrenheit. The resource supplying the pumped Heber 2 wells averages 318 degrees Fahrenheit.

**Table of Contents**

Heber production is from deltaic sedimentary sandstones deposited in the subsiding Salton Trough of California's Imperial Valley. Produced fluids rise from near the magmatic heated basement rocks (18,000 feet) via fault/fracture zones to the near surface. Heber 1 wells produce directly from deep (4,000 to 8,000 feet) fracture zones. Heber 2 wells produce from the nearer surface (2,000 to 4,000 feet) matrix permeability sandstones in the horizontal outflow plume fed by the fractures from below and the surrounding ground waters.

Scale deposition in the flashing Heber 1 producers is controlled by down hole chemical inhibition supplemented with occasional mechanical cleanouts and acid treatments. There is no scale deposition in the Heber 2 production wells.

*Resource Cooling*

1 degree Fahrenheit per year was observed during the past 20 years of production.

*Sources of Makeup Water*

Water is provided by condensate and by the IID.

*Power Purchaser*

2 PPAs with Southern California Edison and 1 PPA with SCPPA.

*PPA Expiration Date*

Heber 1 2015, Heber 2 2023, and Heber South 2031. The output from the G-1 and G-2 power plants is sold under the PPAs of Southern California Edison and SCPPA.

*Financing*

OrCal Senior Secured Notes.

*Supplemental Information*

As a result of the significant decrease in natural gas price forecasts for 2012 and 2013 and the delay of California's GHG cap-and-trade program that is now scheduled to begin in 2013, each of which is uncertain and subject to changes, we are currently looking at alternative contractual solutions to the PPAs. However, using the January 2012 estimates for gas prices in 2012 and 2013, it is expected that the new SRAC price formulas will reduce our revenues.

**Jersey Valley Power Plant**

We plan to enhance the complex and add 6 MW, if negotiation on new PPA will succeed.

*Location*

Pershing County, Nevada

*Generating Capacity*

12 MW (See supplemental information below)

*Number of Power Plants*

1

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

*Technology*

The Jersey Valley power plant utilizes an air cooled binary system.

*Subsurface Improvements*

2 production wells and 4 injection wells are connected to the plant through a gathering system. The drilling of the third production well was completed and will be used in the future as required. Drilling of additional injection wells is currently under development.

*Major Equipment*

2 OEC units together with the Balance of Plant equipment.

**Table of Contents**

<i>Age</i>	Construction of the power plant was completed at the end of 2010 and the off-taker approved commercial operation status under the PPA effective on August 30, 2011.
<i>Land and Mineral Rights</i>	<p>The Jersey Valley area is comprised of BLM leases. The leases are held by production. The scheduled expiration dates for all of these leases are after the end of the expected useful life of the power plants.</p> <p>The power plant's rights to use the geothermal and surface rights under the leases are subject to various conditions, as described in Description of Our Leases and Lands.</p>
<i>Access to Property</i>	Direct access to public roads from leased property and access across leased property under surface rights granted in leases from BLM.
<i>Resource Information</i>	<p>The Jersey Valley geothermal reservoir consists of a small high-permeability area surrounded by a large low-permeability area. The high-permeability area has been defined by wells drilled along an interpreted fault trending west-northwest. Static water levels are artesian; two of the wells along the permeable zone have very high productivities, as indicated by Permeability Index (PI) values exceeding 20 gpm/psi.</p> <p>The average temperature of the resource is 330 degrees Fahrenheit.</p>
<i>Power Purchaser</i>	Nevada Power Company.
<i>PPA Expiration Date</i>	January 1, 2032
<i>Financing</i>	<p>Corporate funds.</p> <p>Once the Jersey Valley power plant reaches certain operational targets and meets other conditions precedent we have the ability to borrow additional funds under the OFC 2 Senior Secured Notes.</p> <p>We have submitted an application for the ITC cash grant for the power plant.</p>
<i>Supplemental Information</i>	<p>The Jersey Valley power plant is currently operating below its designed capacity. This is primarily due to the need to shut down one of the injection wells that was rendered unusable by old mining wells that we believe were not adequately plugged when abandoned by the mining operator that previously operated on the land.</p> <p>We have drilled an additional injection well, which is being connected to the plant.</p>

We have identified targets for additional wells and will continue to drill to improve injection capacity.

**Mammoth Complex**

Location

Mammoth Lakes, California

**Table of Contents**

<i>Generating Capacity</i>	29 MW
<i>Number of Power Plants</i>	3 (G-1, G-2, and G-3).
<i>Technology</i>	The Mammoth complex utilizes air cooled binary systems.
<i>Subsurface Improvements</i>	11 production wells and 5 injection wells connected to the plants through a gathering system.
<i>Major Equipment</i>	8 Rotoflow expanders together with the Balance of Plant equipment.
<i>Age</i>	The G-1 plant commenced commercial operations in 1984 and G-2 and G-3 commenced commercial operation in 1990.
<i>Land and Mineral Rights</i>	<p>The total Mammoth area is comprised mainly of BLM leases. The leases are held by production. The scheduled expiration dates for all of these leases are after the end of the expected useful life of the power plants.</p> <p>The complex's rights to use the geothermal and surface rights under the leases are subject to various conditions, as described in Description of Our Leases and Lands.</p> <p>We recently purchased land at Mammoth that was owned by a third party. This purchase will reduce royalty expenses for the Mammoth complex.</p>
<i>Access to Property</i>	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases.
<i>Resource Information</i>	<p>The average resource temperature is 339 degrees Fahrenheit.</p> <p>The Casa Diablo/Basalt Canyon geothermal field at Mammoth lies on the southwest edge of the resurgent dome within the Long Valley Caldera. It is believed that the present heat source for the geothermal system is an active magma body underlying the Mammoth Mountain to the northwest of the field. Geothermal waters heated by the magma flow from a deep source (&gt; 3,500 feet) along faults and fracture zones from northwest to southeast east into the field area.</p> <p>The produced fluid has no scaling potential.</p>
<i>Resource Cooling</i>	1 degree Fahrenheit per year was observed during the past 20 years of production.

*Power Purchaser*

Southern California Edison.

*PPA Expiration Date*

G-1 2014, G2 and G-3 2020.

*Financing*

50% OFC Senior Secured Notes and 50% corporate funds.

**Table of Contents**

*Supplemental Information*

As a result of the significant decrease in natural gas price forecasts for 2012 and 2013 and the delay of California's GHG cap-and-trade program that is now scheduled to begin in 2013, each of which is uncertain and subject to changes, we are currently looking at alternative contractual solutions to the PPAs. However, using the January 2012 estimates for gas prices in 2012 and 2013, it is expected that the new SRAC price formulas will reduce our revenues.

We are in the process of repowering the Mammoth complex by replacing part of the old units with new Ormat-manufactured equipment. The replacement of the equipment will optimize generation and add approximately 3 MW of generating capacity to the complex.

**North Brawley Power Plant**

*Location*

Imperial County, California

*Generating Capacity*

33 MW (See supplemental information below)

*Number of Power Plants*

1

*Technology*

The North Brawley power plant utilizes a water-cooled binary system.

*Subsurface Improvements*

16 production wells and 21 injection wells are currently connected to the plant through a gathering system. An additional production well is currently being completed.

*Major Equipment*

5 OEC units together with the Balance of Plant equipment.

*Age*

The power plant was placed in service on January 15, 2010 with commercial operation having commenced on March 31, 2011.

*Land and Mineral Rights*

The total North Brawley area is comprised of private leases. The leases are held by production. The scheduled expiration date for all of these leases is after the end of the expected useful life of the power plant.

The plant's rights to use the geothermal and surface rights under the leases are subject to various conditions, as described in Description of Our Leases and Lands.

*Access to Property*

Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases.

*Resource Information*

North Brawley production is from deltaic and marine sedimentary sands and sandstones deposited in the subsiding Salton Trough of the Imperial Valley. Based on seismic

refraction surveys the total thickness of these sediments in the Brawley area is over 15,000 feet. The shallow production reservoir (1,500 - 4,500 feet) that was developed is fed by fractures and matrix permeability and is

**Table of Contents**

conductively heated from the underlying fractured reservoir which convectively circulates magmatically heated fluid. Produced fluid salinity ranges from 20,000 to 50,000 ppm, and the moderate scaling and corrosion potential is chemically inhibited. The temperature of the deeper fractured reservoir fluids exceed 525 degrees Fahrenheit, but the fluid is not yet developed because of severe scaling and corrosion potential. The deep reservoir is not dedicated to the North Brawley power plant.

The average produced fluid resource temperature is 335 degrees Fahrenheit.

*Sources of Makeup Water*

Water is provided by IID.

*Power Purchaser*

Southern California Edison

*PPA Expiration Date*

2031

*Financing*

Corporate funds and ITC cash grant from the U.S. Treasury.

*Supplemental Information*

The ramp up of the field has been slow and expensive. While we believe that the reservoir is large enough to support the originally designed generation capacity of 50 MW, the operation of the production wells, injection wells and the handling of the geothermal fluid has been a challenge.

On March 31, 2011, Southern California Edison set the demonstrated capacity of the power plant at 33MW. Southern California Edison also agreed to modify the PPA to allow us the option of performing an additional capacity demonstration until March 31, 2012.

There is ongoing work to increase the generation of the power plant. We have set new targets for production wells and identified improvements that we can make to the injection wells, all in parallel with our effort to reduce the operating expenses, mostly through modifications that would extend the service time of the production pumps.

The power plant currently has an interim transmission agreement with IID. A transmission study that is in progress will allow IID to enter into a permanent transmission agreement. To date the study has been delayed due to extensive analysis by the utility and maintenance activity on the transmission corridor.

**OREG 1 Power Plant**

*Location*

Four gas compressor stations along the Northern Border natural gas pipeline in North and South Dakota

*Generating Capacity* 22 MW

*Number of Units* 4

43

**Table of Contents**

<i>Technology</i>	The OREG 1 power plant utilizes our air cooled OEC units.
<i>Major Equipment</i>	4 WHOH and 4 OEC units together with the Balance of Plant equipment.
<i>Age</i>	The OREG 1 power plant commenced commercial operations in 2006.
<i>Land</i>	Easement from NBPL.
<i>Access to Property</i>	Direct access to the plant from public roads.
<i>Power Purchaser</i>	Basin Electric Power Cooperative.
<i>PPA Expiration Date</i>	2031
<i>Financing</i> <b><u>OREG 2 Power Plant</u></b>	Corporate funds.
<i>Location</i>	Four gas compressor stations along the Northern Border natural gas pipeline; one in Montana, two in North Dakota, and one in Minnesota
<i>Generating Capacity</i>	22 MW
<i>Number of Units</i>	4
<i>Technology</i>	The OREG 2 power plant utilizes our air cooled OEC units.
<i>Major Equipment</i>	4 WHOH and 4 OEC units together with the Balance of Plant equipment.
<i>Age</i>	The OREG 2 power plant commenced commercial operations during 2009.
<i>Land</i>	Easement from NBPL.
<i>Access to Property</i>	Direct access to the plant from public roads.

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

<i>Power Purchaser</i>	Basin Electric Power Cooperative.
<i>PPA Expiration Date</i>	2034
<i>Financing</i> <b><u>OREG 3 Power Plant</u></b>	Corporate funds.
<i>Location</i>	A gas compressor station along Northern Border natural gas pipeline in Martin County, Minnesota
<i>Generating Capacity</i>	5.5 MW
<i>Number of Units</i>	1

**Table of Contents**

<i>Technology</i>	The OREG 3 power plant utilizes our air cooled OEC units.
<i>Major Equipment</i>	One WHOH and one OEC unit along with the Balance of Plant equipment.
<i>Age</i>	The OREG 3 power plant commenced commercial operations during 2010.
<i>Land</i>	Easement from NBPL.
<i>Access to Property</i>	Direct access to the plant from public roads.
<i>Power Purchaser</i>	Great River Energy
<i>PPA Expiration Date</i>	2029
<i>Financing</i> <b><u>OREG 4 Power Plant</u></b>	Corporate funds.
<i>Location</i>	A gas compressor station along natural gas pipeline in Denver, Colorado
<i>Generating Capacity</i>	3.5 MW
<i>Number of Units</i>	1
<i>Technology</i>	The OREG 4 power plant utilizes our air cooled OEC units.
<i>Major Equipment</i>	2 WHOH and 1 OEC unit together with the Balance of Plant equipment.
<i>Age</i>	The OREG 4 power plant commenced commercial operations during 2009.
<i>Land</i>	Easement from Trailblazer Pipeline Company.
<i>Access to Property</i>	Direct access to the plant from public roads.
<i>Power Purchaser</i>	Highline Electric Association

<i>PPA Expiration Date</i>	2029
<i>Financing</i> <b><u>Ormesa Complex</u></b>	Corporate funds.
<i>Location</i>	East Mesa, Imperial County, California
<i>Generating Capacity</i>	54 MW
<i>Number of Power Plants</i>	4 (OG I, OG II, GEM 2 and GEM 3).
<i>Technology</i>	The OG plants utilize a binary system and the GEM plants utilize a flash system. The complex uses a water cooling system.

**Table of Contents**

<i>Subsurface Improvements</i>	32 production wells and 52 injection wells connected to the plants through a gathering system.
<i>Material Major Equipment</i>	32 OEC units and 2 steam turbines with the Balance of Plant equipment.
<i>Age</i>	The various OG I units commenced commercial operations between 1987 and 1989, and the OG II plant commenced commercial operation in 1988. Between 2005 and 2007 a significant portion of the old equipment in the OG plants was replaced (including turbines through repowering). The GEM plants commenced commercial operation in 1989, and a new bottoming unit was added in 2007.
<i>Land and Mineral Rights</i>	The total Ormesa area is comprised of BLM leases. The leases are held by production. The scheduled expiration dates for all of these leases are after the end of the expected useful life of the power plants.  The complex s rights to use the geothermal and surface rights under the leases are subject to various conditions, as described in Description of Our Leases and Lands.
<i>Access to Property</i>	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases.
<i>Resource Information</i>	The resource temperature is an average of 307 degrees Fahrenheit. Production is from sandstones. Productive sandstones are between 1,800 and 6,000 feet, and have only matrix permeability. The currently developed thermal anomaly was created in geologic time by conductive heating and direct outflow from an underlying convective fracture system. Produced fluid salinity ranges from 2,000 ppm to 13,000 ppm, and minor scaling and corrosion potential is chemically inhibited.
<i>Resource Cooling</i>	1 degree Fahrenheit per year was observed during the past 20 years of production.
<i>Sources of Makeup Water</i>	Water is provided by the IID.
<i>Power Purchaser</i>	Southern California Edison under a single PPA.
<i>PPA Expiration Date</i>	2018
<i>Financing</i>	OFC Senior Secured Notes.
<i>Supplemental Information</i>	As a result of the significant decrease in natural gas price forecasts for 2012 and 2013 and the delay of California s GHG cap-and-trade program that is now scheduled to begin in 2013, each of which is uncertain and subject to changes, we are currently looking at

alternative contractual solutions to the PPAs. However, using the January 2012 estimates for gas prices in 2012 and 2013, it is expected that the new SRAC price formulas will reduce our revenues.

**Table of Contents**

**Puna Complex**

<i>Location</i>	Puna district, Big Island, Hawaii
<i>Generating Capacity</i>	38 MW
<i>Number of Power Plants</i>	2
<i>Technology</i>	The Puna plants utilize our geothermal combined cycle and binary systems. The plants use an air cooled system.
<i>Subsurface Improvements</i>	5 production wells and 4 injection wells connected to the plants through a gathering system. We are preparing to drill a sixth production well.
<i>Major Equipment</i>	One plant consists of 10 OEC units consisting of 10 binary turbines, 10 steam turbines and two bottoming units along with the Balance of Plant equipment. The second plant consists of 2 OEC units along with Balance of Plant equipment.
<i>Age</i>	The first plant commenced commercial operation in 1993. The second plant was placed in service in 2011, but has not yet reached commercial operation.
<i>Land and Mineral Rights</i>	<p>The Puna area is comprised of a private lease. The private lease is between PGV and KLP and it expires in 2046. PGV pays annual rental payment to KLP, which is adjusted every 5 years based on the CPI.</p> <p>The state of Hawaii owns all mineral rights (including geothermal resources) in the state. The state has issued a Geothermal Resources Mining Lease to KLP, and KLP in turn has entered into a sublease agreement with PGV, with the state's consent. Under this arrangement, the state receives royalties of approximately 3% of the gross revenues.</p>
<i>Access to Property</i>	Direct access to the leased property is readily available via county public roads located adjacent to the leased property. The public roads are at the north and south boundaries of the leased property.
<i>Resource Information</i>	The geothermal reservoir at Puna is located in volcanic rock along the axis of the Kilauea Lower East Rift Zone. Permeability and productivity are controlled by rift-parallel subsurface fissures created by volcanic activity. They may also be influenced by lens-shaped bodies of pillow basalt which have been postulated to exist along the axis of the rift at depths below 7,000 feet.

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

The distribution of reservoir temperatures is strongly influenced by the configuration of subsurface fissures and temperatures are among the hottest of any geothermal field in the world, with maximum measured temperatures consistently above 650 degrees Fahrenheit.

*Resource Cooling*

The resource temperature is stable.

*Power Purchaser*

3 PPAs with HELCO (see Supplemental Information below).

**Table of Contents**

*PPA Expiration Date*

December 31, 2027.

*Financing*

Operating Lease.

We have submitted an application for an ITC cash grant for the new 8 MW power plant.

*Supplemental Information*

The construction of the new 8 MW power plant has been completed and it was placed in service.

We signed a new PPA with HELCO that was recently approved by the PUCH, under which the Puna power plant will deliver to the HELCO grid an additional dispatchable 8 MW and will revise the pricing for the energy that is sold from the Puna complex as follows:

For the first on-peak 25 MW, the energy price has not changed from HELCO avoided cost.

For the next on-peak 5 MW, the price has changed from a diesel-based price to a flat rate of 11.8 cents per kWh escalated by 1.5% per year.

For the new on-peak 8 MW, the price is 9 cents per kWh for up to 30,000 MWh/year and 6 cents per kWh above 30,000 MWh/year, escalated by 1.5% per year.

For the first off-peak 22 MW the energy price has not changed from avoided cost.

The off-peak energy above 22 MW is dispatchable:

For the first off-peak 5 MW, the price has changed from diesel-based price to a flat rate of 11.8 cents per kWh escalated by 1.5% per year.

For the energy above 27 MW (up to 38 MW) the price is 6 cents per kWh, escalated by 1.5% per year.

The capacity payment for the first 30 MW remains the same (\$160 kW/year for the first 25 MW and \$100.95 kW/year for the additional 5 MW). For the new 8MW power plant the annual capacity payment is \$2 million.

**Steamboat Complex**

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

<i>Location</i>	Steamboat, Washoe County, Nevada
<i>Generating Capacity</i>	86 MW
<i>Number of Power Plants</i>	7 (Steamboat 1A, Steamboat 2 and 3, Burdette (Galena 1), Steamboat Hills, Galena 2 and Galena 3).
<i>Technology</i>	The Steamboat complex utilizes a binary system (except for Steamboat Hills, which utilizes a single flash system). The complex uses air and water cooling systems.
<i>Subsurface Improvements</i>	23 production wells and 8 injection wells connected to the plants through a gathering system.

## **Table of Contents**

<i>Major Equipment</i>	12 individual air cooled OEC units and one steam turbine together with the Balance of Plant equipment.
<i>Age</i>	The Steamboat 1A plant commenced commercial operation in 1988 and the other plants commenced commercial operation in 1992, 2005, 2007 and 2008. During 2008, the Rotoflow expanders at Steamboat 2 and 3 were replaced with four turbines manufactured by us and we repowered Steamboat 1A.
<i>Land and Mineral Rights</i>	<p>The total Steamboat area is comprised of 41% private leases, 41% BLM leases and 18% private land owned by us. The leases are held by production. The scheduled expiration dates for all of these leases are after the end of the expected useful life of the power plants.</p> <p>The complex s rights to use the geothermal and surface rights under the leases are subject to various conditions, as described in Description of Our Leases and Lands.</p> <p>We have easements for the transmission lines we use to deliver power to our power purchasers.</p>
<i>Resource Information</i>	<p>The resource temperature is an average of 292 degrees Fahrenheit.</p> <p>The Steamboat geothermal field is a typical basin and range geothermal reservoir. Large and deep faults that occur in the rocks allow circulation of ground water to depths exceeding 10,000 feet below the surface. Horizontal zones of permeability permit the hot water to flow eastward in an out-flow plume.</p> <p>Steamboat Hills and Galena 2 power plants produce hot water from fractures associated with normal faults. The rest of the power plants acquire their geothermal water from the horizontal out-flow plume.</p> <p>The water in the Steamboat reservoir has a low total solids concentration. Scaling potential is very low unless the fluid is allowed to flash which will result in calcium carbonate scale. Injection of cooled water for reservoir pressure maintenance prevents flashing.</p>
<i>Resource Cooling</i>	2 degrees Fahrenheit per year was observed during the past 20 years of production.
<i>Access to Property</i>	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases.
<i>Sources of Makeup Water</i>	Water is provided by condensate and the local utility.

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

*Power Purchaser*

Sierra Pacific Power Company (for Steamboat 1A, Steamboat 2 and 3, Burdette, Steamboat Hills, and Galena 3) and Nevada Power Company (for Galena 2).

*PPA Expiration Date*

Steamboat 1A 2018, Steamboat 2 and 3 2022, Burdette 2026, Steamboat Hills 2018, Galena 3 2028, and Galena 2 2027.

**Table of Contents**

<i>Financing</i>	OFC Senior Secured Notes (Steamboat 1A, Steamboat 2 and 3, and Burdette) and OPC Transaction (Steamboat Hills, Galena 2, and Galena 3).
<b><u>Tuscarora Power Plant</u></b>	
<i>Location</i>	Elko County, Nevada
<i>Projected Generating Capacity</i>	18 MW
Number of Power Plants	1
<i>Technology</i>	The Tuscarora power plant utilizes a water cooled binary system.
<i>Subsurface Improvements</i>	3 production and 5 injection wells are connected to the power plant. A fourth production well is under development.
<i>Major Equipment</i>	2 water cooled OEC units with the Balance of Plant equipment.
<i>Age</i>	The power plant commenced commercial operation on January 11, 2012.
<i>Land and Mineral Rights</i>	The Tuscarora area is comprised of private and BLM leases.  The leases are currently held by payment of annual rental payments, as described in Description of Our Leases and Lands.  The plant's rights to use the geothermal and surface rights under the leases are subject to various conditions, as described in Description of Our Leases and Lands.
<i>Resource Information</i>	The Tuscarora geothermal reservoir consists of an area of approximately 2.5 square miles. The reservoir is contained in both Tertiary and Paleozoic (basement) rocks. The Paleozoic section consists primarily of sedimentary rocks, overlain by Tertiary volcanic rocks. Thermal fluid in the native state of the reservoir flows upward and to the north through apparently southward-dipping, basement formations. At an elevation of roughly 2,500 feet with respect to mean sea level, the upwelling thermal fluid enters the Tertiary volcanic rocks and flows directly upward, exiting to the surface at Hot Sulphur Springs.  The resource temperature averages 346 degrees Fahrenheit.
<i>Resource Cooling</i>	Will be established in the future.

*Access to Property*

Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted in leases from BLM.

*Sources of Makeup Water*

Water is provided from two water makeup wells. A third makeup well will be added.

*Power Purchaser*

Nevada Power Company

**Table of Contents**

*PPA Expiration Date* 2032

*Financing* OFC 2 Senior Secured Notes.

We plan to file an application for an ITC cash grant for the power plant.

**Foreign Power Plants**

The following descriptions summarize certain industry metrics for our foreign power plants:

**Amatitlan Power Plant (Guatemala)**

*Location* Amatitlan, Guatemala

*Generating Capacity* 18 MW

*Number of Power Plants* 1

*Technology* The Amatitlan power plant utilizes an air cooled binary system and a small back pressure steam turbine (1MW).

*Subsurface Improvements* 5 production wells and 2 injection wells connected to the plants through a gathering system.

*Major Equipment* 1 steam turbine and 2 OEC units together with the Balance of Plant equipment.

*Age* The plant commenced commercial operation in 2007.

*Land and Mineral Rights* Total resource concession area (under usufruct agreement with INDE) is for a term of 25 years from April 2003. Leased and company owned property is approximately 3% of the concession area. Under the agreement with INDE, the power plant company pays royalties of 3.5% of revenues up to 20.5 MW and 2% of revenues exceeding 20.5 MW.

The generated electricity is sold at the plant fence. The transmission line is owned by INDE.

*Resource Information* The resource temperature is an average of 530 degrees Fahrenheit.

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

The Amatitlan geothermal area is located on the north side of the Pacaya Volcano at approximately 5,900 feet above sea level.

Hot fluid circulates up from a heat source beneath the volcano, through deep faults to shallower depths, and then cools as it flows horizontally to the north and northwest to hot springs on the southern shore of Lake Amatitlan and the Michatoya River Valley.

### *Resource Cooling*

Approximately 2 degrees Fahrenheit per year.

### *Access to Property*

Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the lease agreement.

**Table of Contents**

<i>Power Purchasers</i>	INDE and another local purchaser.
<i>PPA Expiration Date</i>	Contract with INDE expires in 2028.
<i>Financing</i>	Senior secured project loan from TCW Global Project Fund II, Ltd.
<i>Supplemental Information</i>	The power plant was registered by the United Nations Framework Convention on Climate Change as a Clean Development Mechanism. It is expected to offset emissions of approximately 83,000 tons of CO <sub>2</sub> per year.
	The power plant has a long-term contract to sell all of its emission reduction credits to a European buyer.
<b><u>Momotombo Power Plant (Nicaragua)</u></b>	
<i>Location</i>	Momotombo, Nicaragua
<i>Generating Capacity</i>	22 MW
<i>Number of Power Plants</i>	1
<i>Technology</i>	The Momotombo power plant utilizes single flash and binary systems. The plant uses air and water cooled systems.
<i>Subsurface Improvements</i>	10 production wells and 7 injection wells connected to the plants through a gathering system.
<i>Major Equipment</i>	1 steam turbine and 1 OEC unit together with the Balance of Plant equipment.
<i>Age</i>	The plant commenced commercial operation in 1983 and was already in existence when we signed the concession agreement in 1999.
<i>Land and Mineral Rights</i>	The total Momotombo area is under a concession agreement which expires in 2014.
	We sell the generated electricity at the boundary of the plant. The transmission line is owned by the utility.
<i>Resource Information</i>	The resource temperature is an average of 466.5 degrees Fahrenheit.

The Momotombo geothermal reservoir is located within sedimentary and andesitic volcanic formations that relate to the Momotombo volcano.

Main flow paths in the geothermal system are a hot reservoir layer. The shallow layer conducted deep fluids that eventually will be discharged at surface at the eastern edge of the geothermal system at the shore of the Lake Managua.

*Resource Cooling*

Approximately 3.5 degrees Fahrenheit per year was observed during the past 10 years of production.

**Table of Contents**

<i>Access to Property</i>	Direct access to public roads and access across the property are provided under surface rights granted pursuant to the concession assignment agreement.
<i>Sources of Makeup Water</i>	Condensed steam is used for makeup water.
<i>Power Purchaser</i>	DISNORTE and DISSUR
<i>PPA Expiration Date</i>	2014
<i>Financing</i> <b><u>Olkaria III Complex (Kenya)</u></b>	A loan from Bank Hapoalim B.M, which was repaid in full in 2010.
<i>Location</i>	Naivasha, Kenya
<i>Generating Capacity</i>	52 MW
<i>Number of Power Plants</i>	2 (Olkaria III Phase 1 and Olkaria III Phase 2).
<i>Technology</i>	The Olkaria III complex utilizes an air cooled binary system.
<i>Subsurface Improvements</i>	10 production wells and 3 injection wells connected to the plants through a gathering system.
<i>Major Equipment</i>	6 OEC units together with the Balance of Plant equipment.
<i>Age</i>	Phase I plant commenced commercial operation in 2000 and was incorporated into the phase II plant in January 2009.
<i>Land and Mineral Rights</i>	The total Olkaria III area is comprised of government leases. A license granted by the Kenyan government provides exclusive rights of use and possession of the relevant geothermal resources for an initial period of 30 years, expiring in 2029, which initial period may be extended for two additional five-year terms. The Kenyan Minister of Energy has the right to terminate or revoke the license in the event work in or under the license area stops during a period of six months, or there is a failure to comply with the terms of the license or the provisions of the law relating to geothermal resources. Royalties are paid to the Kenyan government monthly based on the amount of power supplied to the power purchaser and an annual rent.

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

The power generated is purchased at the metering point located immediately after the power transformers in the 220 kV sub-station within the power plant, before the transmission lines which belong to the utility.

### *Resource Information*

The resource temperature is an average of 570 degrees Fahrenheit.

The Olkaria III geothermal field is on the west side of the greater Olkaria geothermal area located at approximately 6,890 feet above sea level within the Rift Valley.

**Table of Contents**

Hot geothermal fluids rise up from deep in the northeastern portion of the concession area, penetrating a low permeability zone below 3280 feet ASL to a high productivity, two-phase zone identified between 3,280 and 4,270 feet ASL.

*Resource Cooling*

The resource temperature is stable.

*Access to Property*

Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the lease agreement.

*Power Purchaser*

KPLC

*PPA Expiration Date*

2029

*Financing*

Senior secured project finance loan from a group of European DFIs.

Supplemental Information

See *Projects under Construction* *Olkaria III Phase III (Kenya)*.

We have signed a commitment letter issued by OPIC to provide up to \$310 million to refinance and expand the Olkaria III complex. See *New Financing of our Project* in Item 7.

If the Phase III of Olkaria III is completed by November 2015, the expiration date of the PPA will be extended until 2033.

**Zunil Power Plant (Guatemala)**

Location

Zunil, Guatemala

*Generating Capacity*

24 MW

*Number of Power Plants*

1

*Technology*

The Zunil power plant utilizes an air cooled binary system.

*Major Equipment*

7 OEC units together with the Balance of Plant equipment.

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

<i>Age</i>	The plant commenced commercial operation in 1999.
<i>Land and Mineral Rights</i>	<p>The land owned by the plant includes the power plant, workshop and open yards for equipment and pipes storage.</p> <p>Pipelines for the gathering system transit through a local agricultural area s right of way acquired by us.</p> <p>The geothermal wells and resource are owned by INDE.</p> <p>Our produced power is sold at our property line; power transmission lines are owned and operated by INDE.</p>
<i>Access to Property</i>	Direct access to public roads.
<i>Power Purchaser</i>	INDE

**Table of Contents**

<i>PPA Expiration Date</i>	2019
<i>Financing</i>	Senior Secured project loan from IFC and CDC that was repaid in full in November 2011.
<i>Supplemental Information</i>	Through August 2011, the energy output of the power plant was sold under a take or pay arrangement, under which the revenues were calculated based on 24 MW capacity regardless of the actual performance of the power plant. From September 2011, the energy portion of revenues is paid based on the actual generation of the power plant, while the capacity portion remains the same. The actual generation of the power plant is based on a capacity of approximately 13 MW. In 2011, the energy revenues were approximately 21% of the total revenues of the power plant.

**Projects under Construction**

We are in varying stages of construction or enhancement of domestic and foreign projects. Based on our current construction schedule, we have new generating capacity of approximately 145 MW under construction in California, Nevada, and Hawaii (including Mammoth expansion described above).

The following is a description of the projects currently undergoing construction:

**Carson Lake Project (U.S.)**

<i>Location</i>	Churchill County, Nevada
<i>Projected Generating Capacity</i>	20 MW
<i>Projected Technology</i>	The Carson Lake power plant will utilize a binary system.
<i>Condition</i>	Received the approval of the BLM for the required EIS and for the permitting required to start the drilling of additional wells.
<i>Subsurface Improvements</i>	Awaiting drilling permits.
<i>Land and Mineral Rights</i>	The Carson Lake area is comprised of BLM leases.  The leases are currently held by the payment of annual rental payments, as described in Description of Our Leases and Lands.  Unless steam is produced in commercial quantities, the primary term for these leases will expire commencing August 31, 2016.

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

The project's rights to use the geothermal and surface rights under the leases are subject to various conditions, as described in Description of Our Leases and Lands.

*Resource Information*

The expected average temperature of the resource cannot be estimated as field development has not been completed yet.

*Access to Property*

Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted in leases from BLM.

**Table of Contents**

<i>Financing</i>	Corporate funds.
<i>Projected Operation</i>	To be determined.
<i>Supplemental Information</i>	Permitting delays have prevented substantial progress on the project site and on transmission until late last year and have had a significant impact on the development plan and the economics of the project. As a result, in December 2011, we terminated the project's PPA and joint operating agreement with NV Energy. We are continuing to work on the project.
<b><u>CD4 Project (Mammoth Complex) (U.S.)</u></b>	
<i>Location</i>	Mammoth Lakes, California
<i>Projected Generating Capacity</i>	30 MW
<i>Projected Technology</i>	The CD4 power plant will utilize an air cooled binary system.
<i>Condition</i>	Drilling activity.
<i>Subsurface Improvements</i>	We have completed 1 production well and 1 injection well. Continued drilling is subject to receipt of additional permits.
<i>Land and Mineral Rights</i>	The total Mammoth area is comprised mainly of BLM leases, several of which are held by production and the remainder of which are the subject of a unitization agreement that is pending BLM approval. The expiration date of the leases (assuming approval of the unitization agreement) is after the end of the expected useful life of the power plant.
<i>Access to Property</i>	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases.
<i>Resource Information</i>	The expected average temperature of the resource cannot be estimated as field development has not been completed yet.
<i>Power Purchaser</i>	We have not executed a PPA.
<i>Financing</i>	Corporate funds.
<i>Projected Operation</i>	To be determined.

*Supplemental Information*

As part of the process to secure a transmission line, we are participating in the Southern California Edison Wholesale Distribution Access Tariff Transition Cluster Generator Interconnection Process to deliver energy into the Southern California Edison system at the Casa Diablo Substation.

**Table of Contents**

**Heber Solar PV Project (U.S.)**

<i>Location</i>	Imperial County, California
<i>Projected Generating Capacity</i>	10 MW (24,500 MWh per year)
<i>Projected Technology</i>	Solar PV.
<i>Condition</i>	Procurement.
<i>Land</i>	The Heber Solar area is comprised of land that we own.
<i>Access to Property</i>	Direct access to public roads from the leased property and access across the leased property.
<i>Power Purchaser</i>	IID
<i>PPA Expiration Date</i>	20 years after date of COD.
<i>Financing</i>	Corporate funds.
<i>Projected Operation</i>	2013
<i>Supplemental Information</i>	Commercial operation is expected within 18 months from the signing of the PPA, subject to timely completion of the interconnection that is to be provided by IID.

**McGinness Hills Project (U.S.)**

<i>Location</i>	Lander County, Nevada
<i>Projected Generating Capacity</i>	30 MW
<i>Projected Technology</i>	The McGinness Hills power plant will utilize an air cooled binary system.
<i>Subsurface Improvements</i>	5 production wells and 3 injection wells have been drilled.

*Material Equipment*

Power plant equipment on site.

*Condition*

Field development is still in process and construction is in an advanced stage.

*Land and Mineral Rights*

The McGinness Hills area is comprised of private and BLM leases.

The leases are currently held by the payment of annual rental payments, as described in Description of Our Leases and Lands.

Unless steam is produced in commercial quantities, the primary term for these leases will expire commencing September 30, 2017.

The project's rights to use the geothermal and surface rights under the leases are subject to various conditions, as described in Description of Our Leases and Lands.

**Table of Contents**

<i>Resource Information</i>	The expected average temperature of the resource cannot be estimated as field development has not been completed yet.
<i>Access to Property</i>	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted in leases from BLM.
<i>Power Purchaser</i>	Nevada Power Company
<i>PPA Expiration Date</i>	20 years after date of COD.
<i>Financing</i>	OFC 2 Senior Secured Notes.  We plan to file an application for an ITC cash grant for the project.
<i>Projected Operation</i>	Third quarter of 2012.
<i>Supplemental Information</i> <b><u>Olkaria III Phase III (Kenya)</u></b>	Commercial operation of the power plant is expected in the second half of 2012.
<i>Location</i>	Naivasha, Kenya
<i>Projected Generating Capacity</i>	36 MW
<i>Technology</i>	The phase III of the Olkaria III complex will utilize an air cooled binary system.
<i>Condition</i>	Field development and manufacturing of the power plant is in progress.
<i>Subsurface Improvement</i>	Two production wells have been drilled.
<i>Land and Mineral Rights</i>	The total Olkaria III area is comprised of government leases. See description above under Olkaria III complex.
<i>Resource Information</i>	The Olkaria III geothermal field is on the west side of the greater Olkaria geothermal area located within the Rift Valley at approximately 6,890 feet above sea level.

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Hot geothermal fluids rise up from deep in the northeastern portion of the concession area through low permeability at a shallow depth to a high productivity two-phase region from 3,280 to 4,270 feet above sea level.

The expected average temperature of the resource cannot be estimated as field development has not been completed yet.

*Access to Property*

Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the lease agreement.

**Table of Contents**

<i>Power Purchaser</i>	KPLC
<i>PPA Expiration Date</i>	20 years from COD.
<i>Financing</i>	Corporate funds.
<i>Projected Operation</i>	2013
<i>Supplemental Information</i>	<p>We amended and restated the existing PPA with KPLC. The amended and restated PPA provides for the construction of a new 36 MW power plant at the Olkaria III complex. The PPA amendment includes an option for additional capacity up to 100 MW.</p> <p>We have signed a commitment letter with OPIC to provide up to \$310 million to refinance and expand the Olkaria III complex. See description in Item 7 under New Financing of our Projects.</p>
<b><u>Wild Rose (formerly DH Wells) Project (U.S.)</u></b>	
<i>Location</i>	Mineral County, Nevada
<i>Projected Generating Capacity</i>	15-20 MW
<i>Projected Technology</i>	The Wild Rose power plant will utilize a binary system.
<i>Material Equipment</i>	Drilling equipment for wells.
<i>Condition</i>	Field development is in progress.
<i>Subsurface Improvement</i>	3 wells have been drilled. We are continuing with the drilling activity.
<i>Land and Mineral Rights</i>	<p>The Wild Rose area is comprised of BLM leases.</p> <p>The leases are currently held by the payment of annual rental payments, as described in Description of Our Leases and Lands.</p> <p>Unless steam is produced in commercial quantities, the primary term for these leases will expire commencing September 30, 2017.</p>

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

The project's rights to use the geothermal and surface rights under the leases are subject to various conditions, as described in Description of Our Leases and Lands.

*Resource Information*

The expected average temperature of the resource cannot be estimated as field development has not been completed yet.

*Access to Property*

Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted in leases from BLM.

*Power Purchaser*

We have not executed a PPA yet for this power plant.

*Financing*

Corporate funds.

*Projected Operation*

2013

## **Table of Contents**

### **Projects under Exploration and Development and Future Projects**

We also have other projects under various stages of development in the United States, Guatemala, Chile, and Indonesia. We expect to continue to explore these and other opportunities for expansion so long as they continue to meet our business objectives and investment criteria.

The following is a description of the projects currently under various stages of development and for which we are able to estimate their expected generating capacity. Upon completion of these projects, the generating capacity of the geothermal projects would be approximately 87 MW and our share in the combined generating capacity of the Solar PV projects would be 130 MW.

#### ***Crump Geyser Project (U.S.)***

In October 2010, we and NGP agreed to jointly develop, construct, own and operate one or more geothermal power plants in the Crump Geyser Area located in Lake County, Oregon. All activities will be carried out through CGC, a limited liability company that is owned equally by our wholly owned subsidiary, Ormat Nevada, and NGP.

We will be the EPC contractor for the project, which will utilize our proprietary generating equipment and other Balance of Plant equipment. We will also be the Operator and provide operating and maintenance services to CGC.

We and NGP intend to build an up to 20 MW power plant, which is expected to be placed in service gradually.

#### ***Solar PV Projects (Israel)***

We are currently in the process of developing ground-mounted and roof-top Solar PV projects in Israel under two joint venture agreements with Solar Hybrid Israel Ltd., which acquired the equity ownership in the joint venture from Sunday Energy. Under the ground-mounted joint venture agreement, we plan to build six projects with a total capacity of 38 MW. Our share in these projects will be 70%. Under the roof-top joint venture agreement, we plan to build eight projects with a total capacity of 18 MW. Our share in these projects will be 51%.

Additionally, we are a party to a joint venture agreement with Summit Holdings Real Estate Ltd. to develop 127 MW of utility scale ground-mounted Solar PV project located over three sites. Summit Holdings Real Estate Ltd. recently purchased Sunday Energy's interest in these projects. Our share in these projects will be 51%. We are also independently developing a 30 MW utility scale ground-mounted Solar PV project.

We have completed feasibility studies for all of these projects as required by the Israel Electric Corporation Ltd and we have submitted applications to obtain conditional licenses for these projects from the PUA; we have already received two such licenses. We believe that the installation permitting process for the ground-mounted projects will take longer to complete because of the zoning changes required for the land, compared to the permitting process for the roof-top projects, which do not require zoning changes. We estimate that only a portion of the above projects will be constructed.

In addition to the projects mentioned above, we are developing and are in the permitting phase for a roof-top Solar PV installation on our manufacturing facility in Yavne.

#### ***Sarulla Project (Indonesia)***

We are a member of a consortium which is in the process of developing a geothermal power project in Indonesia of approximately 330 MW. We own 12.75% of the Indonesian special purpose entity that will operate the project.

**Table of Contents**

The project, located in Tapanuli Utara, North Sumatra, represents the largest single-contract geothermal power project to date, and reflects the large scale, high productivity and potential of Indonesian geothermal resources. The project will be owned and operated by the consortium members under the framework of a Joint Operating Contract (JOC) with PT Pertamina Geothermal Energy, and is to be constructed in three phases over four years, with each phase utilizing Ormat’s 110 MW to 120 MW combined cycle geothermal plants.

The adjustment of the electricity tariff for the 330 MW Sarulla project has been agreed in principle between PLN (the state electric utility which is the off-taker of the electricity from the Sarulla Project) and the consortium, based on the verification of the agreed tariff by the BPKP (Indonesian State Auditor for Development). The JOC and the Energy Sales Contract (ESC) are currently in their final stage of being amended to reflect the agreed adjusted tariff as well as other financial conditions that have been agreed in principle by the relevant Indonesian ministries such as the Ministry of Energy and Mineral Resources and the Ministry of Finance. The execution of these amended contracts is expected to occur during the first half of 2012.

Sarulla Operations Ltd. (the project company) has received responses from over ten international banks that were invited to submit proposals to provide limited recourse financing for the Sarulla Project. The expected financing package will consist of direct loans from the Japan Bank for International Cooperation (JBIC) and the Asian Development Bank (ADB), plus Extended Political Risk Guarantees to the participating banks by JBIC. Sarulla Operations Ltd. has mandated certain lenders and the selection and engagement of due diligence consultants is currently underway.

Based on past experience, we find it difficult to estimate when these negotiations will be concluded. Construction is expected to start after the consortium obtains financing, a process which we expect to take approximately one year from the date of execution of the amended ESC and JOC.

***Wister Project (U.S.)***

We are currently developing the Wister project on private leases located in Imperial County, California. We expect the first phase of the project to be 30 MW.

The project has been awarded an exploration grant of \$4.5 million under the DOE’s Innovative Exploration and Drilling Projects program and the exploration activity under this program has started.

***Others***

We have a substantial land position that is expected to support future development on which we have started or plan to start exploration activity. Our land position is comprised of:

*1. Various leases and concessions for geothermal resources of approximately 339,000 acres in 32 prospects including the following:*

**Nevada**

Beowawe	Lease acquired but no further action has yet been taken.
Dixie Hope	Started exploratory drilling.
Dixie Meadows-Comstock	Completed exploration studies and are awaiting permits to start exploratory drilling at the site.
Edwards Creek	Started exploratory drilling.

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Hyder Hot Springs/Dixie Valley

Lease acquired but no further action has yet been taken.

Leach Hot Springs

Started exploratory drilling.

**Table of Contents**

Seven Devils	Lease acquired but no further action has yet been taken.
Smith Creek	Under exploration studies.
Tungsten Mountain	Started exploratory drilling.
Tuscarora Expansion	Under exploration studies.
Wildhorse (Mustang)	Under exploration studies.
Quieta	Under exploration studies.
Argenta	Under exploration studies.
Hycroft	Under exploration studies.
Baltazar	Lease acquired but no further action has yet been taken.
South Jersey <b>California</b>	Lease acquired but no further action has yet been taken.
East & North Brawley	Deep resource lease acquired but no further action has yet been taken.
Rhyolite Plateau <b>Hawaii</b>	Lease acquired but no further action has yet been taken.
Ulupalakua (Maui)	Advanced exploration studies and the project has been awarded an exploration grant of \$4.9 million under the DOE's Innovative Exploration and Drilling Projects program.
Kula	Under exploration studies.
Kona <b>Oregon</b>	Under exploration studies.

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Glass Buttes Mahogany	Completed exploration studies and the project has been awarded an exploration grant of \$4.3 million under the DOE's Innovative Exploration and Drilling Projects program. Awaiting permits to start exploratory drilling.
Glass Buttes Midnight Point	Completed exploration studies and are expected to start exploratory drilling
Newberry Twilight	Completed exploration studies and are expected to start exploratory drilling
Lakeview/Goose Lake- <b>Idaho</b>	Started exploration studies.
Magic Reservoir <b>Alaska</b>	Lease acquired but no further action has yet been taken.
Mount Spurr <b>Utah</b>	Performed exploration drilling at the site and a \$2.0 million exploration grant has been awarded.
Drum Mountain	Under exploration studies.
Whirlwind Valley	Under exploration studies.

**Table of Contents**

**Guatemala**

Amatitlan Phase II Started exploration studies.

Tecumburu Surface rights have been obtained but no further action has yet been taken.  
**New Zealand**

Tikitere Started exploration studies.

2. *Exploration concessions for geothermal resources of approximately 336,000 acres in the following prospects:*

**Chile**

San Pablo Exploration Concession has been approved; started exploration studies.

Aroma Exploration Concession has been approved but no further action has yet been taken.

Mariman Exploration Concession has been approved but no further action has yet been taken.

Quinohuen Exploration Concession has been approved but no further action has yet been taken.

San Jose II Exploration Concession has been approved but no further action has yet been taken.

Sollipulli. Exploration Concession has been approved but no further action has yet been taken.

3. *We have an option to enter into geothermal leases covering more than 264,000 acres under a lease option agreement with Weyerhaeuser Company. We are currently exploring the following prospects:*

**Oregon**

Foley Hot Springs Started exploration studies.

Silver Lake Started exploration studies.

Summer Lake Started exploration studies.

**Nevada**

Walker River Paiute

Started exploration studies. (option agreement under negotiation)

4. *In addition to the geothermal resources listed above, we have leases pending for approximately 6,700 acres.*

**Operations of our Product Segment**

*Power Units for Geothermal Power Plants.* We design, manufacture, and sell power units for geothermal electricity generation, which we refer to as OECs. Our customers include contractors and geothermal plant owners and operators.

The consideration for the power units is usually paid in installments, in accordance with milestones set in the supply agreement. Sometimes we agree to provide the purchaser with spare parts (or alternatively, with a non-exclusive license to manufacture such parts). We provide the purchaser with at least a 12-month warranty for

## **Table of Contents**

such products. We usually also provide the purchaser (often, upon receipt of advances made by the purchaser) with a guarantee, which expires in part upon delivery of the equipment to the site and fully expires at the termination of the warranty period. The guarantees are at times supported by letters of credit.

*Power Units for Recovered Energy-Based Power Generation.* We design, manufacture, and sell power units used to generate electricity from recovered energy or so-called waste heat. Our existing and target customers include interstate natural gas pipeline owners and operators, gas processing plant owners and operators, cement plant owners and operators, and other companies engaged in other energy-intensive industrial processes. We have two different business models for this product line.

The first business model, which is similar to the model utilized in our geothermal power generation business, consists of the development, construction, ownership, and operation of recovered energy-based generation power plants. In this case, we will enter into agreements to purchase industrial waste heat, and enter into long-term PPAs with off-takers to sell the electricity generated by the REG unit that utilizes such industrial waste heat. The power purchasers in such cases generally are investor-owned electric utilities or local electrical cooperatives, such as our PPA with Great River Energy for power from our REG facility on the Northern Border natural gas pipeline.

Pursuant to the second business model, we construct and sell the power units for recovered energy-based power generation to third parties for use in inside-the-fence installations or otherwise. Our customers include gas processing plant owners and operators, cement plant owners and operators and companies in the process industry. The Neptune recovered energy project is an example of this model. There, we installed one of our recovered energy-based generation units at Enterprise Products Neptune gas processing plant in Louisiana. The unit utilizes exhaust gas from two gas turbines at the plant and is providing electrical power that is consumed internally by the facility (although a portion of the generated electricity is also sold to the local electric utility).

*Remote Power Units and other Generators.* We design, manufacture and sell fossil fuel powered turbo-generators with a capacity ranging between 200 watts and 5,000 watts, which operate unattended in extreme climate conditions, whether hot or cold. The remote power units supply energy for remote and unmanned installations and along communications lines and cathodic protection along gas and oil pipelines. Our customers include contractors installing gas pipelines in remote areas. In addition, we manufacture and sell generators for various other uses, including heavy duty direct current generators. The terms of sale of the turbo-generators are similar to those for the power units produced for power plants.

*EPC of Power Plants.* We engineer, procure and construct, as an EPC contractor, geothermal and recovered energy power plants on a turnkey basis, using power units we design and manufacture. Our customers are geothermal power plant owners as well as the same customers described above that we target for the sale of our power units for recovered energy-based power generation. Unlike many other companies that provide EPC services, we have an advantage in that we are using our own manufactured equipment and thus have better control over the timing and delivery of required equipment and its costs. The consideration for such services is usually paid in installments, in accordance with milestones set in the EPC contract and related documents. We usually provide performance guarantees or letters of credit securing our obligations under the contract. Upon delivery of the plant to its owner, such guarantees are replaced with a warranty guarantee, usually for a period ranging from 12 months to 36 months. The EPC contract usually places a cap on our liabilities for failure to meet our obligations thereunder.

In connection with the sale of our power units for geothermal power plants, power units for recovered energy-based power generation and remote power units and other generators, we, from time to time, enter into sales agreements for the marketing and sale of such products pursuant to which we are obligated to pay commissions to such representatives upon the sale of our products in the relevant territory covered by such agreements by such representatives or, in some cases, by other representatives in such territory.

Our manufacturing operations and products are certified ISO 9001, ISO 14001, American Society of Mechanical Engineers, and TÜV, and we are an approved supplier to many electric utilities around the world.

**Table of Contents****Backlog**

We have a product backlog of approximately \$241 million as of February 15, 2012, which includes revenues for the period between January 1, 2012 and February 15, 2012, compared to \$51.0 million as of February 15, 2011. The approximately \$241 million includes: (i) an EPC contract in the amount of \$21 million related to the Thermo 1 project with Cyrq, for which revenue will be recognized when payment by the customer is reasonably assured; and (ii) \$27 million related to a geothermal supply contract, which is subject to the customer finalizing its financing arrangements for the project. The backlog does not include an EPC contract in the amount of \$65 million related to the Lightning Dock Geothermal project with Cyrq.

The following is a breakdown of the Product Segment backlog as of February 15, 2012 (in millions):

	Expected Completion of the Contract	Sales Expected to be Recognized in 2012	Sales Expected to be Recognized in the years following 2012	Expected Until End of Contract
Geothermal	2013	\$ 153	\$ 70	\$ 223
Recovered Energy	2012	6		6
Remote Power Units	2012	7		7
Other	2014	1	4	5
<b>Total</b>		<b>\$ 167</b>	<b>\$ 74</b>	<b>\$ 241</b>

**Competition**

In our Electricity Segment, we face competition from geothermal power plant owners and developers as well as other renewable energy providers.

In our Product Segment, we face competition from power plant equipment manufacturers or system integrators and from engineering or projects management companies.

**Electricity Segment**

Our main competitors among geothermal power plant owners and developers in the United States are CalEnergy, Calpine, Terra-Gen Power LLC, ENEL SpA and other smaller-sized pure play developers. Outside the United States we face competition from some of the same geothermal power plant owners and developers in addition to other companies such as Chevron Corporation, Energy Development Corporation in the Philippines, developers such as Star Energy and Medco Energi in Indonesia, Mighty River Power and Contact Energy in New Zealand and Enel Colbus S.A. and others in Chile. We may also face competition from national electric utilities or state-owned oil companies.

Our competitors among renewable energy providers include companies engaged in the power generation business from renewable energy sources other than geothermal energy, such as wind power, biomass, solar power and hydro-electric power. In the last few years, competition from the wind and solar power generation industries has increased significantly. However, current demand for renewable energy is large enough that this increased competition has not materially impacted our ability to obtain new PPAs although we are starting to see signs that we might face a change where there will be competition from wind and more so from solar energy projects.

In the U.S., the Solar PV market is characterized by strong competition and low prices. We are focused on niche markets where our site-specific advantages can allow us to develop competitive projects. In Israel, the Solar PV market is based on a feed-in-tariff system creating a market that is driven less by price competitiveness and more by competition for land and for limited availability of electricity licenses.

**Table of Contents**

***Product Segment***

Our competitors among power plant equipment suppliers are divided into two groups: high enthalpy and low enthalpy competitors. The main high enthalpy competitors are industrial turbine manufacturers such as Mitsubishi, Fuji and Toshiba of Japan, GE/Nuovo Pignone and Ansaldo Energia of Italy, and Alstom S.A. of France.

The low enthalpy competitors are either binary systems manufacturers using the Organic Rankine Cycle such as Fuji of Japan, Mafi Trench, Atlas Copco Company, GE-Nuovo Pignone of Italy, and Turboden, a Pratt & Whitney Power Systems company (a unit of United Technologies Company), or systems integrators such as Turbine Air Systems and Geothermal Development Associates (GDA) of the U.S.

In the REG business, our competitors are other Organic Rankine Cycle manufacturers (such as GE and Turboden), manufactures that use Kalina technology (such as Siemens AG of Germany), as well as other manufacturers of conventional steam turbines. We believe that our REG system has technological and economic advantages over the products offered by the above mentioned companies, depending on the heat source conditions.

In the remote power unit business, we face competition from Global Thermoelectric, as well as from manufacturers of diesel generator sets and small wind and solar installations with batteries.

Currently, none of our competitors compete with us both in the sale of electricity and in the product business. Our competitors in the electricity segment are from time to time and in different jurisdictions our customers in the product segment.

When the proposed project is an EPC project we also compete with other service suppliers, such as project/engineering companies.

**Customers**

Most of our revenues from the sale of electricity in the year ended December 31, 2011 were derived from fully-contracted energy and/or capacity payments under long-term PPAs with governmental and private utility entities. Southern California Edison, Sierra Pacific Power Company and Nevada Power Company (subsidiaries of NV Energy), HELCO, and SCPPA accounted for 27.7%, 13.0%, 10.6% and 1.9% of revenues, respectively, for the year ended December 31, 2011. Based on publicly available information, as of December 31, 2011, the issuer ratings of Southern California Edison, HELCO, Sierra Pacific Power Company, Nevada Power Company, and SCPPA were as set forth below:

<b>Issuer</b>	<b>Standard &amp; Poor's Ratings Services</b>	<b>Moody's Investors Service Inc.</b>
Southern California Edison	BBB+ (stable outlook)	A3 (stable outlook)
HELCO	BBB- (stable outlook)	Baa1
Sierra Pacific Power Company	BB+ (stable outlook)	Ba1 (stable outlook)
Nevada Power Company	BB+ (stable outlook)	Ba1 (stable outlook)
SCPPA	BBB (Outlook Developing)	Aa3 (stable outlook)

The credit ratings of any power purchaser may change from time to time. There is no publicly available information with respect to the credit rating or stability of the power purchasers under the PPAs for our foreign power plants.

Our revenues from the product business are derived from contractors or owners or operators of power plants, process companies, and pipelines, none of which traditionally account for more than 10% of our Product Segment revenues.

## **Table of Contents**

### **Raw Materials, Suppliers and Subcontractors**

In connection with our manufacturing activities, we use raw materials such as steel and aluminum. We do not rely on any one supplier for the raw materials used in our manufacturing activities, as all of such raw materials are readily available from various suppliers.

We use subcontractors for some of the manufacturing for our products components and for construction activities of our power plants, which allows us to expand our construction and development capacity on an as-needed basis. We are not dependent on any one subcontractor and expect to be able to replace any subcontractor, or assume such manufacturing and construction activities of our projects ourselves, without adverse effect to our operations.

### **Employees**

As of December 31, 2011, we employed 1,226 employees, of which 526 were located in the United States, 540 were located in Israel and 160 were located in other countries. We expect that future growth in the number of our employees will be mainly attributable to the purchase and/or development of new power plants.

None of our employees (other than the employees at the Momotombo power plant) are represented by a labor union, and we have never experienced any labor dispute, strike or work stoppage. We consider our relations with our employees to be satisfactory. We believe our future success will depend on our continuing ability to hire, integrate, and retain qualified personnel.

We have no collective bargaining agreements with respect to our Israeli employees. However, by order of the Israeli Ministry of Industry, Trade and Labor, the provisions of a collective bargaining agreement between the Histadrut (the General Federation of Labor in Israel) and the Coordination Bureau of Economic Organizations (which includes the Industrialists Association) may apply to some of our non-managerial, finance and administrative, and sales and marketing personnel. This collective bargaining agreement principally concerns cost of living increases, length of the workday, minimum wages, insurance for work-related accidents, procedures for dismissing employees, annual and other vacation, sick pay, determination of severance pay, pension contributions, and other conditions of employment. We currently provide such employees with benefits and working conditions which are at least as favorable as the conditions specified in the collective bargaining agreement.

### **Insurance**

We maintain business interruption insurance, casualty insurance, including flood, volcanic eruption and earthquake coverage, and primary and excess liability insurance, as well as customary worker's compensation and automobile insurance and such other insurance, if any, as is generally carried by companies engaged in similar businesses and owning similar properties in the same general areas or as may be required by any of our PPAs, or any lease, financing arrangement, or other contract. To the extent any such casualty insurance covers both us and/or our power plants, and any other person and/or plants, we generally have specifically designated as applicable solely to us and our power plants all risk property insurance coverage in an amount based upon the estimated full replacement value of our power plants (provided that earthquake, volcanic eruption and flood coverage may be subject to annual aggregate limits depending on the type and location of the power plant) and business interruption insurance in an amount that also varies from power plant to power plant.

We generally purchase insurance policies to cover our exposure to certain political risks involved in operating in developing countries. Political risk insurance policies are generally issued by entities which specialize in such policies, such as the Overseas Private Investment Corporation (an agency of the U.S. government), or the Multilateral Investment Guarantee Agency (a member of the World Bank Group), and by private sector providers, such as Lloyd Syndicates, Zurich Emerging Markets and other such companies. To date all of our political risk insurance contracts are with the Multilateral Investment Guarantee Agency and with

---

## **Table of Contents**

Zurich Emerging Markets. We have obtained such insurance for all of our foreign power plants currently in operation. However, the policy for the Amatitlan Geothermal Project in Guatemala was terminated following the financing of the project in 2009 due to our reduced equity exposure. Such insurance policies generally cover, subject to the limitations and restrictions contained therein, approximately 90% of our losses derived from a specified governmental act, such as confiscation, expropriation, riots, and the inability to convert local currency into hard currency and, in certain cases, the breach of agreements.

### **Regulation of the Electric Utility Industry in the United States**

The following is a summary overview of the electric utility industry and applicable federal and state regulations, and should not be considered a full statement of the law or all issues pertaining thereto.

#### ***PURPA***

PURPA provides certain benefits described below, if a power plant is a Qualifying Facility. A small power production facility is a Qualifying Facility if: (i) the facility does not exceed 80 megawatts; (ii) the primary energy source of the facility is biomass, waste, renewable resources, or any combination thereof, and 75% of the total energy input of the facility is from these sources, and fossil fuel input is limited to specified uses; and (iii) the facility has filed with FERC a notice of self-certification of qualifying status, or has filed with FERC an application for FERC certification of qualifying status, that has been granted. The 80 MW size limitation, however, does not apply to a facility if (i) it produces electric energy solely by the use, as a primary energy input, of solar, wind, waste or geothermal resources; and (ii) an application for certification or a notice of self-certification of qualifying status of the facility was submitted to the FERC prior to December 21, 1994, and construction of the facility commenced prior to December 31, 1999.

PURPA exempts Qualifying Facilities from regulation under the PUHCA 2005 and exempts Qualifying Facilities from most provisions of the FPA and state laws relating to the financial, organization and rate regulation of electric utilities. In addition, FERC's regulations promulgated under PURPA require that electric utilities offer to purchase electricity generated by Qualifying Facilities at a rate based on the purchasing utility's incremental cost of purchasing or producing energy (also known as avoided cost).

Following passage of the Energy Policy Act of 2005, FERC issued a final rule that requires small power Qualifying Facilities to obtain market-based rate authority pursuant to the FPA for sales of energy or capacity from facilities larger than 20 MW in size that are made (a) pursuant to a contract executed after March 17, 2006 that is not a contract made pursuant to a state regulatory authority's implementation of PURPA; or (b) not pursuant to another provision of a state regulatory authority's implementation of PURPA. The practical effect of this final rule is to require Qualifying Facilities that are larger than 20 MW in size that seek to engage in non-PURPA sales of power (i.e., power that is sold in a manner that is not pursuant to a pre-existing contract or state implementation of PURPA) to obtain market-based rate authority from FERC for these non-PURPA sales. However, the rule protects a Qualifying Facility's rights under any contract or obligation for the sale of energy in effect or pending approval before the appropriate state regulatory authority or non-regulated electric utility on August 8, 2005. Until that contract expires, the Qualifying Facility will not be required to file for market based rates.

The Energy Policy Act of 2005 also allows FERC to terminate a utility's obligation to purchase energy from Qualifying Facilities upon a finding that Qualifying Facilities have nondiscriminatory access to either: (i) independently administered, auction-based day ahead, and real time markets for energy and wholesale markets for long-term sales of capacity; (ii) transmission and interconnection services provided by a FERC-approved regional transmission entity and administered under an open-access transmission tariff that affords nondiscriminatory treatment to all customers, and competitive wholesale markets that provide a meaningful opportunity to sell capacity and energy, including long and short term sales; or (iii) wholesale markets for the sale of capacity and energy that are at a minimum of comparable competitive quality as markets described in

---

## **Table of Contents**

(i) and (ii) above. FERC issued a rule to implement these provisions of the Energy Policy Act of 2005. This rule gives utilities the right to apply to eliminate the mandatory purchase obligation. The rule also creates a rebuttable presumption that a utility provides nondiscriminatory access if it has an open access transmission tariff in compliance with FERC's pro forma open access transmission tariff. Further, the rule provides a procedure for utilities that are not members of the four named regional transmission organizations to file to obtain relief from the mandatory purchase obligation on a service territory-wide basis, and establishes procedures for affected Qualifying Facilities to seek reinstatement of the purchase obligation. The rule protects a Qualifying Facility's rights under any contract or obligation involving purchases or sales that are entered into before FERC has determined that the contracting utility is entitled to relief from the mandatory purchase obligation. The FERC recently granted the request of California investor-owned utilities for a waiver of the mandatory purchase obligation for Qualifying Facilities larger than 20 MW in size.

In addition, the Energy Policy Act of 2005 eliminated the restriction on utility ownership of a Qualifying Facility. Prior to the Energy Policy Act of 2005, electric utilities or electric utility holding companies could not own more than a 50% equity interest in a Qualifying Facility. Under the Energy Policy Act of 2005, electric utilities or holding companies may own up to 100% of the equity interest in a Qualifying Facility.

We expect that our power plants in the United States will continue to meet all of the criteria required for Qualifying Facilities under PURPA. However, since the Heber power plants have PPAs with Southern California Edison that require Qualifying Facility status to be maintained, maintaining Qualifying Facility status remains a key obligation. If any of the Heber power plants loses its Qualifying Facility status our operations could be adversely affected. Loss of Qualifying Facility status would eliminate the Heber power plants' exemption from the FPA and thus, among other things, the rates charged by the Heber power plants in the PPAs with Southern California Edison and SCPPA would become subject to FERC regulation. Further, it is possible that the utilities that purchase power from the power plants could successfully obtain an elimination of the mandatory-purchase obligation in their service territories. If this occurs, the power plants' existing PPAs will not be affected, but the utilities will not be obligated under PURPA to renew these PPAs or execute new PPAs upon the existing PPAs' expiration.

### ***PUHCA***

PUHCA was repealed, effective February 8, 2006, pursuant to the Energy Policy Act of 2005. Although PUHCA was repealed, the Energy Policy Act of 2005 created the new PUHCA 2005. Under PUHCA 2005, the books and records of a utility holding company, its affiliates, associate companies, and subsidiaries are subject to FERC and state commission review with respect to transactions that are subject to the jurisdiction of either FERC or the state commission or costs incurred by a jurisdictional utility in the same holding company system. However, if a company is a utility holding company solely with respect to Qualifying Facilities, exempt wholesale generators, or foreign utility companies, it will not be subject to review of books and records by FERC under PUHCA 2005. Qualifying Facilities that make only wholesale sales of electricity are not subject to state commissions' rate, financial, and organizational regulations and, therefore, in all likelihood would not be subject to any review of their books and records by state commissions pursuant to PUHCA 2005 as long as the Qualifying Facility is not part of a holding company system that includes a utility subject to regulation in that state.

### ***FPA***

Pursuant to the FPA, the FERC has exclusive rate-making jurisdiction over most wholesale sales of electricity and transmission in interstate commerce. These rates may be based on a cost of service approach or may be determined on a market basis through competitive bidding or negotiation. Qualifying Facilities are exempt from most provisions of the FPA. If any of the power plants were to lose its Qualifying Facility status, such power plant could become subject to the full scope of the FPA and applicable state regulations. The application of the FPA and other applicable state regulations to the power plants could require our power plants to comply with an increasingly complex regulatory regime that may be costly and greatly reduce our operational

## **Table of Contents**

flexibility. Even if a power plant does not lose Qualifying Facility status, if a PPA with a power plant is terminated or otherwise expires, a Qualifying Facility power plant in excess of 20 MW will become subject to rate regulation under the Federal Power Act.

If a power plant in the United States were to become subject to FERC's ratemaking jurisdiction under the FPA as a result of loss of Qualifying Facility status and the PPA remains in effect, the FERC may determine that the rates currently set forth in the PPA are not appropriate and may set rates that are lower than the rates currently charged. In addition, the FERC may require that the power plant refund a portion of amounts previously paid by the relevant power purchaser to such power plant. Such events would likely result in a decrease in our future revenues or in an obligation to disgorge revenues previously received from the power plant, either of which would have an adverse effect on our revenues.

Moreover, the loss of the Qualifying Facility status of any of our power plants selling energy to Southern California Edison could also permit Southern California Edison, pursuant to the terms of its PPA, to cease taking and paying for electricity from the relevant power plant and to seek refunds for past amounts paid. In addition, the loss of any such status would result in the occurrence of an event of default under the indenture for the OFC Senior Secured Notes and the OrCal Senior Secured Notes and hence would give the indenture trustee the right to exercise remedies pursuant to the indenture and the other financing documents.

### ***State Regulation***

Our power plants in California and Nevada, by virtue of being Qualifying Facilities that make only wholesale sales of electricity, are not subject to rate, financial and organizational regulations applicable to electric utilities in those states. The power plants each sell or will sell their electrical output under PPAs to electric utilities (Sierra Pacific Power Company, Nevada Power Company, Southern California Edison or SCPPA). All of the utilities except SCPPA are regulated by their respective state public utilities commissions. Sierra Pacific Power Company and Nevada Power Company are regulated by the PUCN. Southern California Edison is regulated by the CPUC.

Under Hawaii law, non-fossil generators are not subject to regulation as public utilities. Hawaii law provides that a geothermal power producer is to negotiate the rate for its output with the public utility purchaser. If such rate cannot be determined by mutual accord, the PUCH will set a just and reasonable rate. If a non-fossil generator in Hawaii is a Qualifying Facility, federal law applies to such Qualifying Facility and the utility is required to purchase the energy and capacity at its avoided cost. The rates for our power plant in Hawaii are established under a long-term PPA with HELCO.

### **Environmental Permits**

U.S. environmental permitting regimes with respect to geothermal projects center upon several general areas of focus. The first involves land use approvals. These may take the form of Special Use Permits or Conditional Use Permits from local planning authorities or a series of development and utilization plan approvals and right of way approvals where the geothermal facility is entirely or partly on BLM or U.S. Forest Service lands. Certain federal approvals require a review of environmental impacts in conformance with the federal National Environmental Policy Act. In California, some local permit approvals require a similar review of environmental impacts under a state statute known as the California Environmental Quality Act. These federal and local land use approvals typically impose conditions and restrictions on the construction, scope and operation of geothermal projects.

The second category of permitting focuses on the installation and use of the geothermal wells themselves. Geothermal projects typically have three types of wells: (i) exploration wells designed to define and verify the geothermal resource, (ii) production wells to extract the hot geothermal liquids (also known as brine) for the power plant, and (iii) injection wells to inject the brine back into the subsurface resource. In Nevada and on BLM lands, the well permits take the form of geothermal drilling permits for well installation. Approvals are also

## **Table of Contents**

required to modify wells, including for use as production or injection wells. For all wells drilled in Nevada, a geothermal drilling permit must be obtained from the Nevada Division of Minerals. Those wells in Nevada to be used for injection will also require Underground Injection Control permits from the Nevada Division of Environmental Protection. Geothermal wells on private lands in California require drilling permits from the California Department of Conservation's DOGGR. The eventual designation of these installed wells as individual production or injection wells and the ultimate closure of any wells is also reviewed and approved by DOGGR pursuant to a DOGGR-approved Geothermal Injection Program.

A third category of permits involves the regulation of potential air emissions associated with the construction and operation of wells and power plants and surface water discharges associated with construction and operations activities. Generally, each well and plant requires a preconstruction air permit and storm water discharge permit before earthwork can commence. In addition, in some jurisdictions the wells that are to be used for production require and those used for injection may require air emissions permits to operate. Combustion engines and other air pollutant emissions sources at the projects may also require air emissions permits. For our projects, these permits are typically issued at the state or county level. Permits are also required to manage storm water during project construction and to manage drilling muds from well construction, as well as to manage certain discharges to surface impoundments, if any.

A fourth category of permits, that are required in both California and Nevada, includes ministerial permits such as hazardous materials storage and management permits and pressure vessel operating permits. We are also required to obtain water rights permits in Nevada and may be required to obtain groundwater permits in California to use groundwater resources for makeup water. In addition to permits, there are various regulatory plans and programs that are required, including risk management plans (federal and state programs) and hazardous materials management plans (in California).

In some cases our projects may also require permits, issued by the applicable federal agencies or authorized state agencies, regarding threatened or endangered species, permits to impact wetlands or other waters and notices of construction of structures which may have an impact on airspace. Environmental laws and regulations may change in the future, which may lead to increases in the time to receive such permits and associated costs of compliance.

As of the date of this report, all of the material environmental permits and approvals currently required for our operating power plants have been obtained. We are currently experiencing regulatory delays in obtaining various environmental permits and approvals required for projects in development and construction. These delays may lead to increases in the time and cost to complete these projects. Our operations are designed and conducted to comply with applicable environmental permit and approval requirements. Non-compliance with any such requirements could result in fines or other penalties.

## **Environmental Laws and Regulations**

Our facilities are subject to a number of environmental laws and regulations relating to development, construction and operation of geothermal facilities. In the United States, these may include the Clean Air Act, the Clean Water Act, the Emergency Planning and Community Right-to-Know Act, the Endangered Species Act, the National Environmental Policy Act, the Resource Conservation and Recovery Act, and related state laws and regulations.

Our geothermal operations involve significant quantities of brine (substantially, all of which we reinject into the subsurface) and scale, both of which can contain materials (such as arsenic, lead, and naturally occurring radioactive materials) in concentrations that exceed regulatory limits used to define hazardous waste. We also use various substances, including isopentane and industrial lubricants, that could become potential contaminants and are generally flammable. Hazardous materials are also used in our equipment manufacturing operations in Israel. As a result, our projects are subject to domestic and foreign federal, state and local statutory and regulatory requirements regarding the use, storage, fugitive emissions, and disposal of hazardous substances. The cost of remediation activities associated with a spill or release of such materials could be significant.

---

## **Table of Contents**

Although we are not aware of any mismanagement of these materials, including any mismanagement prior to the acquisition of some of our power plants, that has materially impaired any of the power plant sites, any disposal or release of these materials onto the power plant sites, other than by means of permitted injection wells, could lead to contamination of the environment and result in material cleanup requirements or other responsive obligations under applicable environmental laws. We believe that at one time there may have been a gas station located on the Mammoth complex site, but because of significant surface disturbance and construction since that time further physical evaluation of the environmental condition of the former gas station site has been impractical. We believe that, given the subsequent surface disturbance and construction activity in the vicinity of the suspected location of the service station, it is likely that environmental contamination, if any, associated with the former facilities and any associated underground storage tanks would have already been encountered if they still existed.

### **Regulation of the Electric Utility Industry in our Foreign Countries of Operation**

The following is a summary overview of certain aspects of the electric industry in the foreign countries in which we have an operating geothermal power plant and should not be considered a full statement of the laws in such countries or all of the issues pertaining thereto.

Nicaragua. In 1998, two laws were approved by Nicaraguan authorities, Law No. 272-98 and Law No. 271-98, which define the structure of the energy sector in the country. Law No. 272-98 provides for the establishment of the CNE, which is responsible for setting policies, strategies and objectives as well as approving indicative plans for the energy sector. Law No. 271-98 formally assigned regulatory, supervisory, inspection and oversight functions to the INE.

In 2002, the National Congress enacted Law No. 443 to regulate the granting of exploration and exploitation concessions for geothermal fields. The INE adopted this law.

In 2007, Nicaragua passed Law No. 612 amending Law No. 290, which governs the organization of the executive branch. Among other matters, the new law established a new ministry of energy and mining, which has assumed all of the functions and responsibilities of the CNE. The new Ministry of Energy and Mining is responsible for administering Law No. 443 described above, and is also responsible for granting concessions and permits relating to the exploration or exploitation of any energy source, as well as concessions and licensing for generation, transmission, and distribution of energy.

The Nicaraguan energy sector has been restructured and partially privatized. Following such restructuring and privatization, the government retained title and control of the transmission assets and created the ENATREL, which is in charge of the operation of the transmission system in the country and of the new wholesale market. As part of the restructuring, most of the distribution facilities previously owned by the Nicaraguan Electricity Company, the government-owned vertically-integrated monopoly, were transferred to two companies, DISNORTE and DISSUR, which in turn were privatized and acquired by an affiliate of Union Fenosa, a large Spanish utility. Following such privatization, the PPA for our Momotombo power plant was assigned by the Nicaraguan Electricity Company to DISNORTE and DISSUR. In addition, a National Dispatch Center was created to work with ENATREL and provide for dispatch and wholesale market administration.

Guatemala. The General Electricity Law of 1996, Decree 93-96, created a wholesale electricity market in Guatemala and established a new regulatory framework for the electricity sector. The law created a new regulatory commission, the CNEE, and a new wholesale power market administrator, the AMM, for the regulation and administration of the sector. The AMM is a private not-for-profit entity. The CNEE functions as an independent agency under the Ministry of Energy and Mines and is in charge of regulating, supervising, and controlling compliance with the electricity law, overseeing the market and setting rates for transmission services, and distribution to medium and small customers. All distribution companies must supply electricity to such customers pursuant to long-term contracts with electricity generators. Large customers can contract directly with the distribution companies, electricity generators or power marketers, or buy energy in the spot market.

## Table of Contents

Guatemala has approved a Law of Incentives for the Development of Renewable Energy Power plants, Decree 52-2003, in order to promote the development of renewable energy power plants in Guatemala. This law provides certain benefits to companies utilizing renewable energy, including a 10-year exemption from corporate income tax and VAT on imports and customs duties. On September 16, 2008, CNEE issued a resolution which approved the Technical Norms for the Connection, Operation, Control and Commercialization of the Renewable Distributed Generation and Self-producers Users with Exceeding Amounts of Energy. This technical norm was created to regulate all aspects of generation, connection, operation, control and commercialization of electric energy produced with renewable sources; to promote and facilitate the installation of new generation plants, and to promote the connection of existing generation plants which have exceeding amounts of electric energy for commercialization.

Kenya. The electric power sector in Kenya is regulated by the Kenyan Energy Act. Among other things, the Kenyan Energy Act provides for the licensing of electricity power producers and public electricity suppliers or distributors. KPLC is the only licensed public electricity supplier and has a monopoly in the distribution of electricity in the country. The Kenyan Energy Act permits IPPs to install power generators and sell electricity to KPLC, which is owned by various private and government entities, and which currently purchases energy and capacity from other IPPs in addition to our Olkaria III complex. The electricity sector is regulated by the ERC which was created under the Kenyan Energy Act. KPLC's retail electricity rates are subject to approval by the ERC. The ERC has an expanded mandate to regulate not just the electric power sector but the entire energy sector in Kenya. Transmission of electricity is now undertaken by KETRACO while another company, GDC, is responsible for geothermal assessment, drilling of wells and sale of steam for electricity operations to IPPs and KenGen. Both KETRACO and GDC are wholly owned by the government of Kenya. Under the new national constitution enacted in August 2010, the formulation of energy policy and the regulation of the energy sector remains vested in the national government (and not at the regional or local level where individual power plants may be located).

### **Regulation of Solar PV in Israel**

The PUA published on December 12, 2009 regulations for medium-size Solar PV power systems that are larger than 50 kW. According to the regulations, the installed capacity of a medium-sized Solar PV system may not exceed the feasible connection to the distribution network.

The PUA approved a feed-in-tariff for medium-sized power systems. This feed-in-tariff is available for up to 300 MW of medium-sized power systems initiated prior to an expiry date in 2017. Rates under the feed-in-tariff are guaranteed for 20 years.

The feed-in-tariff rates awarded to a new project are set based on the year in which the PUA's tariff approval of such project is obtained. If the capacity cap in a certain year is met, projects in excess of the cap will be awarded the feed-in-tariff for the following year. On December 13, 2011, the PUA amended the feed-in-tariff rates to reflect reduced global Solar PV prices. The current feed-in-tariff rates are shown in the table below.

<b>Year</b>	<b>Annual Cap (in MW)</b>	<b>Cumulative Cap (in MW)</b>	<b>Rate* (Cent/kWh)</b>
2010-2011	50	50	39
2012	65	115	29
2013	85	200	27
2014-2017	100	300	25

\* Based on an exchange rate of the NIS/dollar as of December 31, 2011 (\$1 = NIS 3.821)

The PUA published on December 12, 2009 regulations for utility-scale Solar PV power systems above 12 MW that will be connected to the transmission system. Based on the December 31, 2011 exchange rate, the feed-in-tariff, 26 cents/kWh, is valid until 2015 after which the rate will drop by 10%. The quota for this rate is 200 MW and it is valid so long as project proponents reach financial closing by December 31, 2013.

## **Table of Contents**

The licensing process designed by the PUA includes several stages. Developers that are interested in applying for a production license are required at the first stage to obtain a temporary license that will be given to candidates who can demonstrate they meet the following requirements:

Proven land rights: for private lands, a signed option agreement between the candidate and the land-rights owner. If the land is owned by the ILA, the candidate must have a signed agreement with the land-rights owner, in addition to an ILA land-rights preference.

Adequate financial resources: the candidate must demonstrate that it has equity in an amount equal to 20% of the normative cost to build a power plant, which is estimated by the PUA at \$3.7 million per installed MW.

Feasibility study completed by the Israel Electric Corporation Ltd. that demonstrates that the power plant can connect to the grid in accordance with the capacity demand (this requirement applies only to facilities with a capacity higher than 630kVA which will be connected to the high voltage grid).

Appropriate experience and capabilities for design, construction and operation of high voltage power plants according to the power plant size declared in the temporary license.

A request that demonstrates compliance with the above requirements will be reviewed by PUA staff and will require the approval of the PUA plenum, followed by the approval of the Israeli Ministry of Energy and Water Resources.

Upon the signature of the conditional license by the Israeli Ministry of Energy and Water Resources, the developer of a facility with a capacity higher than 1 MW must provide the PUA with a bank guarantee in an amount equal to \$1.80 per installed kW. In the event the developer subsequently fails to meet the milestones specified in the conditional license for financial closing, the PUA may draw up to 35% of the bank guarantee.

A developer that receives a conditional license will have 42 months to obtain all required permits to operate the power plant and attain a production license.

In December 2010, the National Planning Council of the Israeli Ministry of the Interior issued regulations for the development of solar installations in Israel. The regulations include guidelines for the statutory planning route for the development of Solar PV projects on agricultural and nonagricultural land. Following statutory approval, a developer who meets the milestones set forth in its conditional license, will receive a provisional tariff approval valid for 90 days which ensures the developer's place under the cap. During this 90-day period, the developer is supposed to close the financing terms. Once the financing terms are finalized, the provisional tariff approval will become permanent, and the tariff will be secured for 20 years from commencement of commercial operation. The developer may commence the construction and installation of the power plant upon receipt of the permanent tariff approval. For lands owned by the ILA, in addition to statutory approval, the developer must (i) obtain the consent of the ILA to build the power plant and (ii) meet further conditions based on the land determination.

## **Table of Contents**

### **ITEM 1A. RISK FACTORS**

Because of the following factors, as well as other variables affecting our business, operating results or financial condition, past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods.

*Our financial performance depends on the successful operation of our geothermal power and REG plants, which is subject to various operational risks.*

Our financial performance depends on the successful operation of our subsidiaries' geothermal and REG power plants. In connection with such operations, we derived approximately 74.1% of our total revenues for the year ended December 31, 2011 from the sale of electricity. The cost of operation and maintenance and the operating performance of our subsidiaries' geothermal power and REG plants may be adversely affected by a variety of factors, including some that are discussed elsewhere in these risk factors and the following:

regular and unexpected maintenance and replacement expenditures;

shutdowns due to the breakdown or failure of our equipment or the equipment of the transmission serving utility;

labor disputes;

the presence of hazardous materials on our power plant sites;

continued availability of cooling water supply;

catastrophic events such as fires, explosions, earthquakes, landslides, floods, releases of hazardous materials, severe storms, or similar occurrences affecting our power plants or any of the power purchasers or other third parties providing services to our power plants; and

the aging of power plants may reduce their availability and increase the cost of their maintenance.

Any of these events could significantly increase the expenses incurred by our power plants or reduce the overall generating capacity of our power plants and could significantly reduce or entirely eliminate the revenues generated by one or more of our power plants, which in turn would reduce our net income and could materially and adversely affect our business, financial condition, future results and cash flow.

As mentioned above, the aging of our power plants may reduce their availability and increase maintenance costs due to the need to repair or replace our equipment. For example, in 2008, we experienced protracted failures of two of the Steamboat 2 and 3 power plants' turbines, which were not manufactured by us. We replaced the turbines and successfully upgraded the power plant. Such major maintenance activities impact both the capacity factor of the affected power plant and its operating costs.

*Our exploration, development, and operation of geothermal energy resources are subject to geological risks and uncertainties, which may result in decreased performance or increased costs for our power plants.*

Our primary business involves the exploration, development, and operation of geothermal energy resources. These activities are subject to uncertainties that, in certain respects, are similar to those typically associated with oil and gas exploration, development, and exploitation, such as dry holes, uncontrolled releases, and pressure and temperature decline. Any of these uncertainties may increase our capital expenditures and our operating costs, or reduce the efficiency of our power plants. We may not find geothermal resources capable of supporting a commercially viable power plant at a number of exploration sites where we have conducted tests, acquired land rights, and drilled test wells, which would adversely affect our development of geothermal power plants. Prior to our acquisition of the Steamboat Hills power plant, one of the wells

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

related to the power plant experienced an uncontrolled release. The high temperature and high pressure in the Puna power plant's geothermal energy resource requires special reservoir management and monitoring. Further, since the commencement of their

---

**Table of Contents**

operations, several of our power plants have experienced geothermal resource cooling and/or reservoir pressure decline in the normal course of operations. For example, some of Brady's production wells have cooled significantly due to breakthrough from injection wells. At Momotombo, early operations without injection resulted in reservoir pressure decline and consequent reduced productivity and scale plugging in the formation near the producer wellbores. Because geothermal reservoirs are complex geological structures, we can only estimate their geographic area and sustainable output. The viability of geothermal power plants depends on different factors directly related to the geothermal resource (such as the temperature, pressure, storage capacity, transmissivity, and recharge) as well as operational factors relating to the extraction or reinjection of geothermal fluids. At our North Brawley power plant instability of the sands and clay in the geothermal resource and variability in the chemical composition of the geothermal fluid have all combined to increase our capital expenditures for the plant, as well as our ongoing operating expenses, and have so far prevented the plant from sustainable operation at its intended design capacity. Our geothermal energy power plants may also suffer an unexpected decline in the capacity of their respective geothermal wells and are exposed to a risk of geothermal reservoirs not being sufficient for sustained generation of the electrical power capacity desired over time.

Another aspect of geothermal operations is the management and stabilization of subsurface impacts caused by fluid injection pressures of production and injection fluids to mitigate subsidence. In the case of the geothermal resource supplying the Heber complex, pressure drawdown in the center of the well field has caused some localized ground subsidence, while pressure in the peripheral areas has caused localized ground inflation. Inflation and subsidence, if not controlled, can adversely affect farming operations and other infrastructure at or near the land surface. Potential costs, which cannot be estimated and may be significant, of failing to stabilize site pressures in the Heber complex area include repair and modification of gravity-based farm irrigation systems and municipal sewer piping and possible repair or replacement of a local road bridge spanning an irrigation canal.

Additionally, active geothermal areas, such as the areas in which our power plants are located, are subject to frequent low-level seismic disturbances. Serious seismic disturbances are possible and could result in damage to our power plants or equipment or degrade the quality of our geothermal resources to such an extent that we could not perform under the PPA for the affected power plant, which in turn could reduce our net income and materially and adversely affect our business, financial condition, future results and cash flow. If we suffer a serious seismic disturbance, our business interruption and property damage insurance may not be adequate to cover all losses sustained as a result thereof. In addition, insurance coverage may not continue to be available in the future in amounts adequate to insure against such seismic disturbances.

Furthermore, absent additional geologic/hydrologic studies, any increase in power generation from our geothermal power plants, or failure to reinject the geothermal fluid, or improper maintenance of the hydrological balance may affect the operational duration of the geothermal resource and cause it to become a wasting asset, and may adversely affect our ability to generate power from the relevant geothermal power plant.

***Reduced levels of recovered energy required for the operation of our REG power plants may result in decreased performance of such power plants.***

Our REG power plants generate electricity from recovered energy or so-called "waste heat" that is generated as a residual by-product of gas turbine-driven compressor stations and a variety of industrial processes. Any interruption in the supply of the recovered energy source, such as a result of reduced gas flows in the pipelines or reduced level of operation at the compressor stations, or in the output levels of the various industrial processes, may cause an unexpected decline in the capacity and performance of our recovered energy power plants.

***Unfavorable meteorological conditions may have a negative effect on electricity production at our Solar PV projects and, therefore, the revenue from such projects may be substantially below our expectations.***

The electricity that we expect to produce and the revenue that we expect to generate by our Solar PV power plants are highly dependent on suitable solar conditions and associated weather conditions, which are beyond our

## **Table of Contents**

control. It is possible that the solar energy at our Solar PV plants will be lower than expected, perhaps significantly so, which would result in an unexpected reduction in energy production and performance and decreased revenues at our Solar PV plants.

*Our business development activities may not be successful and our projects under construction may not commence operation as scheduled.*

We are in the process of developing and constructing a number of new power plants. We recently entered the solar energy sector of the renewable energy industry and have signed a PPA with IID for a 10 MW Solar PV project to be built in Imperial Valley, California and we entered into a joint venture with third parties to develop Solar PV power projects in Israel. Our success in developing a particular project is contingent upon, among other things, negotiation of satisfactory engineering and construction agreements and PPAs, receipt of required governmental permits, obtaining adequate financing, and the timely implementation and satisfactory completion of construction. We may be unsuccessful in accomplishing any of these matters or doing so on a timely basis. Although we may attempt to minimize the financial risks attributable to the development of a project by securing a favorable PPA, obtaining all required governmental permits and approvals and arranging adequate financing prior to the commencement of construction, the development of a power project may require us to incur significant expenses for preliminary engineering, permitting and legal and other expenses before we can determine whether a project is feasible, economically attractive or capable of being financed. Our lack of experience in the Solar PV sector may also affect our ability to successfully develop, construct, finance, and operate the Solar PV power projects.

Currently, we have power plants under development or construction in the United States, Kenya, Chile, Guatemala, New Zealand and Indonesia, and we intend to pursue the expansion of some of our existing plants and the development of other new plants. Our completion of these facilities is subject to substantial risks, including:

unanticipated cost increases;

shortages and inconsistent qualities of equipment, material and labor;

work stoppages;

inability to obtain permits and other regulatory matters;

failure by key contractors and vendors to timely and properly perform, including in the Solar PV sector where we will use equipment manufactured by others;

inability to secure the required transmission capacity;

adverse environmental and geological conditions (including inclement weather conditions); and

our attention to other projects, including those in the solar energy sector.

Any one of which could give rise to delays, cost overruns, the termination of the plant expansion, construction or development or the loss (total or partial) of our interest in the project under development, construction, or expansion.

*We rely on power transmission facilities that we do not own or control.*

We depend on transmission facilities owned and operated by others to deliver the power we sell from our power plants to our customers. If transmission is disrupted, or if the transmission capacity infrastructure is inadequate, our ability to sell and deliver power to our customers may be adversely impacted and we may either incur additional costs or forego revenues. In addition, lack of access to new transmission capacity may

affect our ability to develop new projects. Existing congestion of transmission capacity, as well as expansion of transmission systems and competition from other developers seeking access to expanded systems, could also affect our performance.

## **Table of Contents**

### ***The aftermath of the recent global recession and its attendant credit constraints could adversely affect us.***

We may continue to experience lower levels of worldwide demand for energy, and face tighter credit markets, as the world economy continues to recover from the disruption in the global credit markets, failures or material business deterioration of investment banks, commercial banks, and other financial institutions and intermediaries in the United States and elsewhere around the world, concerns over European Union debt and currency crisis and significant reductions in asset values across businesses, households and individuals that led to the recent global recession. These conditions may adversely affect both our Electricity and Product Segments. Among other things, we might face:

potential adverse impacts on our ability to negotiate with existing lenders, waivers or modifications of the terms of existing financing arrangements if and when that might be necessary;

potential declines in revenues in our Product Segment due to reduced or postponed orders or other factors caused by economic challenges faced by our customers and prospective customers; and

potential adverse impacts on our customers' ability to pay, when due, amounts payable to us and related increases in our cost of capital associated with any increased working capital or borrowing needs we may have if this occurs, or to collect amounts payable to us in full (or at all) if any of our customers fail or seek protection under applicable bankruptcy or insolvency laws.

Any of these things could adversely affect our business, financial condition, operating results, and cash flow.

### ***We may be unable to obtain the financing we need to pursue our growth strategy and any future financing we receive may be less favorable to us than our current financing arrangements, either of which may adversely affect our ability to expand our operations.***

Most of our geothermal power plants generally have been financed using leveraged financing structures, consisting of non-recourse or limited recourse debt obligations. As of December 31, 2011, we had approximately \$1,025.0 million of total consolidated indebtedness, of which approximately \$476.8 million represented non-recourse debt and limited recourse debt held by our subsidiaries. Each of our projects under development or construction and those projects and businesses we may seek to acquire or construct will require substantial capital investment. Our continued access to capital with acceptable terms is necessary for the success of our growth strategy. Our attempts to obtain future financings may not be successful or on favorable terms.

Market conditions, including those described in the previous risk factor, and other factors may not permit future project and acquisition financings on terms similar to those our subsidiaries have previously received. Our ability to arrange for financing on a substantially non-recourse or limited recourse basis, and the costs of such financing, are dependent on numerous factors, including general economic conditions, conditions in the global capital and credit markets (as discussed above), investor confidence, the continued success of current power plants, the credit quality of the power plants being financed, the political situation in the country where the power plant is located, and the continued existence of tax and securities laws which are conducive to raising capital. If we are not able to obtain financing for our power plants on a substantially non-recourse or limited-recourse basis, we may have to finance them using recourse capital such as direct equity investments, parent company loans or the incurrence of additional debt by us.

Also, in the absence of favorable financing options, we may decide not to build new plants or acquire facilities from third parties. Any of these alternatives could have a material adverse effect on our growth prospects.

---

**Table of Contents**

*Our foreign power plants expose us to risks related to the application of foreign laws, taxes, economic conditions, labor supply and relations, political conditions, and policies of foreign governments, any of which risks may delay or reduce our ability to profit from such power plants.*

We have substantial operations outside of the United States that generated revenues in the amount of \$187.3 million for the year ended December 31, 2011, which represented 42.9% of our total revenues for such twelve-month period. Our foreign operations are subject to regulation by various foreign governments and regulatory authorities and are subject to the application of foreign laws. Such foreign laws or regulations may not provide for the same type of legal certainty and rights, in connection with our contractual relationships in such countries, as are afforded to our power plants in the United States, which may adversely affect our ability to receive revenues or enforce our rights in connection with our foreign operations. Furthermore, existing laws or regulations may be amended or repealed, and new laws or regulations may be enacted or issued. In addition, the laws and regulations of some countries may limit our ability to hold a majority interest in some of the power plants that we may develop or acquire, thus limiting our ability to control the development, construction and operation of such power plants. Our foreign operations are also subject to significant political, economic and financial risks, which vary by country, and include:

changes in government policies or personnel;

changes in general economic conditions;

restrictions on currency transfer or convertibility;

changes in labor relations;

political instability and civil unrest;

changes in the local electricity market;

breach or repudiation of important contractual undertakings by governmental entities; and

expropriation and confiscation of assets and facilities.

In particular, in Guatemala the electricity sector was partially privatized, and it is currently unclear whether further privatization will occur in the future. Such developments may affect our Amatitlan and Zunil power plants if, for example, they result in changes to the prevailing tariff regime or in the identity and creditworthiness of our power purchasers. In Nicaragua, subsidiaries of Union Fenosa, which are the off-takers of our Momotombo power plant, have been experiencing difficulties adjusting the tariffs charged to their customers, thus affecting their ability to pay for electricity they purchase from power generators. This may adversely affect our Momotombo power plant. In addition, recent sentiment in the country suggests increased opposition to the presence of foreign investors generally, including in the electricity sector. In Kenya, the government is continuing to make an effort to deliver on campaign promises to reduce the price of electricity and is applying pressure on IPPs to lower their tariffs. In addition, further re-organization of KPLC has been made with the formation of a new company known as KETRACO to undertake power transmission. KPLC will continue to undertake power distribution. This re-organization is in accordance with the National Energy Policy (Sessional Paper No. 4 of 2004). No announcement has been made as to whether KPLC's transmission assets will be transferred to KETRACO. In addition, the state owned GDC has been formed and is operational. GDC is charged with the responsibility of geothermal assessment, drilling of steam wells and sale of steam to future IPPs and to KenGen for electricity generation. Any break-up and potential privatization of KPLC may adversely affect our Olkaria III complex. Although we generally obtain political risk insurance in connection with our foreign power plants, such political risk insurance does not mitigate all of the above-mentioned risks. In addition, insurance proceeds received pursuant to our political risk insurance policies, where applicable, may not be adequate to cover all losses sustained as a result of any covered risks and may at times be pledged in favor of the power plant lenders as collateral. Also, insurance may not be available in the future with the scope of coverage and in amounts of coverage adequate to insure against such risks and disturbances.



---

## **Table of Contents**

***Our foreign power plants and foreign manufacturing operations expose us to risks related to fluctuations in currency rates, which may reduce our profits from such power plants and operations.***

Risks attributable to fluctuations in currency exchange rates can arise when any of our foreign subsidiaries borrow funds or incur operating or other expenses in one type of currency but receive revenues in another. In such cases, an adverse change in exchange rates can reduce such subsidiary's ability to meet its debt service obligations, reduce the amount of cash and income we receive from such foreign subsidiary or increase such subsidiary's overall expenses. In addition, the imposition by foreign governments of restrictions on the transfer of foreign currency abroad, or restrictions on the conversion of local currency into foreign currency, would have an adverse effect on the operations of our foreign power plants and foreign manufacturing operations, and may limit or diminish the amount of cash and income that we receive from such foreign power plants and operations.

***A significant portion of our net revenue is attributed to payments made by power purchasers under PPAs. The failure of any such power purchaser to perform its obligations under the relevant PPA or the loss of a PPA due to a default would reduce our net income and could materially and adversely affect our business, financial condition, future results and cash flow.***

A significant portion of our net revenue is attributed to revenues derived from power purchasers under the relevant PPAs. Southern California Edison, Sierra Pacific Power Company and Nevada Power Company (subsidiaries of NV Energy), HELCO, and KPLC have accounted for 27.7%, 13.0%, 10.6%, and 8.0%, respectively, of our revenues for the year ended December 31, 2011. Neither we nor any of our affiliates makes any representations as to the financial condition or creditworthiness of any purchaser under a PPA, and nothing in this annual report should be construed as such a representation.

There is a risk that any one or more of the power purchasers may not fulfill their respective payment obligations under their PPAs. For example, as a result of the energy crisis in California in the early 2000s, Southern California Edison withheld payments it owed under various of its PPAs with a number of power generators (such as the Ormesa, Heber, and Mammoth power plants) payable for certain energy delivered between November 2000 and March 2001 under such PPAs until March 2002. If any of the power purchasers fails to meet its payment obligations under its PPAs, it could materially and adversely affect our business, financial condition, future results and cash flow.

***Seasonal variations may cause significant fluctuations in our cash flows, which may cause the market price of our common stock to fall in certain periods.***

Our results of operations are subject to seasonal variations. This is primarily because some of our domestic power plants receive higher capacity payments under the relevant PPAs during the summer months, and due to the generally higher short run avoided costs in effect during the summer months. Some of our other power plants may experience reduced generation during warm periods due to the lower heat differential between the geothermal fluid and the ambient surroundings. Such seasonal variations could materially and adversely affect our business, financial condition, future results and cash flow. If our operating results fall below the public's or analysts' expectations in some future period or periods, the market price of our common stock will likely fall in such period or periods.

***Pursuant to the terms of some of our PPAs with investor-owned electric utilities in states that have renewable portfolio standards, the failure to supply the contracted capacity and energy thereunder may result in the imposition of penalties.***

Under the PPAs of our Burdette, Desert Peak 2, Galena 2, Galena 3, Jersey Valley, McGinness Hills, Tuscarora and North Brawley power plants, we may be required to make payments to the relevant power purchaser in an amount equal to such purchaser's replacement costs for renewable energy relating to any shortfall amount of renewable energy that we do not provide as required under the PPA and which such power purchaser

**Table of Contents**

is forced to obtain from an alternate source. Five of these nine plants were in commercial operation in 2011, and to date the shortfall amount has not been material. In addition, we may be required to make payments to the relevant power purchaser in an amount equal to its replacement costs relating to any renewable energy credits we do not provide as required under the relevant PPA. We may be subject to certain penalties, and we may also be required to pay liquidated damages if certain minimum performance requirements are not met under certain of our PPAs. With respect to the Brady PPA, we may also be required to pay liquidated damages of approximately \$1.5 million (increased by the percent change in GNP deflator) to our power purchaser if the relevant power plant does not maintain availability of at least 85% during applicable peak periods. Any or all of these could materially and adversely affect our business, financial condition, future results and cash flow.

*The short run avoided costs for our power purchasers may decline, which would reduce our power plant revenues and could materially and adversely affect our business, financial condition, future results and cash flow.*

Under a number of the PPAs for our power plants in California, the price that Southern California Edison pays for energy is based upon its SRAC, which are the incremental costs that it would have incurred had it generated the relevant electrical energy itself or purchased such energy from others. Under settlement agreements between Southern California Edison and a number of power generators in California that are Qualifying Facilities, including our subsidiaries, the energy price component payable by Southern California Edison has been fixed through April 2012 and thereafter will be based on Southern California Edison's short run avoided costs, as determined by the CPUC. These short run avoided costs may vary substantially on a monthly basis, and are expected to be based primarily on natural gas prices for gas delivered to California as well as other factors. The levels of short run avoided cost prices paid by Southern California Edison may decline following the expiration date of the settlement agreements, which in turn would reduce our power plant revenues derived from Southern California Edison under our PPAs and could materially and adversely affect our business, financial condition, future results and cash flow.

In December 2010, a global settlement (Global Settlement) relating primarily to the purchase and payment obligations of investor-owned utilities to Qualifying Facilities was approved by the CPUC and became effective on November 23, 2011.

Under the terms of the Global Settlement, existing Qualifying Facilities with Legacy PPAs (meaning any PPA that was in effect at the time the Global Settlement went into effect) will have the option to choose to enter into a Legacy PPA Amendment within 180 days of the effectiveness of the Global Settlement. The Legacy PPA Amendment will allow a Qualifying Facility to choose a pricing methodology option going forward from the pricing effective date, which in Ormat's case will be the end of the fixed rate period that terminates April 2012 under a prior settlement agreement with Southern California Edison until December 31, 2014, after which the SRAC will be tied only to a formula with energy market heat rates. The pricing options include:

- (1) switching to a new SRAC methodology, which has fixed, declining heat rates, a variable O&M component, an adjustment based on location, and a price adjustment if GHG costs are imposed on the facility, all until December 31, 2014, after which the SRAC will be tied only to a formula with energy market heat rates;
- (2) the same formula specified in (1) above but with somewhat higher heat rates, no GHG cost adder and no location adjustment (for renewable resources);
- (3) the same formula specified in (1) above but with heat rates between options (1) and (2) and a fixed GHG payment of \$20 per metric ton for allowances used by a facility until December 31, 2014;
- (4) the same pricing terms as (3) above, but tied to actual GHG costs imposed on a facility, capped at \$12.50 per metric ton until December 31, 2014; or
- (5) a 90-day negotiation period to see if the parties can turn the PPA into a tolling agreement on agreed terms. This 90-day period has since expired.

---

**Table of Contents**

*If an existing Qualifying Facility chooses not to enter into a Legacy PPA Amendment, its pricing under the existing Legacy PPA will revert at the end of the current fixed rate period (meaning, in Ormat's case, the one that ends April 2012) to the SRAC formula pricing specified in (1) above.*

The Global Settlement further provides that after July 1, 2015 if the term of a Qualifying Facility's Legacy PPA expires, the utility will have no obligation to purchase power from the Qualifying Facility if the Qualifying Facility has a generating capacity in excess of 20 MW. Until July 1, 2015, a transition PPA will be available for Qualifying Facilities with Legacy PPAs that expire, which will incorporate the pricing structure outlined above. The investor-owned utilities have also agreed to conduct competitive solicitations for CHP Qualifying Facilities' output (similar to the competitive solicitations available to renewable generators under the State's Renewables Portfolio Standard program, but with various differences). There are also several other contracting options under the Global Settlement, including bilateral contracts with the investor-owned utilities. Qualifying Facilities below 20 MW will be entitled to a new standard offer PPA, with SRAC pricing and capacity payments as determined from time to time by the CPUC. The joint parties to the Global Settlement agreed that the utilities can go to FERC to obtain a waiver of the mandatory purchase obligation under PURPA for Qualifying Facilities above 20 MW and FERC has granted such waiver for these California utilities. Our existing PPAs with California investor-owned utilities are not affected by this waiver.

*If any of our domestic power plants loses its current Qualifying Facility status under PURPA, or if amendments to PURPA are enacted that substantially reduce the benefits currently afforded to Qualifying Facilities, our domestic operations could be adversely affected.*

Most of our domestic power plants are Qualifying Facilities pursuant to the PURPA, which largely exempts the power plants from the FPA, and certain state and local laws and regulations regarding rates and financial and organizational requirements for electric utilities.

If any of our domestic power plants were to lose its Qualifying Facility status, such power plant could become subject to the full scope of the FPA and applicable state regulation. The application of the FPA and other applicable state regulation to our domestic power plants could require our operations to comply with an increasingly complex regulatory regime that may be costly and greatly reduce our operational flexibility.

If a domestic power plant were to lose its Qualifying Facility status, it would become a public utility under the FPA, and the rates charged by such power plant pursuant to its PPAs would be subject to the review and approval of FERC. FERC, upon such review, may determine that the rates currently set forth in such PPAs are not appropriate and may set rates that are lower than the rates currently charged. In addition, FERC may require that some or all of our domestic power plants refund amounts previously paid by the relevant power purchaser to such power plant. Such events would likely result in a decrease in our future revenues or in an obligation to disgorge revenues previously received from our domestic power plants, either of which would have an adverse effect on our revenues. Even if a power plant does not lose its Qualifying Facility status, pursuant to a final rule issued by FERC for Qualifying Facility power plants above 20 MW, if a power plant's PPA is terminated or otherwise expires, and the subsequent sales are not made pursuant to a state's implementation of PURPA, that power plant will become subject to FERC's ratemaking jurisdiction under the FPA. Moreover, a loss of Qualifying Facility status also could permit the power purchaser, pursuant to the terms of the particular PPA, to cease taking and paying for electricity from the relevant power plant or, consistent with FERC precedent, to seek refunds of past amounts paid. This could cause the loss of some or all of our revenues payable pursuant to the related PPAs, result in significant liability for refunds of past amounts paid, or otherwise impair the value of our power plants. If a power purchaser were to cease taking and paying for electricity or seek to obtain refunds of past amounts paid, there can be no assurance that the costs incurred in connection with the power plant could be recovered through sales to other purchasers or that we would have sufficient funds to make such payments. In addition, the loss of Qualifying Facility status would be an event of default under the financing arrangements currently in place for some of our power plants, which would enable the lenders to exercise their remedies and enforce the liens on the relevant power plant.

---

**Table of Contents**

Pursuant to the Energy Policy Act of 2005, FERC also has the authority to prospectively lift the mandatory obligation of a utility under PURPA to offer to purchase the electricity from a Qualifying Facility if the utility operates in a workably competitive market. Existing PPAs between a Qualifying Facility and a utility are not affected. If, in addition to California, the utilities in the other regions in which our domestic power plants operate were to be relieved of the mandatory purchase obligation, they would not be required to purchase energy from the power plant in the region under Federal law upon termination of the existing PPA or with respect to new power plants, which could materially and adversely affect our business, financial condition, future results and cash flow.

***Our financial performance is significantly dependent on the successful operation of our power plants, which is subject to changes in the legal and regulatory environment affecting our power plants.***

All of our power plants are subject to extensive regulation and, therefore, changes in applicable laws or regulations, or interpretations of those laws and regulations, could result in increased compliance costs, the need for additional capital expenditures or the reduction of certain benefits currently available to our power plants. The structure of domestic and foreign federal, state and local energy regulation currently is, and may continue to be, subject to challenges, modifications, the imposition of additional regulatory requirements, and restructuring proposals. Our power purchasers or we may not be able to obtain all regulatory approvals that may be required in the future, or any necessary modifications to existing regulatory approvals, or maintain all required regulatory approvals. In addition, the cost of operation and maintenance and the operating performance of geothermal power plants may be adversely affected by changes in certain laws and regulations, including tax laws.

Any changes to applicable laws and regulations could significantly increase the regulatory-related compliance and other expenses incurred by the power plants and could significantly reduce or entirely eliminate the revenues generated by one or more of the power plants, which in turn would reduce our net income and could materially and adversely affect our business, financial condition, future results and cash flow.

***The costs of compliance with environmental laws and of obtaining and maintaining environmental permits and governmental approvals required for construction and/or operation, which currently are significant, may increase in the future and could materially and adversely affect our business, financial condition, future results and cash flow; any non-compliance with such laws or regulations may result in the imposition of liabilities which could materially and adversely affect our business, financial condition, future results and cash flow.***

Our power plants are required to comply with numerous domestic and foreign federal, regional, state and local statutory and regulatory environmental standards and to maintain numerous environmental permits and governmental approvals required for construction and/or operation. Some of the environmental permits and governmental approvals that have been issued to the power plants contain conditions and restrictions, including restrictions or limits on emissions and discharges of pollutants and contaminants, or may have limited terms. If we fail to satisfy these conditions or comply with these restrictions, or with any statutory or regulatory environmental standards, we may become subject to regulatory enforcement action and the operation of the power plants could be adversely affected or be subject to fines, penalties or additional costs. In addition, we may not be able to renew, maintain or obtain all environmental permits and governmental approvals required for the continued operation or further development of the power plants. As of the date of this report, we have not yet obtained certain permits and government approvals required for the completion and successful operation of power plants under construction or enhancement. In addition, a nearby municipality has informed our Amatitlan power plant that an additional building permit should be obtained from such municipality before construction commences. Our failure to renew, maintain or obtain required permits or governmental approvals, including the permits and approvals necessary for operating power plants under construction or enhancement, could cause our operations to be limited or suspended. Environmental laws, ordinances and regulations affecting us can be subject to change and such change could result in increased compliance costs, the need for additional capital expenditures, or otherwise adversely affect us.

---

**Table of Contents**

***We could be exposed to significant liability for violations of hazardous substances laws because of the use or presence of such substances at our power plants.***

Our power plants are subject to numerous domestic and foreign federal, regional, state and local statutory and regulatory standards relating to the use, storage and disposal of hazardous substances. We use isobutane, isopentane, industrial lubricants, and other substances at our power plants which are or could become classified as hazardous substances. If any hazardous substances are found to have been released into the environment at or by the power plants in concentrations that exceed regulatory limits, we could become liable for the investigation and removal of those substances, regardless of their source and time of release. If we fail to comply with these laws, ordinances or regulations (or any change thereto), we could be subject to civil or criminal liability, the imposition of liens or fines, and large expenditures to bring the power plants into compliance. Furthermore, in the United States, we can be held liable for the cleanup of releases of hazardous substances at other locations where we arranged for disposal of those substances, even if we did not cause the release at that location. The cost of any remediation activities in connection with a spill or other release of such substances could be significant.

We believe that at one time there may have been a gas station located on the Mammoth complex site, but because of significant surface disturbance and construction since that time, further physical evaluation of the environmental condition of the former gas station site has been impractical. There may be soil or groundwater contamination and related potential liabilities of which we are unaware related to this site, which may be significant and could materially and adversely affect our business, financial condition, future results and cash flow.

***We may not be able to successfully integrate companies which we may acquire in the future, which could materially and adversely affect our business, financial condition, future results and cash flow.***

Our strategy is to continue to expand in the future, including through acquisitions. Integrating acquisitions is often costly, and we may not be able to successfully integrate our acquired companies with our existing operations without substantial costs, delays or other adverse operational or financial consequences. Integrating our acquired companies involves a number of risks that could materially and adversely affect our business, including:

failure of the acquired companies to achieve the results we expect;

inability to retain key personnel of the acquired companies;

risks associated with unanticipated events or liabilities; and

the difficulty of establishing and maintaining uniform standards, controls, procedures and policies, including accounting controls and procedures.

If any of our acquired companies suffers customer dissatisfaction or performance problems, the same could adversely affect the reputation of our group of companies and could materially and adversely affect our business, financial condition, future results and cash flow.

***The power generation industry is characterized by intense competition, and we encounter competition from electric utilities, other power producers, and power marketers that could materially and adversely affect our business, financial condition, future results and cash flow.***

The power generation industry is characterized by intense competition from electric utilities, other power producers and power marketers. In recent years, there has been increasing competition in the sale of electricity, in part due to excess capacity in a number of U.S. markets and an emphasis on short-term or spot markets, and competition has contributed to a reduction in electricity prices. For the most part, we expect that power purchasers interested in long-term arrangements will engage in competitive bid solicitations to satisfy new capacity demands. This competition could adversely affect our ability to obtain PPAs and the price paid for electricity by the relevant power purchasers. There is also increasing competition between electric utilities. This

## **Table of Contents**

competition has put pressure on electric utilities to lower their costs, including the cost of purchased electricity, and increasing competition in the future will put further pressure on power purchasers to reduce the prices at which they purchase electricity from us.

***The reduction or elimination of government incentives related to solar power could cause the revenues we expect to derive from our solar power joint venture to decline.***

Today, the cost of solar power exceeds the cost of power furnished by the electric utility grid in most locations. As a result, federal, state and local government bodies in many countries have provided various incentives in the form of rebates, tax credits, mandated feed-in-tariffs and other incentives to end users, distributors, system integrators and manufacturers of solar power products to promote the use of solar energy to reduce dependency on other forms of energy. These government economic incentives could be reduced or eliminated. Reductions in, or eliminations or expirations of, incentives related to solar power could result in decreased demand for solar power and adversely affect the revenues we expect to derive from our solar power joint venture in Israel. In the United States, a federal tax credit for solar power projects is currently scheduled to expire at the end of 2016. In addition, it is possible that the federal government could impose new tariffs on solar panels imported from China, as part of a trade complaint currently pending with the U.S. Department of Commerce and the International Trade Commission.

***We face competition from other companies engaged in the solar energy sector.***

The solar power market is intensely competitive and rapidly evolving. We compete with many companies that have longer operating histories in this sector, larger customer bases, and greater brand recognition, as well as, in some cases, significantly greater financial and marketing resources than us. In some cases, these competitors are vertically integrated in the solar energy sector, manufacturing Solar PV, silicon wafers, and other related products for the solar industry, which may give them an advantage in developing, constructing, owning and operating solar power projects. We do not represent a significant competitive presence in the solar power market. Our lack of experience in the Solar PV sector may affect our ability to successfully develop, construct, finance, and operate Solar PV power projects.

***The existence of a prolonged force majeure event or a forced outage affecting a power plant could reduce our net income and materially and adversely affect our business, financial condition, future results and cash flow.***

The operation of our subsidiaries' geothermal power plants is subject to a variety of risks discussed elsewhere in these risk factors, including events such as fires, explosions, earthquakes, landslides, floods, severe storms or other similar events.

If a power plant experiences an occurrence resulting in a force majeure event, our subsidiary that owns that power plant would be excused from its obligations under the relevant PPA. However, the relevant power purchaser may not be required to make any capacity and/or energy payments with respect to the affected power plant or plant so long as the force majeure event continues and, pursuant to certain of our PPAs, will have the right to prematurely terminate the PPA. Additionally, to the extent that a forced outage has occurred, the relevant power purchaser may not be required to make any capacity and/or energy payments to the affected power plant, and if, as a result the power plant fails to attain certain performance requirements under certain of our PPAs, the purchaser may have the right to permanently reduce the contract capacity (and correspondingly, the amount of capacity payments due pursuant to such agreements in the future), seek refunds of certain past capacity payments, and/or prematurely terminate the PPA. As a consequence, we may not receive any net revenues from the affected power plant other than the proceeds from any business interruption insurance that applies to the force majeure event or forced outage after the relevant waiting period, and may incur significant liabilities in respect of past amounts required to be refunded. Accordingly, our business, financial condition, future results and cash flows could be materially and adversely affected.

---

**Table of Contents**

***The existence of a force majeure event or a forced outage affecting the transmission system of the IID could reduce our net income and materially and adversely affect our business, financial condition, future results and cash flow.***

If the transmission system of the IID experiences a force majeure event or a forced outage which prevents it from transmitting the electricity from the Heber complex, the Ormesa complex or the North Brawley power plant to the relevant power purchaser, the relevant power purchaser would not be required to make energy payments for such non-delivered electricity and may not be required to make any capacity payments with respect to the affected power plant so long as such force majeure event or forced outage continues. Our revenues for the year ended December 31, 2011, from the power plants utilizing the IID transmission system, were approximately \$102.2 million. The impact of such force majeure would depend on the duration thereof, with longer outages resulting in greater revenue loss.

***Some of our leases will terminate if we do not extract geothermal resources in commercial quantities, thus requiring us to enter into new leases or secure rights to alternate geothermal resources, none of which may be available on terms as favorable to us as any such terminated lease, if at all.***

Most of our geothermal resource leases are for a fixed primary term, and then continue for so long as geothermal resources are extracted in commercial quantities or pursuant to other terms of extension. The land covered by some of our leases is undeveloped and has not yet produced geothermal resources in commercial quantities. Leases that cover land which remains undeveloped and does not produce, or does not continue to produce, geothermal resources in commercial quantities and leases that we allow to expire, will terminate. In the event that a lease is terminated and we determine that we will need that lease once the applicable power plant is operating, we would need to enter into one or more new leases with the owner(s) of the premises that are the subject of the terminated lease(s) in order to develop geothermal resources from, or inject geothermal resources into, such premises or secure rights to alternate geothermal resources or lands suitable for injection. We may not be able to do this or may not be able to do so without incurring increased costs, which could materially and adversely affect our business, financial condition, future results and cash flow.

***Our BLM leases may be terminated if we fail to comply with any of the provisions of the Geothermal Steam Act or if we fail to comply with the terms or stipulations of such leases, which may materially and adversely affect our business, financial condition, future results and cash flow.***

Pursuant to the terms of our BLM leases, we are required to conduct our operations on BLM-leased land in a workmanlike manner and in accordance with all applicable laws and BLM directives and to take all mitigating actions required by the BLM to protect the surface of and the environment surrounding the relevant land. Additionally, certain BLM leases contain additional requirements, some of which relate to the mitigation or avoidance of disturbance of any antiquities, cultural values or threatened or endangered plants or animals. In the event of a default under any BLM lease, or the failure to comply with such requirements, or any non-compliance with any of the provisions of the Geothermal Steam Act or regulations issued thereunder, the BLM may, 30 days after notice of default is provided to our relevant project subsidiary, suspend our operations until the requested action is taken or terminate the lease, either of which could materially and adversely affect our business, financial condition, future results and cash flow.

***Some of our leases (or subleases) could terminate if the lessor (or sublessor) under any such lease (or sublease) defaults on any debt secured by the relevant property, thus terminating our rights to access the underlying geothermal resources at that location.***

The fee interest in the land which is the subject of some of our leases (or subleases) may currently be or may become subject to encumbrances securing loans from third-party lenders to the lessor (or sublessor). Our rights as lessee (or sublessee) under such leases (or subleases) are or may be subject and subordinate to the rights of any such lender. Accordingly, a default by the lessor (or sublessor) under any such loan could result in a foreclosure on the underlying fee interest in the property and thereby terminate our leasehold interest and result in the shutdown of the power plant located on the relevant property and/or terminate our right of access to the underlying geothermal resources required for our operations.

---

## **Table of Contents**

In addition, a default by a sublessor under its lease with the owner of the property that is the subject of our sublease could result in the termination of such lease and thereby terminate our sublease interest and our right to access the underlying geothermal resources required for our operations.

***Current and future urbanizing activities and related residential, commercial, and industrial developments may encroach on or limit geothermal or Solar PV activities in the areas of our power plants, thereby affecting our ability to utilize access, inject and/or transport geothermal resources on or underneath the affected surface areas or construct and operate Solar PV facilities which require large areas of relatively flat land.***

Current and future urbanizing activities and related residential, commercial and industrial development may encroach on or limit geothermal activities in the areas of our power plants, thereby affecting our ability to utilize, access, inject, and/or transport geothermal resources on or underneath the affected surface areas. In particular, the Heber power plants rely on an area, which we refer to as the Heber Known Geothermal Resource Area or Heber KGRA, for the geothermal resource necessary to generate electricity at the Heber power plants. Imperial County has adopted a specific plan area that covers the Heber KGRA, which we refer to as the Heber Specific Plan Area. The Heber Specific Plan Area allows commercial, residential, industrial and other employment oriented development in a mixed-use orientation, which currently includes geothermal uses. Several of the landowners from whom we hold geothermal leases have expressed an interest in developing their land for residential, commercial, industrial or other surface uses in accordance with the parameters of the Heber Specific Plan Area. Currently, Imperial County's Heber Specific Plan Area is coordinated with the cities of El Centro and Calexico. There has been ongoing underlying interest since the early 1990s to incorporate the community of Heber. While any incorporation process would likely take several years, if Heber were to be incorporated, the City of Heber could replace Imperial County as the governing land use authority, which, depending on its policies, could have a significant effect on land use and availability of geothermal resources and any future expansion of our Solar PV plant near the Heber complex.

Current and future development proposals within Imperial County and the City of Calexico, applications for annexations to the City of Calexico, and plans to expand public infrastructure may affect surface areas within the Heber KGRA, thereby limiting our ability to utilize, access, inject and/or transport the geothermal resource on or underneath the affected surface area that is necessary for the operation of our Heber power plants, which could adversely affect our operations and reduce our revenues.

Current transportation construction works and urban developments in the vicinity of our Steamboat complex of power plants in Nevada may also affect future permitting for geothermal operations relating to those power plants. Such works and developments include the extension of an interstate highway (to be named U.S. 580) by the Nevada Department of Transportation, the construction of a new casino hotel and other commercial or industrial developments on land in the vicinity of our Steamboat complex.

***We depend on key personnel for the success of our business.***

Our success is largely dependent on the skills, experience and efforts of our senior management team and other key personnel. In particular, our success depends on the continued efforts of Lucien Bronicki, Dita Bronicki and Yoram Bronicki, and other key employees. The loss of the services of any key employee could materially harm our business, financial condition, future results and cash flow. Although to date we have been successful in retaining the services of senior management and have entered into employment agreements with Lucien Bronicki, Dita Bronicki and Yoram Bronicki, such members of our senior management may terminate their employment agreements without cause and with notice periods ranging from 30 to 180 days. In addition, while Lucien and Dita Bronicki have not indicated any plan to retire, they are 77 and 70 years old, respectively, and either of them may decide to retire at any time. We may also not be able to locate or employ on acceptable terms qualified replacements for our senior management or key employees if their services were no longer available.

---

## **Table of Contents**

***Our power plants have generally been financed through a combination of our corporate funds and limited or non-recourse project finance debt and lease financing. If our project subsidiaries default on their obligations under such limited or non-recourse debt or lease financing, we may be required to make certain payments to the relevant debt holders and if the collateral supporting such leveraged financing structures is foreclosed upon, we may lose certain of our power plants.***

Our power plants have generally been financed using a combination of our corporate funds and limited- or non-recourse project finance debt or lease financing. Non-recourse project finance debt or lease financing refers to financing arrangements that are repaid solely from the power plant's revenues and are secured by the power plant's physical assets, major contracts, cash accounts and, in many cases, our ownership interest in the project subsidiary. Limited-recourse project finance debt refers to our additional agreement, as part of the financing of a power plant, to provide limited financial support for the power plant subsidiary in the form of limited guarantees, indemnities, capital contributions and agreements to pay certain debt service deficiencies. If our project subsidiaries default on their obligations under the relevant debt documents, creditors of a limited recourse project financing will have direct recourse to us, to the extent of our limited recourse obligations, which may require us to use distributions received by us from other power plants, as well as other sources of cash available to us, in order to satisfy such obligations. In addition, if our project subsidiaries default on their obligations under the relevant debt documents (or a default under such debt documents arises as a result of a cross-default to the debt documents of some of our other power plants) and the creditors foreclose on the relevant collateral, we may lose our ownership interest in the relevant project subsidiary or our project subsidiary owning the power plant would only retain an interest in the physical assets, if any, remaining after all debts and obligations were paid in full.

***Changes in costs and technology may significantly impact our business by making our power plants and products less competitive.***

A basic premise of our business model is that generating baseload power at geothermal power plants achieves economies of scale and produces electricity at a competitive price. However, traditional coal-fired systems and gas-fired systems may under certain economic conditions produce electricity at lower average prices than our geothermal plants. In addition, there are other technologies that can produce electricity, most notably fossil fuel power systems, hydroelectric systems, fuel cells, microturbines, windmills, Solar PV cells and Solar PV systems. Some of these alternative technologies currently produce electricity at a higher average price than our geothermal plants; however, research and development activities are ongoing to seek improvements in such alternate technologies and their cost of producing electricity is gradually declining. It is possible that advances will further reduce the cost of alternate methods of power generation to a level that is equal to or below that of most geothermal power generation technologies. If this were to happen, the competitive advantage of our power plants may be significantly impaired.

***Our expectations regarding the market potential for the development of recovered energy-based power generation may not materialize, and as a result we may not derive any significant revenues from this line of business.***

Demand for our recovered energy-based power generation units may not materialize or grow at the levels that we expect. We currently face competition in this market from manufacturers of conventional steam turbines and may face competition from other related technologies in the future. If this market does not materialize at the levels that we expect, such failure may materially and adversely affect our business, financial condition, future results, and cash flow.

***Our intellectual property rights may not be adequate to protect our business.***

Our intellectual property rights may not be adequate to protect our business. While we occasionally file patent applications, patents may not be issued on the basis of such applications or, if patents are issued, they may not be sufficiently broad to protect our technology. In addition, any patents issued to us or for which we have use rights may be challenged, invalidated or circumvented.

## **Table of Contents**

In order to safeguard our unpatented proprietary know-how, trade secrets and technology, we rely primarily upon trade secret protection and non-disclosure provisions in agreements with employees and others having access to confidential information. These measures may not adequately protect us from disclosure or misappropriation of our proprietary information.

Even if we adequately protect our intellectual property rights, litigation may be necessary to enforce these rights, which could result in substantial costs to us and a substantial diversion of management attention. Also, while we have attempted to ensure that our technology and the operation of our business do not infringe other parties' patents and proprietary rights, our competitors or other parties may assert that certain aspects of our business or technology may be covered by patents held by them. Infringement or other intellectual property claims, regardless of merit or ultimate outcome, can be expensive and time-consuming and can divert management's attention from our core business.

***Threats of terrorism and catastrophic events that could result from terrorism, cyber-attacks, or individuals and/or groups attempting to disrupt our business, or the businesses of third parties, may impact our operations in unpredictable ways and could adversely affect our business, financial condition, future results and cash flow.***

We are subject to the potentially adverse operating and financial effects of terrorist acts and threats, as well as cyber-attacks, including, among others, malware, viruses and attachments to e-mails, and other disruptive activities of individuals or groups. Our generation and transmission facilities, information technology systems and other infrastructure facilities and systems and physical assets, could be directly or indirectly affected by such activities. Terrorist acts or other similar events could harm our business by limiting our ability to generate or transmit power and by delaying the development and construction of new generating facilities and capital improvements to existing facilities. These events, and governmental actions in response, could result in a material decrease in revenues and significant additional costs to repair and insure our assets, and could adversely affect operations by contributing to the disruption of supplies and markets for geothermal and recovered energy. Such events could also impair our ability to raise capital by contributing to financial instability and lower economic activity.

We operate in a highly regulated industry that requires the continued operation of sophisticated information technology systems and network infrastructure. Despite our implementation of security measures, all of our technology systems (and any programs or data stored thereon or therein) are vulnerable to security breaches, failures, data leakage or unauthorized access due to such activities. Those breaches and events may result from acts of our employees, contractors or third parties. If our technology systems were to fail or be breached and we were unable to recover in a timely way, we would be unable to fulfill critical business functions, and sensitive confidential and other data could be compromised, which could adversely affect our business, financial condition, future results and cash flow.

The implementation of security guidelines and measures and maintenance of insurance, to the extent available, addressing such activities could increase costs. These types of events could adversely affect our business, financial condition, future results and cash flow. In addition such events could require significant management attention and resources and could adversely affect our reputation among customers and the public.

A disruption of transmission or the transmission infrastructure facilities of third parties could negatively impact our business. Because generation and transmission systems are part of an interconnected system, we face the risk of possible loss of business due to a disruption caused by the impact of an event on the interconnected system within our systems or within a neighboring system. Any such disruption could adversely affect our business, financial condition, future results and cash flow.

---

**Table of Contents**

*Possible fluctuations in the cost of construction, raw materials, and drilling may materially and adversely affect our business, financial condition, future results, and cash flow.*

Our manufacturing operations are dependent on the supply of various raw materials, including primarily steel and aluminum, and on the supply of various industrial equipment components that we use. We currently obtain all such materials and equipment at prevailing market prices. We are not dependent on any one supplier and do not have any long-term agreements with any of our suppliers. Future cost increases of such raw materials and equipment, to the extent not otherwise passed along to our customers, could adversely affect our profit margins.

*Conditions in and around Israel, where the majority of our senior management and all of our production and manufacturing facilities are located, may adversely affect our operations and may limit our ability to produce and sell our products or manage our power plants.*

Operations in Israel accounted for approximately 22.9%, 18.8%, and 29.7% of our operating expenses in the years ended December 31, 2011, 2010, and 2009, respectively. Political, economic and security conditions in Israel directly affect our operations. Since the establishment of the State of Israel in 1948, a number of armed conflicts have taken place between Israel and its Arab neighbors, and the continued state of hostility, varying in degree and intensity, has led to security and economic problems for Israel.

Negotiations between Israel and representatives of the Palestinian Authority in an effort to resolve the state of conflict have been sporadic and have failed to result in peace. The establishment in 2006 of a government in the Gaza territory by representatives of the Hamas militant group has created additional unrest and uncertainty in the region. At the end of December 2008, Israel engaged in an armed conflict with Hamas lasting for over three weeks, which involved additional missile strikes from the Gaza Strip into Israel and disrupted most day-to-day civilian activity in the proximity of the border with the Gaza Strip. Our production facilities in Israel are located approximately 26 miles from the border with the Gaza Strip.

The recent political instability and civil unrest in the Middle East and North Africa as well as the recently increased tension between Iran and Israel have raised new concerns regarding security in the region and the potential for armed conflict or other hostilities involving Israel. We could be adversely affected by any such hostilities, the interruption or curtailment of trade between Israel and its trading partners, or a significant downturn in the economic or financial condition of Israel. In addition, the sale of products manufactured in Israel may be adversely affected in certain countries by restrictive laws, policies or practices directed toward Israel or companies having operations in Israel.

In addition, some of our employees in Israel are subject to being called upon to perform military service in Israel, and their absence may have an adverse effect upon our operations. Generally, unless exempt, male adult citizens of Israel under the age of 41 are obligated to perform up to 36 days of military reserve duty annually. Additionally, all such citizens are subject to being called to active duty at any time under emergency circumstances.

These events and conditions could disrupt our operations in Israel, which could materially harm our business, financial condition, future results, and cash flow.

*If our parent defaults on its lease agreement with the Israel Land Administration, or is involved in a bankruptcy or similar proceeding, our rights and remedies under certain agreements pursuant to which we acquired our product business and pursuant to which we sublease our land and manufacturing facilities from our parent may be adversely affected.*

We acquired our business relating to the manufacture and sale of products for electricity generation and related services from our parent, Ormat Industries. In connection with that acquisition, we entered into a sublease with Ormat Industries for the lease of the land and facilities in Yavne, Israel where our manufacturing and

## **Table of Contents**

production operations are conducted and where our Israeli offices are located. Under the terms of our parent's lease agreement with the Israel Land Administration, any sublease for a period of more than five years may require the prior approval of the Israel Land Administration. As a result, the initial term of our sublease with Ormat Industries is for a period of four years and eleven months beginning on July 1, 2004, extendable to twenty-five years less one day (which includes the initial term). The consent of the Israel Land Administration was obtained for a period of the shorter of (i) 25 years or (ii) the remaining period of the underlying lease agreement with the Israel Land Administration, which terminates between 2018 and 2047. We recently entered into a new lease agreement with Ormat Industries for the sublease of additional manufacturing facilities that were built adjacent to the existing facilities. The agreement will expire on the same date as the abovementioned agreement. If our parent were to breach its obligations to the Israel Land Administration under its lease agreement, the Israel Land Administration could terminate the lease agreement and, consequently, our sublease would terminate as well.

As part of the acquisition described in the preceding paragraph, we also entered into a patent license agreement with Ormat Industries, pursuant to which we were granted an exclusive license for certain patents and trademarks relating to certain technologies that are used in our business. If a bankruptcy case were commenced by or against our parent, it is possible that performance of all or part of the agreements entered into in connection with such acquisition (including the lease of land and facilities described above) could be stayed by the bankruptcy court in Israel or rejected by a liquidator appointed pursuant to the Bankruptcy Ordinance in Israel and thus not be enforceable. Any of these events could have a material and adverse effect on our business, financial condition, future results, and cash flow.

***We are a holding company and our revenues depend substantially on the performance of our subsidiaries and the power plants they operate, most of which are subject to restrictions and taxation on dividends and distributions.***

We are a holding company whose primary assets are our ownership of the equity interests in our subsidiaries. We conduct no other business and, as a result, we depend entirely upon our subsidiaries' earnings and cash flow.

The agreements pursuant to which most of our subsidiaries have incurred debt restrict the ability of these subsidiaries to pay dividends, make distributions or otherwise transfer funds to us prior to the satisfaction of other obligations, including the payment of operating expenses, debt service and replenishment or maintenance of cash reserves. In the case of some of our power plants that are owned jointly with other partners there may be certain additional restrictions on dividend distributions pursuant to our agreements with those partners. Further, if we elect to receive distributions of earnings from our foreign operations, we may incur United States taxes on account of such distributions, net of any available foreign tax credits. In all of the foreign countries where our existing power plants are located, dividend payments to us are also subject to withholding taxes. Each of the events described above may reduce or eliminate the aggregate amount of revenues we can receive from our subsidiaries.

***Some of our directors and executive officers who also hold positions with our parent may have conflicts of interest with respect to matters involving both companies.***

Three of our seven directors are directors and/or officers of Ormat Industries, namely Lucien Bronicki, Dita Bronicki and Yoram Bronicki. In addition, four of our executive officers are also executive officers of Ormat Industries. Specifically, our Chief Executive Officer and Director, Dita Bronicki, is the Chief Executive Officer of our parent; our Chief Financial Officer, Joseph Tenne, is the Chief Financial Officer of our parent; and our Senior Vice President - Contract Management and Corporate Secretary, ETTY ROSNER, is the Corporate Secretary of our parent. These directors and officers owe fiduciary duties to both companies and may have conflicts of interest on matters affecting both us and our parent, and in some circumstances may have interests adverse to our interests.

## **Table of Contents**

### ***Our controlling stockholders may take actions that conflict with your interests.***

Ormat Industries Ltd. holds approximately 60% of our common stock. Bronicki Investments Ltd. holds approximately 35.1% of the outstanding shares of common stock of Ormat Industries Ltd. as of February 24, 2012 (35.1% on a fully diluted basis). Bronicki Investments Ltd. is a privately held Israeli company and is controlled by Lucien and Dita Bronicki. Because of these holdings, our parent company will be able to exercise control over all matters requiring stockholder approval, including the election of directors, amendment of our certificate of incorporation and approval of significant corporate transactions, and they will have significant control over our management and policies. The directors elected by these stockholders will be able to significantly influence decisions affecting our capital structure. This control may have the effect of delaying or preventing changes in control or changes in management, or limiting the ability of our other stockholders to approve transactions that they may deem to be in their best interest. For example, our controlling stockholders will be able to control the sale or other disposition of our product business to another entity or the transfer of such business outside of the State of Israel; as such action requires the affirmative vote of at least 75% of our outstanding shares.

### ***The price of our common stock may fluctuate substantially and your investment may decline in value.***

The market price of our common stock may be highly volatile and may fluctuate substantially due to many factors, including:

actual or anticipated fluctuations in our results of operations including as a result of seasonal variations in our electricity segment-based revenues or variations from year-to-year in our product segment-based revenues;

variance in our financial performance from the expectations of market analysts;

conditions and trends in the end markets we serve, and changes in the estimation of the size and growth rate of these markets;

announcements of significant contracts by us or our competitors;

changes in our pricing policies or the pricing policies of our competitors;

restatements of historical financial results and changes in financial forecasts;

loss of one or more of our significant customers;

legislation;

changes in market valuation or earnings of our competitors;

the trading volume of our common stock; and

general economic conditions.

In addition, the stock market in general, and the NYSE and the market for energy companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of particular companies affected. These

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

broad market and industry factors may materially harm the market price of our common stock, regardless of our operating performance. In the past, following periods of volatility in the market price of a company's securities, securities class-action litigation has often been instituted against that company. Such litigation, if instituted against us, could result in substantial costs and a diversion of management's attention and resources, which could materially harm our business, financial condition, future results, and cash flow.

***Future sales of common stock by some of our existing stockholders could cause our stock price to decline.***

As of the date of this report, our parent, Ormat Industries Ltd., holds approximately 60% of our outstanding common stock and some of our directors, officers and employees also hold shares of our outstanding common

---

**Table of Contents**

stock. Sales of such shares in the public market, as well as shares we may issue upon exercise of outstanding options, could cause the market price of our common stock to decline. On November 10, 2004, we entered into a registration rights agreement with Ormat Industries whereby Ormat Industries may require us to register our common stock held by it or its directors, officers and employees with the SEC or to include our common stock held by it or its directors, officers and employees in an offering and sale by us.

*Provisions in our charter documents and Delaware law may delay or prevent acquisition of us, which could adversely affect the value of our common stock.*

Our restated certificate of incorporation and our bylaws contain provisions that could make it harder for a third party to acquire us without the consent of our Board of Directors. These provisions do not permit actions by our stockholders by written consent. In addition, these provisions include procedural requirements relating to stockholder meetings and stockholder proposals that could make stockholder actions more difficult. Our Board of Directors is classified into three classes of directors serving staggered, three-year terms and may be removed only for cause. Any vacancy on the Board of Directors may be filled only by the vote of the majority of directors then in office. Our Board of Directors has the right to issue preferred stock without stockholder approval, which could be used to institute a poison pill that would work to dilute the stock ownership of a potential hostile acquirer, effectively preventing acquisitions that have not been approved by our Board of Directors. Delaware law also imposes some restrictions on mergers and other business combinations between us and any holder of 15% or more of our outstanding common stock. Although we believe these provisions provide for an opportunity to receive a higher bid by requiring potential acquirers to negotiate with our Board of Directors, these provisions apply even if the offer may be considered beneficial by some stockholders.

*The SOX Act imposes significant regulatory, corporate and operational requirements on the Company. Failure to comply with such provisions may have significant adverse consequences to the Company.*

As a public company, we are subject to the SOX Act. The SOX Act contains a variety of provisions affecting public companies, including but not limited to, corporate governance requirements, our relationship with our auditors, evaluation of our internal disclosure controls and procedures, and evaluation of our internal control over financial reporting. See Management's Report on Internal Control over Financial Reporting and Item 9A. Controls and Procedures.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

**ITEM 2. PROPERTIES**

We currently lease corporate offices at 6225 Neil Road, Reno, Nevada 89511-1136. We also occupy an approximately 807,000 square feet office and manufacturing facility located in the Industrial Park of Yavne, Israel, which we sublease from Ormat Industries. See Item 13 Certain Relationships and Related Transactions. We also lease small offices in each of the countries in which we operate.

We believe that our current facilities will be adequate for our operations as currently conducted.

Each of our power plants is located on property leased or owned by us or one of our subsidiaries, or is a property that is subject to a concession agreement.

Information and descriptions of our plants and properties are included in Item 1 Business, of this annual report.

---

## **Table of Contents**

### **ITEM 3. LEGAL PROCEEDINGS**

There were no material developments in any legal proceedings to which the Company is a party during the fiscal year 2011, other than as described below.

#### **Securities Class Actions**

Following the Company's public announcement that it would restate certain of its financial results due to a change in the Company's accounting treatment for certain exploration and development costs, three securities class action lawsuits were filed in the United States District Court for the District of Nevada on March 9, 2010, March 18, 2010 and April 7, 2010. These complaints assert claims against the Company and certain officers and directors for alleged violation of Sections 10(b) and 20(a) of the Exchange Act. One complaint also asserts claims for alleged violations of Sections 11, 12(a)(2) and 15 of the Securities Act. All three complaints allege claims on behalf of a putative class of purchasers of Company common stock between May 6, 2008 or May 7, 2008 and February 23, 2010 or February 24, 2010. These three lawsuits were consolidated by the Court in an order issued on June 3, 2010 and the Court appointed three of the Company's stockholders to serve as lead plaintiffs.

Lead plaintiffs filed a consolidated amended class action complaint (CAC) on July 9, 2010 that asserts claims under Sections 10(b) and 20(a) of the Exchange Act on behalf of a putative class of purchasers of Company common stock between May 7, 2008 and February 24, 2010. The CAC alleges that certain of the Company's public statements were false and misleading for failing to account properly for the Company's exploration and development costs based on the Company's announcement on February 24, 2010 that it was going to restate certain of its financial results to change its method of accounting for exploration and development costs in certain respects. The CAC also alleges that certain of the Company's statements concerning the North Brawley project were false and misleading. The CAC seeks compensatory damages, expenses, and such further relief as the Court may deem proper.

Defendants filed a motion to dismiss the CAC on August 13, 2010. On March 3, 2011, the court granted in part and denied in part defendants motion to dismiss. The court dismissed plaintiffs' allegations that the Company's statements regarding the North Brawley project were false or misleading, but did not dismiss plaintiffs' allegations regarding the 2008 restatement. Defendants answered the remaining allegations in the CAC regarding the restatement on April 8, 2011 and the case has now entered the discovery phase. On July 22, 2011, plaintiffs filed a motion to certify the case as a class action on behalf of a class of purchasers of Company common stock between February 25, 2009 and February 24, 2010, and defendants filed an opposition to the motion for class certification on October 4, 2011.

Subsequently, the parties participated in a mediation where they reached an agreement in principle to settle the securities class action lawsuits. Under the proposed class action settlement, the claims against the Company and its officers and directors will be dismissed with prejudice and released in exchange for a cash payment of \$3.1 million to be funded by the Company's insurers. The proposed settlement remains subject to the satisfaction of various conditions, including negotiation and execution of a final stipulation of settlement, and approval by the U.S. District Court for the District of Nevada following notice to members of the class.

The Company and the individual defendants have steadfastly maintained that the claims raised in the securities class action lawsuits were without merit, and have vigorously contested those claims. As part of the settlement, the Company and the individual defendants continue to deny any liability or wrongdoing under the securities laws or otherwise.

#### **Stockholder Derivative Cases**

Four stockholder derivative lawsuits have also been filed in connection with the Company's public announcement that it would restate certain of its financial results due to a change in the Company's accounting treatment for certain exploration and development costs. Two cases were filed in the Second Judicial District

## **Table of Contents**

Court of the State of Nevada in and for the County of Washoe on March 16, 2010 and April 21, 2010 and two cases were filed in the United States District Court for the District of Nevada on March 29, 2010 and June 7, 2010. All four lawsuits assert claims brought derivatively on behalf of the Company against certain of its officers and directors for alleged breach of fiduciary duty and other claims, including waste of corporate assets and unjust enrichment.

The two stockholder derivative cases filed in the Second Judicial District Court of the State of Nevada in and for the County of Washoe were consolidated by the Court in an order dated May 27, 2010 and the plaintiffs filed a consolidated derivative complaint on September 7, 2010. In accordance with a stipulation between the parties, defendants filed a motion to dismiss on November 16, 2010. On April 18, 2011, the court stayed the state derivative case pending the resolution of the securities class action. The Company cannot make an estimate of the reasonably possible loss or range of reasonably possible loss on the state derivative cases.

The two stockholder derivative cases filed in the United States District Court for the District of Nevada were consolidated by the Court in an order dated August 31, 2010, and plaintiffs filed a consolidated derivative complaint on October 28, 2010. The Company filed a motion to dismiss on December 13, 2010. On March 7, 2011, the Court transferred the federal derivative case to the Court presiding over the securities class action, and on August 29, 2011, the Court stayed the federal derivative case pending the resolution of the securities class action. The Company cannot make an estimate of the reasonably possible loss or range of reasonably possible loss on the state derivative cases.

The Company believes the allegations in these purported derivative actions are without merit and is defending the actions vigorously.

## **Other**

On May 19, 2011, FERC issued an order which denied the Company's exemptions for requirements relating to Sections 205 and 206 of the Federal Power Act and directed certain of the Company's REG facilities to make refunds to their customers, equaling the time value of the revenues collected during the periods of non-compliance with the qualifying facilities, in an amount of approximately \$1.6 million. On June 17, 2011, the Company requested a rehearing to obtain relief on this mandated refund payment. On July 18, 2011, FERC issued an Order Granting Rehearing for Further Consideration in order to afford additional time for consideration of the matters raised. In February 2012, FERC reached its ruling that a settlement amount was due from the Company which had an immaterial impact to the December 31, 2011 financial statements.

On January 4, 2012, the California Unions for Reliable Energy (CURE) filed a petition in Alameda Superior Court, naming the California Energy Commission (CEC) and the Company as defendant and real party in interest, respectively. The petition asks the court to order the CEC to vacate its decision which denied, with prejudice, the complaint filed by CURE against the Company with the CEC. The CURE complaint alleged that the Company's North Brawley Project and East Brawley Project both exceed the CEC's 50 MW jurisdictional threshold and therefore are subject to CEC licensing authority rather than Imperial County. In addition, the CURE petition asks the court to investigate and halt any ongoing violation of the Warren Alquist Act by the Company, and to award CURE attorney's fees and costs. As to North Brawley, CURE alleges that the CEC decision violated the Warren Alquist Act because it failed to consider provisions of the County permit for North Brawley, which CURE contends authorizes the Company to build a generating facility with a number of Ormat Energy Converters capable of generating more than 50 MW. As to East Brawley, CURE alleges that the CEC decision violated the Warren Alquist Act because it failed to consider the conditional use permit application for East Brawley, which CURE contends shows that the Company requested authorization to build a facility with a number of Ormat Energy Converters capable of generating more than 50 MW.

The Company believes that the petition is without merit and intends to respond and take necessary legal action to dismiss the proceedings. The Company has thirty days in which to respond to CURE's petition. Filing

**Table of Contents**

of the petition in and of itself does not have any immediate adverse implications for the North Brawley or East Brawley projects and the Company continues to operate the North Brawley project in the ordinary course and continues with its development work on the East Brawley project.

In addition, from time to time, the Company is named as a party to various lawsuits, claims and other legal and regulatory proceedings that arise in the ordinary course of our business. These actions typically seek, among other things, compensation for alleged personal injury, breach of contract, property damage, punitive damages, civil penalties or other losses, or injunctive or declaratory relief. With respect to such lawsuits, claims and proceedings, the Company accrues reserves when a loss is probable and the amount of such loss can be reasonably estimated. It is the opinion of the Company's management that the outcome of these proceedings, individually and collectively, will not be material to the financial statements as a whole.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

**Table of Contents****PART II****ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES**

Our common stock is traded on the NYSE under the symbol ORA. Public trading of our stock commenced on November 11, 2004. Prior to that, there was no public market for our stock. As of February 24, 2012, there were 17 record holders of the Company's common stock. On February 24, 2012, our stock's closing price as reported on the NYSE was \$19.97 per share.

**Dividends:**

We have adopted a dividend policy pursuant to which we currently expect to distribute at least 20% of our annual profits available for distribution by way of quarterly dividends. In determining whether there are profits available for distribution, our Board of Directors will take into account our business plan and current and expected obligations, and no distribution will be made that in the judgment of our Board of Directors would prevent us from meeting such business plan or obligations.

Notwithstanding this policy, dividends will be paid only when, as and if approved by our Board of Directors out of funds legally available therefore. The actual amount and timing of dividend payments will depend upon our financial condition, results of operations, business prospects and such other matters as the Board may deem relevant from time to time. Even if profits are available for the payment of dividends, the Board of Directors could determine that such profits should be retained for an extended period of time, used for working capital purposes, expansion or acquisition of businesses or any other appropriate purpose. As a holding company, we are dependent upon the earnings and cash flow of our subsidiaries in order to fund any dividend distributions and, as a result, we may not be able to pay dividends in accordance with our policy. Our Board of Directors may, from time to time, examine our dividend policy and may, in its absolute discretion, change such policy. In addition to the required Board of Directors' approval for the payment of dividends, the Company can declare as dividends no more than 35% of annual net income as dividends due to restrictions related to its third-party debt (see Note 11 to our consolidated financial statements set forth in Part II, Item 8 of this annual report).

We have declared the following dividends over the past two years:

Date Declared	Dividend Amount per Share	Record Date	Payment Date
February 23, 2010	\$ 0.12	March 16, 2010	March 25, 2010
May 5, 2010	\$ 0.05	May 18, 2010	May 25, 2010
August 4, 2010	\$ 0.05	August 17, 2010	August 26, 2010
November 2, 2010	\$ 0.05	November 17, 2010	November 30, 2010
February 22, 2011	\$ 0.05	March 15, 2011	March 24, 2011
May 4, 2011	\$ 0.04	May 18, 2011	May 25, 2011
August 3, 2011	\$ 0.04	August 16, 2011	August 25, 2011

**High/Low Stock Prices:**

Ormat Technologies, Inc. (ORA) High and Low Prices for the years ended December 31, 2010 and 2011, and from January 1, 2012 until February 24, 2012:

	First Quarter 2010	Second Quarter 2010	Third Quarter 2010	Fourth Quarter 2010	First Quarter 2011	Second Quarter 2011	Third Quarter 2011	Fourth Quarter 2011	January 1 to February 24, 2012
High	\$ 38.00	\$ 32.35	\$ 29.45	\$ 30.08	\$ 31.18	\$ 26.13	\$ 22.90	\$ 19.69	\$ 19.97
Low	\$ 27.68	\$ 26.55	\$ 26.13	\$ 26.80	\$ 23.24	\$ 20.60	\$ 14.43	\$ 15.44	\$ 16.25



**Table of Contents****Stock Performance Graph:**

The following performance graph represents the cumulative total shareholder return for the period November 11, 2004 (the date upon which trading of the Company's common stock commenced) through December 31, 2011 for our common stock, compared to the Standard and Poor's Composite 500 Index, and two peer groups.

	11/11/2004	12/31/2004	12/31/2005	12/31/2006	12/31/2007	12/31/2008	12/31/2009	12/31/2010	12/31/2011
Ormat Technologies Inc	\$ 100	\$ 109	\$ 174	\$ 245	\$ 367	\$ 212	\$ 252	\$ 197	\$ 120
Standard & Poor's Composite									
500 Index	\$ 100	\$ 108	\$ 111	\$ 126	\$ 131	\$ 80	\$ 99	\$ 112	\$ 112
IPP Peers*	\$ 100	\$ 119	\$ 110	\$ 167	\$ 163	\$ 131	\$ 187	\$ 218	\$ 228
Renewable Peers*	\$ 100	\$ 108	\$ 171	\$ 169	\$ 299	\$ 108	\$ 114	\$ 77	\$ 28

\* IPP Peers are The AES Corporation, NRG Energy Inc., Calpine Corporation and International Power PLC. Renewable Energy (Renewable) Peers are Acciona S.A., Evergreen Solar Inc., Energy Conversion Devices Inc., NGP., and U.S. Geothermal Inc.

The above Stock Performance Graph shall not be deemed to be soliciting material or to be filed with the SEC under the Securities Act and the Exchange Act except to the extent that the Company specifically requests that such information be treated as soliciting material or specifically incorporates it by reference into a filing under the Securities Act or the Exchange Act.

**Equity Compensation Plan Information**

For information on our equity compensation plan, refer to Item 12 Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

**Table of Contents****ITEM 6. SELECTED FINANCIAL DATA**

The following table sets forth our selected consolidated financial data for the years ended and at the dates indicated. We have derived the selected consolidated financial data for the years ended December 31, 2011, 2010 and 2009 and as of December 31, 2011 and 2010 from our audited consolidated financial statements set forth in Part II, Item 8 of this annual report. We have derived the selected consolidated financial data for the years ended December 31, 2008 and 2007 and as of December 31, 2009, 2008 and 2007 from our audited consolidated financial statements not included herein.

The information set forth below should be read in conjunction with Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations and our consolidated financial statements set forth in Part II, Item 8 of this annual report.

	Year Ended December 31,				
	2011	2010	2009	2008	2007
	(In thousands, except per share data)				
<b>Statements of Operations Data:</b>					
Revenues:					
Electricity	\$ 323,849	\$ 291,820	\$ 252,621	\$ 251,373	\$ 215,969
Product	113,160	81,410	159,389	92,577	79,950
<b>Total revenues</b>	<b>437,009</b>	<b>373,230</b>	<b>412,010</b>	<b>343,950</b>	<b>295,919</b>
Cost of revenues:					
Electricity	244,037	242,326	179,101	169,297	148,698
Product	76,072	53,277	112,450	72,755	68,036
<b>Total Cost of revenues</b>	<b>320,109</b>	<b>295,603</b>	<b>291,551</b>	<b>242,052</b>	<b>216,734</b>
<b>Gross margin</b>	<b>116,900</b>	<b>77,627</b>	<b>120,459</b>	<b>101,898</b>	<b>79,185</b>
Operating expenses:					
Research and development expenses	8,801	10,120	10,502	4,595	3,663
Selling and marketing expenses	16,207	13,447	14,584	10,885	10,645
General and administrative expenses	27,885	27,442	26,412	25,938	21,416
Write-off of unsuccessful exploration activities		3,050	2,367	9,828	
<b>Operating income</b>	<b>64,007</b>	<b>23,568</b>	<b>66,594</b>	<b>50,652</b>	<b>43,461</b>
Other income (expense):					
Interest income	1,427	343	639	3,118	6,565
Interest expense, net	(69,459)	(40,473)	(16,241)	(14,945)	(29,745)
Foreign currency translation and transaction gains (losses)	(1,350)	1,557	(1,695)	(4,421)	(1,339)
Income attributable to sale of tax benefits	11,474	8,729	15,515	18,118	6,488
Gain on acquisition of controlling interest		36,928			
Gain from extinguishment of liability			13,348		
Other non-operating income (expense), net	671	130	200	(3,424)	(1,130)
<b>Income from continuing operations, before income taxes and equity in income (losses) of investees</b>	<b>6,770</b>	<b>30,782</b>	<b>78,360</b>	<b>49,098</b>	<b>24,300</b>
Income tax benefit (provision)	(48,535)	1,098	(15,430)	(5,310)	(1,822)
Equity in income (losses) of investees, net	(959)	998	2,136	1,725	4,742
<b>Income (loss) from continuing operations</b>	<b>(42,724)</b>	<b>32,878</b>	<b>65,066</b>	<b>45,513</b>	<b>27,220</b>
Discontinued operations:					
Income (loss) from discontinued operations, net of related tax		14	3,487	(2,221)	
Gain on sale of a subsidiary in New Zealand, net of related tax		4,336			
<b>Net income (loss)</b>	<b>(42,724)</b>	<b>37,228</b>	<b>68,553</b>	<b>43,292</b>	<b>27,220</b>

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Net loss (income) attributable to noncontrolling interest	(332)	90	298	316	156
Net income (loss) attributable to the Company's stockholders	\$ (43,056)	\$ 37,318	\$ 68,851	\$ 43,608	\$ 27,376

**Table of Contents**

	Year Ended December 31,				
	2011	2010	2009	2008	2007
	(In thousands, except per share data)				
<b>Earnings per share attributable to the Company's stockholders:</b>					
<b>Basic:</b>					
Income (loss) from continuing operations	\$ (0.95)	\$ 0.72	\$ 1.44	\$ 1.04	\$ 0.71
Discontinued operations		0.10	0.08	(0.05)	
Net income (loss)	\$ (0.95)	\$ 0.82	\$ 1.52	\$ 0.99	\$ 0.71
<b>Diluted:</b>					
Income (loss) from continuing operations	\$ (0.95)	\$ 0.72	\$ 1.43	\$ 1.03	\$ 0.70
Discontinued operations		0.10	0.08	(0.05)	
Net income (loss)	\$ (0.95)	\$ 0.82	\$ 1.51	\$ 0.98	\$ 0.70
<b>Weighted average number of shares used in computation of earnings per share attributable to the Company's stockholders:</b>					
Basic	45,431	45,431	45,391	44,182	38,762
Diluted	45,431	45,452	45,533	44,298	38,880
Cash dividend per share declared during the year	\$ 0.13	\$ 0.27	\$ 0.25	\$ 0.20	\$ 0.22
<b>Balance Sheet Data (at end of year):</b>					
Cash and cash equivalents	\$ 99,886	\$ 82,815	\$ 46,307	\$ 34,393	\$ 47,227
Working capital	98,415	66,932	55,652	3,296	22,337
Property, plant and equipment, net (including construction-in process)	1,889,083	1,696,101	1,517,288	1,334,859	977,400
Total assets	2,314,718	2,043,328	1,864,193	1,630,976	1,277,368
Long-term debt (including current portion)	1,025,010	789,669	624,442	386,635	322,472
Notes payable to Parent (including current portion)			9,600	26,200	57,847
Equity	906,644	945,227	911,695	847,235	627,836

**ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

You should read the following discussion and analysis of our results of operations, financial condition and liquidity in conjunction with our consolidated financial statements and the related notes. Some of the information contained in this discussion and analysis or set forth elsewhere in this annual report including information with respect to our plans and strategies for our business, statements regarding the industry outlook, our expectations regarding the future performance of our business, and the other non-historical statements contained herein are forward-looking statements. See *Cautionary Note Regarding Forward-Looking Statements*. You should also review Item 1A *Risk Factors* for a discussion of important factors that could cause actual results to differ materially from the results described herein or implied by such forward-looking statements.

**General****Overview**

We are a leading vertically integrated company primarily engaged in the geothermal and recovered energy power business. We design, develop, build, sell, own, and operate clean, environmentally friendly geothermal and recovered energy-based power plants, in most cases using equipment that we design and manufacture.

Our geothermal power plants include both power plants that we have built and power plants that we have acquired, while all of our recovered energy-based plants have been constructed by us. We conduct our business activities in two business segments, which we refer to as our

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Electricity Segment and Product Segment. In our Electricity Segment, we develop, build, own, and operate geothermal and recovered energy-based power plants in the United States and geothermal power plants in other countries around the world, and sell the electricity they generate. We have expanded our activities in the Electricity Segment to include the ownership and operation of

---

## **Table of Contents**

power plants that produce electricity generated by Solar PV systems that we do not manufacture. In our Product Segment, we design, manufacture and sell equipment for geothermal and recovered energy-based electricity generation, remote power units, and other power generating units and provide services relating to the engineering, procurement, construction, operation and maintenance of geothermal and recovered energy-based power plants. Both our Electricity Segment and Product Segment operations are conducted in the United States and throughout the world. Our current generating portfolio includes geothermal plants in the United States, Guatemala, Kenya, and Nicaragua, as well as REG plants in the United States. During the years ended December 31, 2011 and 2010, our consolidated power plants generated 3,918,156 MWh and 3,762,283 MWh, respectively.

For the year ended December 31, 2011, our Electricity Segment represented approximately 74.1% of our total revenues, while our Product Segment represented approximately 25.9% of our total revenues. For the year ended December 31, 2010, our Electricity Segment represented approximately 78.2% of our total revenues, while our Product Segment represented approximately 21.8% of our total revenues.

For the year ended December 31, 2011, our total revenues increased by 17.1% (from \$373.2 million to \$437.0 million) over the previous year.

For the year ended December 31, 2011, Electricity Segment revenues were \$323.8 million, compared to \$291.8 million for the year ended December 31, 2010, an increase of 11.0%, while Product Segment revenues for the year ended December 31, 2011 were \$113.2 million, compared to \$81.4 million during the year ended December 31, 2010, an increase of 39.0%.

Revenues from our Electricity Segment are relatively predictable, as they are derived from sales of electricity generated by our power plants pursuant to long-term PPAs. However, our variable price PPAs in California are subject to the impact of fluctuations in natural gas prices. The price for electricity under all but one of our PPAs is effectively a fixed price until May 1, 2012. The exception is the 25 MW PPA of the Puna complex. It has a monthly variable energy rate based on the local utility's avoided costs, which is the incremental cost that the power purchaser avoids by not having to generate such electrical energy itself or purchase it from others. Beginning May 2012, the PPAs for the Ormesa complex, Mammoth complex, Heber 1 and Heber 2 power plants, will convert from fixed to variable energy price PPAs based on SCE's SRAC. In the year ended December 31, 2011, approximately 82.4% of our electricity revenues were derived from contracts with fixed energy rates, and therefore most of our electricity revenues were not affected by the fluctuations in energy commodity prices. However, electricity revenues are subject to seasonal variations and can be affected by higher-than-average ambient temperatures, as described below under the heading *Seasonality*.

Revenues attributable to our Product Segment are based on the sale of equipment and the provision of various services to our customers. These revenues may vary from period to period because of the timing of our receipt of purchase orders and the progress of our execution of each project.

Our management assesses the performance of our two segments of operation differently. In the case of our Electricity Segment, when making decisions about potential acquisitions or the development of new projects, we typically focus on the internal rate of return of the relevant investment, relevant technical and geological matters and other relevant business considerations. We evaluate our operating power plants based on revenues and expenses, and our projects that are under development based on costs attributable to each such project. We evaluate the performance of our Product Segment based on the timely delivery of our products, performance quality of our products, and costs actually incurred to complete customer orders compared to the costs originally budgeted for such orders.

### ***Trends and Uncertainties***

The geothermal industry in the United States has historically experienced significant growth followed by a consolidation of owners and operators of geothermal power plants. During the 1990s, growth and development in the geothermal industry occurred primarily in foreign markets and only minimal growth and development occurred in the United States. Since 2001, there has been increased demand for energy generated from

**Table of Contents**

geothermal resources in the United States as costs for electricity generated from geothermal resources have become more competitive relative to fossil fuel generation. This has partly been due to increasing natural gas and oil prices during much of this period and, equally important, to newly enacted legislative and regulatory requirements and incentives, such as state renewable portfolio standards and federal tax credits. The ARRA further encourages the use of geothermal energy through production or investment tax credits as well as cash grants (which are discussed in more detail in the section entitled "Government Grants and Tax Benefits"). In response, the geothermal industry in the U.S. has seen a wave of new entrants and, over the last several years, consolidation involving smaller developers. We see the increasing demand for energy generated from geothermal and other renewable resources in the United States and the further introduction of renewable portfolio standards as significant trends affecting our industry today and in the immediate future. Our operations and the trends that from time to time impact our operations are subject to market cycles.

We expect to continue to generate the majority of our revenues from our Electricity Segment through the sale of electricity from our power plants. Substantially all of our current revenues from the sale of electricity are derived from fully-contracted payments under long-term PPAs. We also intend to continue to pursue growth in our recovered energy business and in the Solar PV sector.

Although other trends, factors and uncertainties may impact our operations and financial condition, including many that we do not or cannot foresee, we believe that our results of operations and financial condition for the foreseeable future will be affected by the following trends, factors and uncertainties:

Our primary focus continues to be our organic growth through exploration, development, construction of new projects and enhancements of existing power plants. We expect that this investment in organic growth will increase our total generating capacity, consolidated revenues and operating income attributable to our Electricity Segment from year to year. In addition, we routinely look at acquisition opportunities.

We expect that the continued awareness of climate change may result in significant changes in the business and regulatory environments, which may create business opportunities for us. In 2011, the first phase of the EPA Tailoring Rule took effect. The Tailoring Rule sets thresholds addressing the applicability of the permitting requirements under the Clean Air Act's Prevention of Significant Deterioration and Title V programs to certain major sources of GHG emissions. Federal legislation or additional federal regulations addressing climate change are possible. Several states and regions are already addressing climate change. For example, California's state climate change law, AB 32, which was signed into law in September 2006, regulates most sources of GHG emissions and aims to reduce GHG emissions to 1990 levels by 2020. In 2008, the CARB approved a Scoping Plan to carry out regulations implementing AB 32. In December 2010, CARB approved cap-and-trade regulations to reduce California's GHG emissions under AB 32. The cap-and-trade regulation, the first phase of which is contemplated to be initiated in January of 2012 with compliance obligations commencing in January 2013, will set a statewide limit on emissions from sources responsible for emitting 80% of California's GHGs, and, according to CARB, will help establish a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. However, implementation of this cap-and-trade program under AB 32 has been the subject of legal challenges that may hinder and/or ultimately thwart its implementation. In September of 2006, California also passed Senate Bill 1368, which prohibits the state's utilities from entering into long-term financial commitments for base-load generation with power plants that fail to meet a CO<sub>2</sub> emission performance standard established by the California Energy Commission and the California Public Utilities Commission. California's long-term climate change goals are reflected in Executive Order S-3-05, which requires a reduction in GHGs to: (i) 2000 levels by 2010; (ii) 1990 levels by 2020; and (iii) 80% of 1990 levels by 2050. In addition to California, twenty-two other states have set GHG emissions targets or goals (Arizona, Colorado, Connecticut, Florida, Hawaii, Illinois, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, New Hampshire, New Jersey, New Mexico, New York, Oregon, Rhode Island, Utah, Vermont, Virginia and Washington). Regional initiatives, such as the Western Climate Initiative (which includes seven U.S. states and four Canadian

---

**Table of Contents**

provinces) and the Midwest GHG Reduction Accord (which includes six U.S. states and one Canadian province), are also being developed to reduce GHG emissions and develop trading systems for renewable energy credits. In September 2008, the first-in-the-nation auction of CO<sub>2</sub> allowances was held under the RGGI, a regional cap-and-trade system, which includes nine Northeast and Mid-Atlantic States. Under RGGI, the participating states plan to stabilize power sector carbon emissions at their capped level, and then reduce the cap by a total of 10% at a rate of 2.5% each year between 2015 and 2018. In addition, twenty-nine states and the District of Columbia have adopted RPS and eight other states have adopted renewable portfolio goals. On April 12, 2011, Governor Jerry Brown signed California Senate Bill X1-2 (SBX1-2) which increased California's RPS to 33% by December 31, 2020 and instituted a tradable REC program, according to which California utilities can purchase three products to comply with SBX1-2: (i) bundled electricity and RECs from electricity generators that interconnect with a California balancing authority, (ii) tradable RECs that are purchased either from out-of-state electricity generators or in-state electricity generators that do not interconnect with a California balancing authority, and (iii) firmed and shaped transactions with out-of-state electricity generators. Until December 31, 2013 unbundled tradable RECs may account for only 25% of a utility's annual RPS, but this limit on unbundled RECs does not apply to municipal utilities and other small entities. The percentage will be reduced after 2013. SBX1-2 is expected to foster a liquid tradable REC market and lead to more creative off-take arrangements. Although we cannot predict at this time whether the tradable REC program under SBX1-2 and its implementing regulations will have a significant impact on our operations or revenue, it may facilitate additional options when negotiating PPAs and selling electricity from our projects. We expect that the additional demand for renewable energy from utilities in states with RPS will outpace a possible reduction in general demand for energy (if any) due to the effect of economic conditions. We see this increased demand and in particular the impact of the increase in California RPS, as one of the most significant opportunities for us to expand existing power plants and develop new power plants.

Outside of the United States, we expect that a variety of governmental initiatives will create new opportunities for the development of new projects, as well as create additional markets for our products. These initiatives include the award of long-term contracts to independent power generators, the creation of competitive wholesale markets for selling and trading energy, capacity and related energy products and the adoption of programs designed to encourage clean renewable and sustainable energy sources.

We expect competition from the wind and solar power generation industry to continue. While the expected demand for renewable energy is large enough, the increase in competition and the amount of renewable energy under contract may contribute to a reduction in electricity prices. Despite increased competition from the wind and solar power generation industry, we believe that baseload electricity, such as geothermal-based energy, will continue to be a leading source of renewable energy in areas with commercially viable geothermal resource.

We expect increased competition from binary power plant equipment suppliers. While we believe that we have a distinct competitive advantage based on our accumulated experience and current worldwide share of installed binary generation capacity, which is in excess of 90%, an increase in competition may impact our ability to secure new purchase orders from potential customers. The increased competition also may lead to a reduction in prices that we are able to charge for our binary equipment, which in turn may impact our profitability.

North America is the largest and most developed natural gas market in the world. As recently as five years ago, the region was considered to be short on supply, with an expected need to import significant volumes of liquefied natural gas (LNG) from the international gas market to balance supply with expected demand. The rise of shale gas production over the last three years has completely changed the natural gas market landscape in North America. The unexpected growth in supply at increasingly lower costs has come at a time when the U.S. economy has been facing constrained demand and growth for natural gas. Among other things, this has led to an increased interest in exporting natural gas from the U.S., in the form of LNG. Various natural gas companies and other project sponsors have recently applied, and in some cases, have already received an export license to export liquefied natural gas, to countries with

## **Table of Contents**

which the U.S. has a free trade agreement providing comity in trading natural gas (FTA-nations) and to other non-FTA nations. At the same time, environmentalists, regulators, natural gas companies and the public have been focusing more attention on the potential environmental impacts associated with natural gas fracking, including possible chemicals leakage, ground water contamination and other effects, which may slow development in some areas. The changing natural gas landscape, and the resulting effect on natural gas pricing (in either direction) and the corresponding implications for electric utilities and other producers of electricity in terms of planning for and choosing a source of fuel, all combine to affect the pricing under our PPAs that have SRAC pricing or that are otherwise tied to natural gas prices.

Our PPA for 25 MW in the Puna complex has a monthly variable energy rate based on the local utility's short run avoided costs, which is the incremental cost that the power purchaser avoids by not having to generate such electrical energy itself or purchase it from others. A decrease in the price of oil will result in a decrease in the incremental cost that the power purchaser avoids by not generating its electrical energy needs from oil resulting in a reduction of the energy rate that we may charge under this PPA and under any other variable energy rate in PPAs that we may enter into in the future.

Our PPAs for the Ormesa complex, Mammoth complex and Heber 1 and 2 power plants are fixed until May 1, 2012. Thereafter, the energy price component under these PPAs will change from fixed rate to variable rate based on SRAC pricing, as required under a global settlement relating primarily to purchase and payment obligations of investor-owned utilities in California. These PPAs may be impacted by fluctuations in natural gas prices.

We are experiencing a notable decrease in competition in the geothermal industry, specifically in the acquisition of geothermal leases. The reduced level of competition has contributed to a decrease in lease costs.

The viability of a geothermal resource depends on various factors such as the resource temperature, the permeability of the resource (i.e., the ability to get geothermal fluids to the surface) and operational factors relating to the extraction of the geothermal fluids. Such factors, together with the possibility that we may fail to find commercially viable geothermal resources in the future, represent significant uncertainties that we face in connection with our growth expectations.

As our power plants age, they may require increased maintenance with a resulting decrease in their availability, potentially leading to the imposition of penalties if we are not able to meet the requirements under our PPAs as a result of any decrease in availability.

Our foreign operations are subject to significant political, economic and financial risks, which vary by country. Those risks include the partial privatization of the electricity sector in Guatemala, labor unrest in Nicaragua and the political uncertainty currently prevailing in some of the countries in which we operate. Although we maintain political risk insurance for most of our foreign power plants to mitigate these risks, insurance does not provide complete coverage with respect to all such risks.

The Energy Policy Act of 2005 authorizes FERC to revise PURPA so as to terminate the obligation to purchase the output of a Qualifying Facility if FERC finds that there is an accessible competitive market for energy and capacity from the Qualifying Facility. The legislation does not affect existing PPAs. We do not expect this change in law to affect our U.S. power plants significantly, as all except one of our current contracts are long-term. The FERC recently granted the California investor-owned utilities a waiver of the mandatory purchase obligations from Qualifying Facilities above 20 MW. If the utilities in the regions in which our domestic power plants operate were to be relieved of the mandatory purchase obligation, they would not be required to purchase energy from us upon termination of the existing PPA, which could have an adverse effect on our revenues.

**Table of Contents****Revenues**

We generate our revenues from the sale of electricity from our geothermal and recovered energy-based power plants; the design, manufacture and sale of equipment for electricity generation; and the construction, installation and engineering of power plant equipment.

Revenues attributable to our Electricity Segment are relatively predictable as they are derived from the sale of electricity from our power plants pursuant to long-term PPAs. However, we have variable price PPAs in California and Hawaii. Our California PPAs are subject to the impact of fluctuations in natural gas prices. The prices paid for electricity pursuant to the PPA of the Puna complex for 25 MW in Hawaii are impacted by the price of oil. Accordingly, our revenues from those power plants may fluctuate. Our Electricity Segment revenues are also subject to seasonal variations, as more fully described in the section entitled *Seasonality*, and may also be affected by higher-than-average ambient temperature, which could cause a decrease in the generating capacity of our power plants, and by unplanned major maintenance activities related to our power plants.

Our PPAs generally provide for the payment of energy payments alone, or energy and capacity payments. Generally, capacity payments are payments calculated based on the amount of time that our power plants are available to generate electricity. Some of our PPAs provide for bonus payments in the event that we are able to exceed certain target capacity levels and the potential forfeiture of payments if we fail to meet certain minimum target capacity levels. Energy payments, on the other hand, are payments calculated based on the amount of electrical energy delivered to the relevant power purchaser at a designated delivery point. The rates applicable to such payments are either fixed (subject, in certain cases, to certain adjustments) or are based on the relevant power purchaser's short run avoided costs (the incremental costs that the power purchaser avoids by not having to generate such electrical energy itself or purchase it from others). Our more recent PPAs generally provide for energy payments alone with an obligation to compensate the off-taker for its incremental costs as a result of shortfalls in our supply.

Revenues attributable to our Product Segment are generally less predictable than revenues from our Electricity Segment. This is because larger customer orders for our products are typically a result of our participating in, and winning, tenders or requests for proposals issued by potential customers in connection with projects they are developing. Such projects often take a significant amount of time to design and develop and are often subject to various contingencies such as the customer's ability to raise the necessary financing for a project. As a result, we are generally unable to predict the timing of such orders for our products and may not be able to replace existing orders that we have completed with new ones. As a result, our revenues from our Product Segment fluctuate (at times, extensively) from period to period. In 2011, we experienced a significant increase in our Product Segment customer orders, which has increased our Product Segment backlog. We expect that our Product Segment revenues will increase over the next two years as a result of these new orders and increased backlog, which is described in Item 1 Business.

The following table sets forth a breakdown of our revenues for the years indicated:

	Revenues in Thousands Year Ended December 31,			% of Revenues for Period Indicated Year Ended December 31,		
	2011	2010	2009	2011	2010	2009
Revenues:						
Electricity	\$ 323,849	\$ 291,820	\$ 252,621	74.1%	78.2%	61.3%
Product	113,160	81,410	159,389	25.9	21.8	38.7
Total	\$ 437,009	\$ 373,230	\$ 412,010	100.0%	100.0%	100.0%

**Table of Contents****Geographical Breakdown of Revenues**

The following table sets forth the geographic breakdown of the revenues attributable to our Electricity and Product Segments for the periods indicated:

	Revenues in Thousands Year Ended December 31,			% of Revenues for Period Indicated Year Ended December 31,		
	2011	2010	2009	2011	2010	2009
<b>Electricity Segment:</b>						
United States	\$ 249,740	\$ 220,107	\$ 182,219	77.1%	75.4%	72.1%
Foreign	74,109	71,713	70,402	22.9	24.6	27.9
Total	\$ 323,849	\$ 291,820	\$ 252,621	100.0%	100.0%	100.0%
<b>Product Segment:</b>						
United States	\$	\$ 10,177	\$ 63,735	0.0%	12.5%	40.0%
Foreign	113,160	71,233	95,654	100.0	87.5	60.0
Total	\$ 113,160	\$ 81,410	\$ 159,389	100.0%	100.0%	100.0%

**Seasonality**

The prices paid for the electricity generated by our domestic power plants pursuant to our PPAs are subject to seasonal variations. The prices paid for electricity under the PPAs with Southern California Edison for the Heber 1 and 2 plants, the Mammoth complex, the Ormesa complex, and the North Brawley plant are higher in the months of June through September. As a result, we receive, and will receive in the future, higher revenues during such months. The prices paid for electricity pursuant to the PPAs of our power plants in Nevada have no significant changes during the year. In the winter, due principally to the lower ambient temperature, our power plants produce more energy and as a result we receive higher energy revenues. However, the higher capacity payments payable by Southern California Edison in California in the summer months have a more significant impact on our revenues than that of the higher energy revenues generally generated in winter due to increased efficiency. As a result, our revenues are generally higher in the summer than in the winter.

**Breakdown of Cost of Revenues****Electricity Segment**

The principal cost of revenues attributable to our operating power plants include operation and maintenance expenses, such as depreciation and amortization, salaries and related employee benefits, equipment expenses, costs of parts and chemicals, costs related to third-party services, lease expenses, royalties, startup and auxiliary electricity purchases, property taxes, and insurance. In our California power plants our principal cost of revenues also includes transmission charges, scheduling charges and purchases of make-up water for use in our cooling towers. Some of these expenses, such as parts, third-party services and major maintenance, are not incurred on a regular basis. This results in fluctuations in our expenses and our results of operations for individual power plants from quarter to quarter. Payments made to government agencies and private entities on account of site leases where plants are located are included in cost of revenues. Royalty payments, included in cost of revenues, are made as compensation for the right to use certain geothermal resources and are paid as a percentage of the revenues derived from the associated geothermal rights. Royalties constituted approximately 3.7% of Electricity Segment revenues for each of the years ended December 31, 2011 and December 31, 2010.

**Product Segment**

The principal cost of revenues attributable to our Product Segment include materials, salaries and related employee benefits, expenses related to subcontracting activities, and transportation expenses. Sales commissions



**Table of Contents**

to sales representatives are included in selling and marketing expenses. Some of the principal expenses attributable to our Product Segment, such as a portion of the costs related to labor, utilities and other support services are fixed, while others, such as materials, construction, transportation and sales commissions, are variable and may fluctuate significantly, depending on market conditions. As a result, the cost of revenues attributable to our Product Segment, expressed as a percentage of total revenues, fluctuates. Another reason for such fluctuation is that in responding to bids for our products, we price our products and services in relation to existing competition and other prevailing market conditions, which may vary substantially from order to order.

**Cash and Cash Equivalents**

Our cash, cash equivalents and marketable securities as of December 31, 2011 increased to \$118.4 million from \$82.8 million as of December 31, 2010. This increase is principally due to: (i) \$107.4 million of proceeds from the issuance of Senior Unsecured Bonds in February 2011; (ii) \$24.9 million of proceeds from the sale of Class B membership units of OPC to JPM Capital in February 2011; (iii) \$141.1 million of net proceeds from the sale of Series A Senior Secured Notes in October 2011 by OFC 2 to finance a portion of the construction costs of Phase I of the McGinness Hills and Tuscarora facilities; (iv) \$132.7 million derived from operating activities during the year ended December 31, 2011; and (v) net proceeds of \$24.6 million drawn under our revolving credit lines with commercial banks. The increase in our cash resources was partially offset by: (i) our use of \$269.7 million to fund capital expenditures; (ii) repayment of \$50.1 million of long-term debt; (iii) a net change in restricted cash, cash equivalents and marketable securities of \$50.6 million; and (iv) cash paid to non-controlling interest of \$14.0 million. Our corporate borrowing capacity under committed lines of credit with different commercial banks as of December 31, 2011 was \$419.0 million, as described below in *Liquidity and Capital Resources*, of which we have utilized \$333.9 million (including \$128.9 million of letters of credit) as of December 31, 2011.

**Critical Accounting Estimates and Assumptions**

Our significant accounting policies are more fully described in Note 1 to our consolidated financial statements set forth in Part II, Item 8 of this annual report. However, certain of our accounting policies are particularly important to the portrayal of our financial position and results of operations. In applying these critical accounting estimates and assumptions, our management uses its judgment to determine the appropriate assumptions to be used in making certain estimates. Such estimates are based on management's historical experience, the terms of existing contracts, management's observance of trends in the geothermal industry, information provided by our customers and information available to management from other outside sources, as appropriate. Such estimates are subject to an inherent degree of uncertainty and, as a result, actual results could differ from our estimates. Our critical accounting policies include:

*Revenues and Cost of Revenues.* Revenues related to the sale of electricity from our geothermal and REG power plants and capacity payments paid in connection with such sales (electricity revenues) are recorded based upon output delivered and capacity provided by such power plants at rates specified pursuant to the relevant PPAs. Revenues related to PPAs accounted for as operating leases with minimum lease rentals which vary over time are generally recognized on a straight-line basis over the term of the PPA.

Revenues generated from the construction of geothermal and recovered energy-based power plant equipment and other equipment on behalf of third parties (product revenues) are recognized using the percentage of completion method. The percentage of completion method requires estimates of future costs over the full term of product delivery. Such cost estimates are made by management based on prior operations and specific project characteristics and designs. If management's estimates of total estimated costs with respect to our Product Segment are inaccurate, then the percentage of completion is inaccurate resulting in an over- or under-estimate of gross margins. As a result, we review and update our cost estimates on significant contracts on a quarterly basis, and no less than annually for all others, or when

---

**Table of Contents**

circumstances change and warrant a modification to a previous estimate. Changes in job performance, job conditions, and estimated profitability, including those arising from the application of penalty provisions in relevant contracts and final contract settlements, may result in revisions to costs and revenues and are recognized in the period in which the revisions are determined. Provisions for estimated losses relating to contracts are made in the period in which such losses are determined. Revenues generated from engineering and operating services and sales of products and parts are recorded once the service is provided or product delivery is made, as applicable.

*Property, Plant and Equipment.* We capitalize all costs associated with the acquisition, development and construction of power plant facilities. Major improvements are capitalized and repairs and maintenance (including major maintenance) costs are expensed. We estimate the useful life of our power plants to range between 25 and 30 years. Such estimates are made by management based on factors such as prior operations, the terms of the underlying PPAs, geothermal resources, the location of the assets and specific power plant characteristics and designs. Changes in such estimates could result in useful lives which are either longer or shorter than the depreciable lives of such assets. We periodically re-evaluate the estimated useful life of our power plants and revise the remaining depreciable life on a prospective basis.

We capitalize costs incurred in connection with the exploration and development of geothermal resources beginning when we acquire land rights to the potential geothermal resource. Prior to acquiring land rights, we make an initial assessment that an economically feasible geothermal reservoir is probable on that land using available data and external assessments vetted through our exploration department and occasionally outside service providers. Costs incurred prior to acquiring land rights are expensed. It normally takes one to two years from the time we start active exploration of a particular geothermal resource to the time we have an operating production well, assuming we conclude the resource is commercially viable.

In most cases, we obtain the right to conduct our geothermal development and operations on land owned by the BLM, various states or with private parties. In consideration for certain of these leases, we may pay an up-front non-refundable bonus payment which is a component of the competitive lease process. The up-front non-refundable bonus payments and other related costs, such as legal fees, are capitalized and included in construction-in-process. Once we acquire land rights to the potential geothermal resource, we perform additional activities to assess the commercial viability of the resource. Such activities include, among others, conducting surveys and other analyses, obtaining drilling permits, creating access roads to drilling sites, and exploratory drilling which may include temperature gradient holes and/or slim holes. Such costs are capitalized and included in construction-in-process. Once our exploration activities are complete, we finalize our assessment as to the commercial viability of the geothermal resource and either proceed to the construction phase for a power plant or abandon the site. If we decide to abandon a site, all previously capitalized costs associated with the exploration project are written off.

Our assessment of economic viability of an exploration project involves significant management judgment and uncertainties as to whether a commercially viable resource exists at the time we acquire land rights and begin to capitalize such costs. As a result, it is possible that our initial assessment of a geothermal resource may be incorrect and we would have to write-off costs associated with the project that were previously capitalized. During the years ended December 31, 2010 and 2009, we determined that the geothermal resource at four of our exploration projects would not support commercial operations and as such, we abandoned those sites. As a result of this determination, we expensed \$3,050,000 and \$2,367,000 of capitalized costs during the years ended December 31, 2010 and 2009, respectively. Due to the uncertainties inherent in geothermal exploration, these historical impairments may not be indicative of future impairments. Included in construction-in-process are costs related to projects in exploration and development of \$78,653,000 and \$54,697,000 at December 31, 2011 and 2010, respectively. Of this amount, \$36,832,000 and \$33,600,000 relates to up-front bonus payments at December 31, 2011 and 2010, respectively.

*Impairment of Long-Lived Assets and Long-Lived Assets to be Disposed of.* We evaluate long-lived assets, such as property, plant and equipment, construction-in-process, PPAs, and unconsolidated

---

**Table of Contents**

investments for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Factors which could trigger an impairment include, among others, significant underperformance relative to historical or projected future operating results, significant changes in our use of assets or our overall business strategy, negative industry or economic trends, a determination that an exploration project will not support commercial operations, a determination that a suspended project is not likely to be completed, a significant increase in costs necessary to complete a project, legal factors relating to our business or when we conclude that it is more likely than not that an asset will be disposed of or sold.

We test our operating plants that are operated together as a complex for impairment at the complex level because the cash flows of such plants result from significant shared operating activities. For example, the operating power plants in a complex are managed under a combined operation management generally with one central control room that controls all of the power plants in a complex and one maintenance group that services all of the power plants in a complex. As a result, the cash flows from individual plants within a complex are not largely independent of the cash flows of other plants within the complex. We test for impairment of our operating plants which are not operated as a complex, as well as our projects under exploration, development or construction that are not part of an existing complex, at the plant or project level. To the extent an operating plant becomes part of a complex in the future, we will test for impairment at the complex level.

Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the estimated future net undiscounted cash flows expected to be generated by the asset. The significant assumptions that we use in estimating our undiscounted future cash flows include: (i) projected generating capacity of the power plant and rates to be received under the respective PPA; and (ii) projected operating expenses of the relevant power plant. Estimates of future cash flows used to test recoverability of a long-lived asset under development also include cash flows associated with all future expenditures necessary to develop the asset. If future cash flows are less than the assumptions we used in such estimates, we may incur impairment losses in the future that could be material to our financial condition and/or results of operations.

If our assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds their fair value. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell. We believe that no impairment exists for long-lived assets; however, estimates as to the recoverability of such assets may change based on revised circumstances. Estimates of the fair value of assets require estimating useful lives and selecting a discount rate that reflects the risk inherent in future cash flows.

The North Brawley power plant, which is under development, was tested for impairment in the current year due to the low output and higher than expected operating costs. Based on these indicators, we tested North Brawley for recoverability by estimating its future cash flows taking into consideration the various outcomes from different generating capacities, different outcome of future rates based under its current PPA versus a new PPA that is expected to be signed and expected market rates thereafter, possible penalties for underperformance during periods when the plant is expected to operate below the stated capacity in the PPA, projected capital expenditures to complete development of the plant and projected operating expenses over the life of the plant. We applied a probability-weighted approach and considered alternative courses of action.

Using a probability-weighted approach, the estimated undiscounted cash flows exceed the carrying value of the plant (\$259 million as of December 31, 2011) by approximately \$103 million and therefore, no impairment occurred. Estimated undiscounted cash flows are subject to significant uncertainties. If actual cash flows differ from our current estimates due to factors that include, among others, if the plant's future generating capacity is less than approximately 37 MW, or if the capital expenditures required to complete development of the plant and/or future operating costs exceed the level of our current projections, a material impairment write-down may be required in the future.

## **Table of Contents**

*Obligations Associated with the Retirement of Long-Lived Assets.* We record the fair market value of legal liabilities related to the retirement of our assets in the period in which such liabilities are incurred. Our liabilities related to the retirement of our assets include our obligation to plug wells upon termination of our operating activities, the dismantling of our power plants upon cessation of our operations, and the performance of certain remedial measures related to the land on which such operations were conducted. When a new liability for an asset retirement obligation is recorded, we capitalize the costs of such liability by increasing the carrying amount of the related long-lived asset. Such liability is accreted to its present value each period and the capitalized cost is depreciated over the useful life of the related asset. At retirement, we will either settle the obligation for its recorded amount or will report either a gain or a loss with respect thereto. Estimates of the costs associated with asset retirement obligations are based on factors such as prior operations, the location of the assets and specific power plant characteristics. We review and update our cost estimates periodically and adjust our asset retirement obligations in the period in which the revisions are determined. If actual results are not consistent with our assumptions used in estimating our asset retirement obligations, we may incur additional losses that could be material to our financial condition or results of operations.

*Accounting for Income Taxes.* Significant estimates are required to arrive at our consolidated income tax provision and other tax balances. This process requires us to estimate our actual current tax exposure and to make an assessment of temporary differences resulting from differing treatments of items for tax and accounting purposes. Such differences result in deferred tax assets and liabilities which are included in our consolidated balance sheets. For those jurisdictions where the projected operating results indicate that realization of our net deferred tax assets is not more likely than not, a valuation allowance is recorded.

We evaluate our ability to utilize the deferred tax assets quarterly and assess the need for the valuation allowance. In assessing the need for a valuation allowance, we estimate future taxable income, considering the feasibility of ongoing tax planning strategies and the realization of tax loss carryforwards. Valuation allowances related to deferred tax assets can be affected by changes in tax laws, statutory tax rates and future taxable income. We have provided a full valuation allowance related to our U.S. deferred tax assets. In the future, if sufficient evidence of our ability to generate sufficient future taxable income in the U.S. becomes apparent, we may be required to reduce this valuation allowance, resulting in income tax benefits in our consolidated statement of operations.

In the ordinary course of business, there is inherent uncertainty in quantifying our income tax positions. We assess our income tax positions and record tax benefits for all years subject to examination based upon management's evaluation of the facts, circumstances and information available at the reporting date. For those tax positions where it is more likely than not that a tax benefit will be sustained, we have recorded the largest amount of tax benefit with a greater than 50% likelihood of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. For those income tax positions where it is not more likely than not that a tax benefit will be sustained, no tax benefit has been recognized in the consolidated financial statements. Resolution of these uncertainties in a manner inconsistent with our expectations could have a material impact on our financial condition or results of operations.

### ***New Accounting Pronouncements***

See Note 1 to our consolidated financial statements set forth in Part II, Item 8 of this annual report for information regarding new accounting pronouncements.

**Table of Contents****Results of Operations**

Our historical operating results in dollars and as a percentage of total revenues are presented below. A comparison of the different years described below may be of limited utility due to the following: (i) our recent construction of new power plants and enhancement of acquired power plants; and (ii) fluctuation in revenues from our Product Segment.

	Year Ended December 31,		
	2011	2010	2009
(In thousands, except per share data)			
<b>Statements of Operations Historical Data:</b>			
<b>Revenues:</b>			
Electricity	\$ 323,849	\$ 291,820	\$ 252,621
Product	113,160	81,410	159,389
	437,009	373,230	412,010
<b>Cost of revenues:</b>			
Electricity	244,037	242,326	179,101
Product	76,072	53,277	112,450
	320,109	295,603	291,551
<b>Gross margin</b>			
Electricity	79,812	49,494	73,520
Product	37,088	28,133	46,939
	116,900	77,627	120,459
<b>Operating expenses:</b>			
Research and development expenses	8,801	10,120	10,502
Selling and marketing expenses	16,207	13,447	14,584
General and administrative expenses	27,885	27,442	26,412
Write-off of unsuccessful exploration activities		3,050	2,367
Operating income	64,007	23,568	66,594
<b>Other income (expense):</b>			
Interest income	1,427	343	639
Interest expense, net	(69,459)	(40,473)	(16,241)
Foreign currency translation and transaction gains (losses)	(1,350)	1,557	(1,695)
Income attributable to sale of tax benefits	11,474	8,729	15,515
Gain on acquisition of controlling interest		36,928	
Gain from extinguishment of liability			13,348
Other non-operating income (expense), net	671	130	200
Income from continuing operations, before income taxes and equity in income of investees	6,770	30,782	78,360
Income tax benefit (provision)	(48,535)	1,098	(15,430)
Equity in income (losses) of investees, net	(959)	998	2,136
Income (loss) from continuing operations	(42,724)	32,878	65,066
Discontinued operations:			
Income from discontinued operations, net of related tax		14	3,487
Gain on sale of a subsidiary in New Zealand, net of related tax		4,336	
Net income (loss)	(42,724)	37,228	68,553
Net loss (income) attributable to noncontrolling interest	(332)	90	298
Net income (loss) attributable to the Company's stockholders	\$ (43,056)	\$ 37,318	\$ 68,851

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Earnings (loss) per share attributable to the Company's stockholders:

Basic:			
Income (loss) from continuing operations	\$ (0.95)	\$ 0.72	\$ 1.44
Discontinued operations		0.10	0.08
Net Income (loss)	\$ (0.95)	\$ 0.82	\$ 1.52
Diluted:			
Income (loss) from continuing operations	\$ (0.95)	\$ 0.72	\$ 1.43
Discontinued operations		0.10	0.08
Net Income (loss)	\$ (0.95)	\$ 0.82	\$ 1.51
Weighted average number of shares used in computation of earnings (loss) per share attributable to the Company's stockholders:			
Basic	45,431	45,431	45,391
Diluted	45,431	45,452	45,533

**Table of Contents**

	Year Ended December 31,		
	2011	2010	2009
<b>Statements of Operations Percentage Data:</b>			
<b>Revenues:</b>			
Electricity	74.1%	78.2%	61.3%
Product	25.9	21.8	38.7
	100.00	100.00	100.00
<b>Cost of revenues:</b>			
Electricity	75.4	83.0	70.9
Product	67.2	65.4	70.6
	73.2	79.2	70.8
<b>Gross margin</b>			
Electricity	24.6	17.0	29.1
Product	32.8	34.6	29.4
	26.8	20.8	29.2
<b>Operating expenses:</b>			
Research and development expenses	2.0	2.7	2.5
Selling and marketing expenses	3.7	3.6	3.5
General and administrative expenses	6.4	7.4	6.4
Write-off of unsuccessful exploration activities	0.0	0.8	0.6
Operating income	14.7	6.3	16.2
<b>Other income (expense):</b>			
Interest income	0.3	0.1	0.2
Interest expense, net	(15.9)	(10.8)	(3.9)
Foreign currency translation and transaction gains (losses)	(0.3)	0.4	(0.4)
Income attributable to sale of tax benefits	2.6	2.3	3.8
Gain on acquisition of controlling interest	0.0	9.9	0.0
Gain from extinguishment of liability	0.0	0.0	3.2
Other non-operating income (expense), net	0.1	0.0	0.0
Income from continuing operations, before income taxes and equity in income of investees	1.5	8.2	19.0
Income tax benefit (provision)	(11.1)	0.3	(3.7)
Equity in income (losses) of investees, net	(0.2)	0.3	0.5
Income (loss) from continuing operations	(9.8)	8.8	15.8
<b>Discontinued operations:</b>			
Income from discontinued operations, net of related tax	0.0	0.0	0.8
Gain on sale of a subsidiary in New Zealand, net of related tax	0.0	1.2	0.0
Net income (loss)	(9.8)	10.0	16.6
Net loss (income) attributable to noncontrolling interest	(0.1)	0.0	0.1
Net income (loss) attributable to the company's stockholders	(9.9)%	10.0%	16.7%

---

**Table of Contents*****Comparison of the Year Ended December 31, 2011 and the Year Ended December 31, 2010******Total Revenues***

Total revenues for the year ended December 31, 2011 were \$437.0 million, compared to \$373.2 million for the year ended December 31, 2010, which represented a 17.1% increase in total revenues. This increase is attributable to both our Electricity and Product Segments whose revenues increased by 11.0% and by 39.0%, respectively, over the same period in 2010.

***Electricity Segment***

Revenues attributable to our Electricity Segment for the year ended December 31, 2011 were \$323.8 million, compared to \$291.8 million for the year ended December 31, 2010, which represented an 11.0% increase in such revenues. This increase is due to: (i) an increase in the electricity rates in our Amatitlan and Puna power plants, which resulted in an increase in the average rate of our electricity portfolio from \$78 per MWh in the year ended December 31, 2010 to \$83 per MWh in the year ended December 31, 2011; and (ii) increased electricity generation of our power plants from 3,762,283 MWh in the year ended December 31, 2010 to 3,918,156 MWh in the year ended December 31, 2011, an increase of 4.1%. The most significant contributors to the increase in our electricity generation were: (i) an increase in the generation of the Puna power plant due to repair work that was completed in the second quarter of 2010; (ii) the consolidation of the Mammoth complex, effective August 2, 2010, with revenues of \$19.0 million in the year ended December 31, 2011, compared to \$7.6 million in the period from August 2, 2010 to December 31, 2010, which resulted from the acquisition of the remaining 50% interest in Mammoth Pacific in August 2010; and (iii) an increase in generation of our REG facilities due to the addition of one plant and a higher availability of the pipeline providing the heat to most of our REG power plants. Revenues derived from the North Brawley power plant were \$15.3 million and \$15.0 million, respectively, in the years ended December 31, 2011 and 2010.

***Product Segment***

Revenues attributable to our Product Segment for the year ended December 31, 2011 were \$113.2 million, compared to \$81.4 million for the year ended December 31, 2010, which represented a 39.0% increase in such revenues. The increase in our product revenues reflects the increase in new customer orders that we secured in the first half of 2011, and the recognition of \$12.1 million of revenues relating to an LNG energy recovery unit in Spain in the year ended December 31, 2011 (see Research and Development Expenses below).

***Total Cost of Revenues***

Total cost of revenues for the year ended December 31, 2011 increased by 8.3% to \$320.1 million, compared to \$295.6 million for the year ended December 31, 2010. This increase is attributable to both our Electricity and Product Segments cost of revenues. As a percentage of total revenues, our total cost of revenues for the year ended December 31, 2011 was 73.2%, compared to 79.2% for the year ended December 31, 2010.

***Electricity Segment***

Total cost of revenues attributable to our Electricity Segment for the year ended December 31, 2011 increased by 0.7% to \$244.0 million, compared to \$242.3 million for the year ended December 31, 2010. Costs incurred in operating and maintaining the North Brawley power plant in the year ended December 31, 2011 were slightly higher than in the year ended December 31, 2010 (\$41.8 million and \$39.6 million, respectively). The overall cost per MWh for the year ended December 31, 2011 slightly decreased, compared to the year ended December 31, 2010, as a result of lower maintenance costs, which were offset by: (i) the slightly higher costs in the North Brawley power plant, as described above; and (ii) increased depreciation costs in the Mammoth complex, resulting from the program to repower the complex by replacing part of the old units with new equipment. As a percentage of total electricity revenues, the total cost of revenues attributable to our Electricity

---

**Table of Contents**

Segment for the year ended December 31, 2011 was 75.4%, compared to 83.0% for the year ended December 31, 2010. This decrease in electricity cost of revenues as a percentage of total electricity revenues is due to the 11.0% increase in electricity revenues, which outpaced the 0.7% increase in electricity cost of revenues.

***Product Segment***

Total cost of revenues attributable to our Product Segment for the year ended December 31, 2011 increased by 42.8% to \$76.1 million, compared to \$53.3 million for the year ended December 31, 2010. This increase is attributable to the increase in product revenues, as described above. As a percentage of total Product Segment revenues, our total cost of revenues attributable to this segment increased from 65.4% for the year ended December 31, 2010 to 67.2% for the year ended December 31, 2011. This increase is mainly attributable to: (i) a different product mix; and (ii) different margins in the various sales contracts. The increase was partially offset by the impact of revenues of \$12.1 million relating to an LNG energy recovery unit in Spain with virtually no associated cost of revenues, as these costs had been included in our research and development expenses in previous years.

***Research and Development Expenses***

Research and development expenses for the year ended December 31, 2011 decreased by 13.0% to \$8.8 million, compared to \$10.1 million for the year ended December 31, 2010. This decrease is primarily attributable to the decrease in costs related to an experimental REG plant specifically designed to use the residual energy from the vaporization process at LNG regasification terminals. These costs included developing and building a unit at a customer's premises in Spain and were incurred through the second quarter of 2010. Our research and development activities during the year ended December 31, 2011 also included: (i) continued development of EGS; and (ii) activities intended to improve plant performance, reduce costs, and increase the breadth of product offerings. The research and development expenses are net of grants from the DOE in the amount of \$1.1 million and \$0.7 million for the years ended December 31, 2011 and 2010, respectively, with respect to the EGS project. The primary focus of our research and development efforts includes continued improvements to our Evaporative Cooling system, condensing equipment with improved performance and lower land usage, developing new turbine products, and specialized power units designed to reduce fuel consumption and associated costs during a project's development phase.

***Selling and Marketing Expenses***

Selling and marketing expenses for the year ended December 31, 2011 were \$16.2 million, compared to \$13.4 million for the year ended December 31, 2010, which represented a 20.5% increase. The increase was due primarily to the increase in Product Segment revenues and to a \$1.7 million termination fee to NV Energy as part of the termination agreement of the PPA and joint operating agreement for the Carson Lake geothermal project. Selling and marketing expenses for the year ended December 31, 2011 constituted 3.7% of total revenues for such period, compared to 3.6% for the year ended December 31, 2010.

***General and Administrative Expenses***

General and administrative expenses for the year ended December 31, 2011 were \$27.9 million, compared to \$27.4 million for the year ended December 31, 2010, which represented a 1.6% increase. General and administrative expenses for the year ended December 31, 2011, constituted 6.4% of total revenues for such year, compared to 7.4% for the year ended December 31, 2010.

***Write-off of Unsuccessful Exploration Activities***

Write-off of unsuccessful exploration activities for the year ended December 31, 2010 was \$3.1 million, which represented the write-off of exploration costs related to the Gabbs Valley exploration project in Nevada, which we determined in the second quarter of 2010 would not support commercial operations. There were no write-offs of unsuccessful exploration activities for the year ended December 31, 2011.

---

**Table of Contents*****Operating Income***

Operating income for the year ended December 31, 2011 was \$64.0 million, compared to \$23.6 million for the year ended December 31, 2010. This increase of \$40.4 million in operating income was principally attributable to an increase in our gross margin due to the increase in revenues, as described above, and the absence of any write-off of unsuccessful exploration activities in the year ended December 31, 2011. Operating income attributable to our Electricity Segment for the year ended December 31, 2011 was \$46.2 million, compared to \$12.8 million for the year ended December 31, 2010. Operating income attributable to our Product Segment for the year ended December 31, 2011 was \$18.9 million, compared to \$10.8 million for the year ended December 31, 2010.

***Interest Expense, Net***

Interest expense, net, for the year ended December 31, 2011 was \$69.5 million, compared to \$40.5 million for the year ended December 31, 2010, which represented a 71.6% increase. The \$29.0 million increase is primarily due to: (i) a \$16.4 million loss on interest rate lock transactions in the year ended December 31, 2011, relating to the DOE loan guarantee transactions that were consummated in September 2011, and which were not accounted for as hedge transactions; and (ii) the issuance of Senior Unsecured Bonds in August 2010 and February 2011, as discussed elsewhere in this Item. The increase was partially offset by: (i) an increase of \$2.2 million in interest capitalized to projects as a result of increased aggregate investment in projects under construction; and (ii) a decrease in interest expense as a result of principal repayments.

***Foreign Currency Translation and Transaction Gains (Losses)***

Foreign currency translation and transaction losses for the year ended December 31, 2011 were \$1.4 million, compared to gains of \$1.6 million for the year ended December 31, 2010. The \$3.0 million variance is primarily due to losses on forward foreign exchange transactions for the year ended December 31, 2011, which were not accounted for as hedge transactions, compared to gains in the year ended December 31, 2010.

***Income Attributable to Sale of Tax Benefits***

Income attributable to the sale of tax benefits to institutional equity investors (as described in *OPC Transaction* below) for the year ended December 31, 2011 was \$11.5 million, compared to \$8.7 million for the year ended December 31, 2010. This income represents the value of PTCs and taxable income or loss generated by OPC and allocated to the investors. The increase resulted from the sale of Class B membership units of OPC LLC to JPM Capital Corporation on February 3, 2011.

***Gain on Acquisition of Controlling Interest***

Gain on acquisition of controlling interest for the year ended December 31, 2010 was \$36.9 million. This gain relates to the acquisition of the remaining 50% interest in Mammoth Pacific. The acquisition-date fair value of the previous 50%-equity interest was \$64.9 million. In the year ended December 31, 2010, we recognized a pre-tax gain of \$36.9 million (\$22.4 million after tax), which is equal to the difference between the acquisition-date fair value of the initial investment in Mammoth Pacific and the acquisition-date carrying value of such investment.

***Income Taxes***

Income tax provision for the year ended December 31, 2011 was \$48.5 million, compared to an income tax benefit of \$1.1 million for the year ended December 31, 2010.

In the year ended December 31, 2011, we recorded valuation allowance in the amount of approximately \$61.5 million against our U.S. deferred tax assets in respect of net operating loss (NOL) carryforwards and

**Table of Contents**

unutilized tax credits (PTCs and ITCs). As of December 31, 2011 we have U.S. NOL in the amount of approximately \$349.5 million, state NOLs in the amount of approximately \$159.0 million, and unutilized tax credits of approximately \$61.9 million, that can be utilized over 20 years. The related deferred tax assets totaled approximately \$192.5 million. Realization of these deferred tax assets and tax credits is dependent on generating sufficient taxable income in the U.S. prior to expiration of the NOL carryforwards and tax credits. The scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies were considered in determining the amount of valuation allowance. A valuation allowance in the amount of \$61.5 million was recorded against the U.S. deferred tax assets as of December 31, 2011 as, at this point in time, it is more likely than not that the deferred tax assets will not be realized. If sufficient evidence of our ability to generate taxable income is established in the future, we may be required to reduce this valuation allowance, resulting in income tax benefits in our consolidated statement of operations.

***Income (Loss) from Continuing Operations***

Loss from continuing operations for the year ended December 31, 2011 was \$42.7 million, compared to income of \$32.9 million for the year ended December 31, 2010. This decrease of \$75.6 million in income from continuing operations was principally attributable to: (i) the increase of \$49.6 million in tax provision resulting from the valuation allowance discussed above; (ii) a \$36.9 million gain related to the acquisition of controlling interest in the year ended December 31, 2010; (iii) a \$29.0 million increase in interest expense, net; and (iv) a \$2.9 million decrease in foreign currency transaction and translation gains. This was partially offset by a \$40.4 million increase in operating income.

***Discontinued Operations***

In January 2010, a former shareholder of GDL exercised a call option to purchase from us our shares in GDL for approximately \$2.8 million. We did not exercise our right of first refusal, and therefore we transferred our shares in GDL to the former shareholder. As a result, we recorded an after-tax gain of \$4.3 million in the year ended December 31, 2010. The operations of GDL have been included in discontinued operations for all periods prior to the sale of GDL in January 2010.

***Net Income (Loss)***

Net loss for the year ended December 31, 2011 was \$42.7 million, compared to net income of \$37.2 million for the year ended December 31, 2010, which represents a decrease of \$79.9 million. This decrease in net income was principally attributable to the decrease in income from continuing operations in the amount of \$75.6 million, as discussed above.

***Comparison of the Year Ended December 31, 2010 and the Year Ended December 31, 2009******Total Revenues***

Total revenues for the year ended December 31, 2010 were \$373.2 million, compared to \$412.0 million for the year ended December 31, 2009, which represented a 9.4% decrease in total revenues. This decrease is attributable to our Product Segment whose revenues decreased by 48.9% from the same period in 2009 (for the reasons discussed below). Revenues in our Electricity Segment increased by 15.5% from the same period in 2009.

***Electricity Segment***

Revenues attributable to our Electricity Segment for the year ended December 31, 2010 were \$291.8 million, compared to \$252.6 million for the year ended December 31, 2009, which represented a 15.5% increase in such revenues. The increase is primarily a result of increased electricity generation at most of our power plants from 3,296,824 MWh in the year ended December 31, 2009 to 3,762,283 MWh in the year ended December 31, 2010, an increase of 14.1%. The most significant contributors to the increase in our electricity revenues were:

---

**Table of Contents**

(i) an increase in the generation of the Puna power plant following repair work that was completed in the second quarter of 2010; (ii) the placement in service of our North Brawley power plant in January 2010, with revenues of \$15.0 million in the year ended December 31, 2010; and (iii) the consolidation of the Mammoth complex, effective August 2, 2010, with revenues of \$7.6 million in the period from August 2, 2010 to December 31, 2010, resulting from the acquisition of the remaining 50% interest in Mammoth Pacific. The increase in our Electricity Segment revenues is also attributable to a slight increase in the average revenue rate of our electricity portfolio from \$77 per MWh in the year ended December 31, 2009 to \$78 per MWh in the year ended December 31, 2010.

*Product Segment*

Revenues attributable to our Product Segment for the year ended December 31, 2010 were \$81.4 million, compared to \$159.4 million for the year ended December 31, 2009, which represented a 48.9% decrease in such revenues. This decrease in our product revenue is a result of reduced Product Segment customer orders for the year ended December 31, 2010.

*Total Cost of Revenues*

Total cost of revenues for the year ended December 31, 2010 was \$295.6 million, compared to \$291.6 million for the year ended December 31, 2009, which represented a 1.4% increase in total cost of revenues. This increase is attributable to an increase in our Electricity Segment cost of revenues, which was offset by a decrease in our Product Segment cost of revenues, as discussed below. As a percentage of total revenues, our total cost of revenues for the year ended December 31, 2010 was 79.2%, compared to 70.8% for the year ended December 31, 2009. This increase is mainly attributable to high costs in our North Brawley power plant, as described below, as well as the lower volume of Product Segment revenues.

*Electricity Segment*

Total cost of revenues attributable to our Electricity Segment for the year ended December 31, 2010 was \$242.3 million, which include \$39.6 million related to our North Brawley power plant, compared to \$179.1 million for the year ended December 31, 2009, which represented a 35.3% increase in total cost of revenues for such segment. The increase over the same period last year is mainly attributable to our North Brawley power plant which was placed in service in January 2010. We have incurred high costs (including depreciation) associated with operating and maintaining this power plant, which has a design capacity of 50 MW but is currently operating at a reduced capacity. The higher costs in the North Brawley power plant increased the cost per MWh for the year ended December 31, 2010, compared to the year ended December 31, 2009. As a percentage of total electricity revenues, the total cost of revenues attributable to our Electricity Segment for the year ended December 31, 2010 was 83.0%, compared to 70.9% for the year ended December 31, 2009.

*Product Segment*

Total cost of revenues attributable to our Product Segment for the year ended December 31, 2010 was \$53.3 million, compared to \$112.5 million for the year ended December 31, 2009, which represented a 52.6% decrease in total cost of revenues related to such segment. This decrease is attributable to the decrease in product revenues, as described above. As a percentage of total Product Segment revenues, our total cost of revenues attributable to this segment for the year ended December 31, 2010 decreased from 70.6% for the year ended December 31, 2009 to 65.4% for the year ended December 31, 2010. This percentage decrease is attributable to the removal of a contingency relating to a project that was substantially completed in the second quarter of 2010.

*Research and Development Expenses*

Research and development expenses for the year ended December 31, 2010 were \$10.1 million, compared to \$10.5 million for the year ended December 31, 2009, which represented a 3.6% decrease. Our research and

---

**Table of Contents**

development activities during the year ended December 31, 2010 included primarily: (i) an experimental REG plant specifically designed to use the residual energy from the vaporization process at LNG regasification terminals, including developing and building a unit at a customer's premises in Spain; (ii) continued development of EGS; and (iii) development of a solar thermal system for the production of electricity. Construction of the experimental REG plant commenced in the third quarter of 2010 and was completed during the fourth quarter of 2011. The research and development expenses are net of grants from the DOE in the amount of \$0.7 million and \$1.3 million for the years ended December 31, 2010 and 2009, respectively, with respect to the EGS project.

***Selling and Marketing Expenses***

Selling and marketing expenses for the year ended December 31, 2010 were \$13.4 million, compared to \$14.6 million for the year ended December 31, 2009, which represented a 7.8% decrease. The decrease was due primarily to the decrease in Product Segment revenues. Selling and marketing expenses for the year ended December 31, 2010 constituted 3.6% of total revenues for such period, compared to 3.5% for the year ended December 31, 2009.

***General and Administrative Expenses***

General and administrative expenses for the year ended December 31, 2010 were \$27.4 million, compared to \$26.4 million for the year ended December 31, 2009, which represented a 3.9% increase. General and administrative expenses for the year ended December 31, 2010 constituted 7.4% of total revenues for such year, compared to 6.4% for the year ended December 31, 2009.

***Write-off of Unsuccessful Exploration Activities***

Write-off of unsuccessful exploration activities for the year ended December 31, 2010 was \$3.1 million, compared to \$2.4 million for the year ended December 31, 2009. Write-off of unsuccessful exploration activities for the year ended December 31, 2010 relates to the Gabbs Valley exploration project in Nevada, which we determined in the second quarter of 2010 would not support commercial operations. Write-off of unsuccessful exploration activities for the year ended December 31, 2009 relates to the Rock Hills exploration project in Nevada, which we determined in the third quarter of 2009 would not support commercial operations.

***Operating Income***

Operating income for the year ended December 31, 2010 was \$23.6 million, compared to \$66.6 million for the year ended December 31, 2009. Such decrease of \$43.0 million in operating income was principally attributable to a decrease in the total gross margin due to the decrease in Product Segment revenues and the increase in Electricity Segment cost of revenues. Operating income attributable to our Electricity Segment for the year ended December 31, 2010 was \$12.8 million, compared to \$45.3 million for the year ended December 31, 2009, mainly due to the increase in electricity cost of revenues, as explained above. Operating income attributable to our Product Segment for the year ended December 31, 2010 was \$10.8 million, compared to \$21.3 million for the year ended December 31, 2009, mainly due to the decrease in product revenues, as explained above.

***Interest Expense, Net***

Interest expense, net, for the year ended December 31, 2010 was \$40.5 million, compared to \$16.2 million for the year ended December 31, 2009, which represented a 149.2% increase. The \$24.2 million increase is primarily due to: (i) a decrease of \$17.9 million in interest capitalized to projects as a result of decreased aggregate investment in projects under construction; (ii) an increase in interest expenses related to our long-term project finance loans of the Olkaria III and Amatitlan power plants; (iii) borrowings under our revolving credit

---

**Table of Contents**

lines with commercial banks; (iv) loan agreements with institutional investors and a commercial bank; and (v) issuance of Senior Unsecured Bonds on August 3, 2010, as discussed below. The increase was partially offset by a decrease in interest expense as a result of the acquisition of a 30% interest in the Class B membership units of OPC on October 30, 2009 by our subsidiary, Ormat Nevada, as well as principal repayments.

***Foreign Currency Translation and Transaction Gains (Losses)***

Foreign currency translation and transaction gains for the year ended December 31, 2010 were \$1.6 million, compared to losses of \$1.7 million for the year ended December 31, 2009. The \$3.3 million increase is primarily due to an increase in gains on forward foreign exchange transactions which were not accounted for as hedge transactions.

***Income Attributable to Sale of Tax Benefits***

Income attributable to the sale of tax benefits to institutional equity investors (as described in OPC Transaction below) for the year ended December 31, 2010 was \$8.7 million, compared to \$15.5 million for the year ended December 31, 2009. This income represents the value of PTCs and taxable income or loss generated by OPC and allocated to the investors. The decrease is due to lower depreciation for tax purposes as a result of declining depreciation rates utilizing MACRS and to the purchase of Class B membership units of OPC from Lehman-OPC LLC (Lehman OPC) in October 2009, as described under Gain from Extinguishment of Liability below.

***Gain on Acquisition of Controlling Interest***

Gain on acquisition of controlling interest for the year ended December 31, 2010 was \$36.9 million. This gain relates to the acquisition of the remaining 50% interest in Mammoth Pacific. The acquisition-date fair value of the previous 50%-equity interest was \$64.9 million. In the year ended December 31, 2010, we recognized a pre-tax gain of \$36.9 million (\$22.4 million after tax), which is equal to the difference between the acquisition-date fair value of the initial investment in Mammoth Pacific and the acquisition-date carrying value of such investment.

***Gain from Extinguishment of Liability***

Gain from extinguishment of liability for the year ended December 31, 2009 was \$13.3 million. On October 30, 2009, Ormat Nevada acquired Lehman-OPC's 30% interest in the Class B membership units of OPC. The membership units were acquired from Lehman-OPC pursuant to a right of first offer for a price of \$18.5 million. A substantial portion of the initial sale of the Class B membership units by Ormat Nevada was accounted for as a financing. As a result, the repurchase of these interests at a discount resulted in a pre-tax gain of \$13.3 million (\$8.2 million after tax) in the year ended December 31, 2009. In addition, an amount of approximately \$1.1 million was classified in the year ended December 31, 2009 from noncontrolling interest to additional paid-in capital representing the 1.5% residual interest of Lehman-OPC's Class B membership units.

***Income Taxes***

Income tax benefit for the year ended December 31, 2010 was \$1.1 million, compared to income tax provision of \$15.4 million for the year ended December 31, 2009. The effective tax rate for the year ended December 31, 2010 was 3.6% compared to 19.7% for the year ended December 31, 2009. The decrease in the effective tax rate primarily resulted from the higher impact of PTCs on the effective tax rate for the year ended December 31, 2010 due to our low pretax income from continuing operations.

***Equity in Income of Investees***

Our participation in the income generated from our investees for the year ended December 31, 2010 was \$1.0 million, compared to \$2.1 million for the year ended December 31, 2009. The amount is derived mainly

---

## **Table of Contents**

from our 50% ownership of the Mammoth complex which was included in the Company's consolidated financial statements effective August 2, 2010, as a result of our acquisition of the remaining 50% interest in Mammoth Pacific. For the year ended December 31, 2010, the amount represents our share in the income of the Mammoth complex in the period from January 1, 2010 to August 1, 2010.

### ***Income from Continuing Operations***

Income from continuing operations for the year ended December 31, 2010 was \$32.9 million, compared to \$65.1 million for the year ended December 31, 2009. This decrease of \$32.2 million in income from continuing operations was principally attributable to: (i) a \$43.0 million decrease in operating income; (ii) a \$24.2 million increase in interest expense, net; (iii) a \$6.8 million decrease in income attributable to the sale of tax benefits; and (iv) gain from extinguishment of liability of \$13.3 million in the year ended December 31, 2009. This was partially offset by: (i) a \$3.3 million increase in foreign currency transaction and translation gains; (ii) a \$36.9 million gain related to the acquisition of controlling interest in the year ended December 31, 2010; and (iii) a \$16.5 million decrease in income tax provision.

### ***Discontinued Operations***

In January 2010, a former shareholder of GDL exercised a call option to purchase from us our shares in GDL for approximately \$2.8 million. We did not exercise our right of first refusal, and therefore we transferred our shares in GDL to the former shareholder. As a result, we recorded an after-tax gain of \$4.3 million in the year ended December 31, 2010. The operations of GDL have been included in discontinued operations for all periods prior to the sale of GDL in January 2010.

### ***Net Income***

Net income for the year ended December 31, 2010 was \$37.2 million, compared to \$68.6 million for the year ended December 31, 2009, which represents a decrease of \$31.3 million. This decrease in net income was principally attributable to the decrease in income from continuing operations in the amount of \$32.2 million, as discussed above.

### **Liquidity and Capital Resources**

Our principal sources of liquidity have been derived from cash flows from operations, the issuance of our common stock in public and private offerings, proceeds from third party debt in the form of borrowings under credit facilities and private offerings, issuance by OFC, OrCal and OFC 2 of their respective Senior Secured Notes, project financing (including the Puna lease and the OPC Transaction described below), and cash grants we received under the ARRA. We have utilized this cash to fund our acquisitions (including the acquisition of the remaining 50% ownership of the Mammoth complex in August 2010), to develop and construct power generation plants, and to meet our other cash and liquidity needs.

As of December 31, 2011, we have access to the following sources of funds: (i) \$118.4 million in cash, cash equivalents and marketable securities; and (ii) \$75.1 million of unused corporate borrowing capacity under existing lines of credit with different commercial banks.

Our estimated capital needs for 2012 include approximately \$367.0 million for capital expenditures on new projects under development or construction, exploration activity, operating projects, and machinery and equipment, as well as \$55.6 million for debt repayment.

We expect to finance these requirements with: (i) the sources of liquidity described above; (ii) cash flows from our operations; (iii) future project financing and refinancing (including construction loans); and (iv) cash grants available to us under the ARRA in respect of new projects that will be placed in service before the end of 2013. Management believes that these sources will address our anticipated liquidity, capital expenditures, and other investment requirements.

**Table of Contents*****Third-Party Debt***

Our third-party debt is composed of two principal categories. The first category consists of project finance debt or acquisition financing that we or our subsidiaries have incurred for the purpose of developing and constructing, refinancing or acquiring our various projects, which are described under the heading *Non-Recourse and Limited-Recourse Third-Party Debt*. The second category consists of debt incurred by us or our subsidiaries for general corporate purposes, which are described under the heading *Full-Recourse Third-Party Debt*.

***Non-Recourse and Limited-Recourse Third-Party Debt******OFC Senior Secured Notes – Non-Recourse***

On February 13, 2004, OFC, one of our subsidiaries, issued \$190.0 million of OFC Senior Secured Notes in an offering subject to Rule 144A and Regulation S of the Securities Act, for the purpose of refinancing the acquisition cost of the Brady, Ormesa and Steamboat 1 and 1A power plants, and the financing of the acquisition cost of the Steamboat 2 and 3 power plants. The OFC Senior Secured Notes have a final maturity date of December 30, 2020. Principal and interest on the OFC Senior Secured Notes are payable in semi-annual payments which commenced on June 30, 2004. The OFC Senior Secured Notes are collateralized by substantially all of the assets of OFC and those of its wholly owned subsidiaries and are fully and unconditionally guaranteed by all of the wholly owned subsidiaries of OFC. There are various restrictive covenants under the OFC Senior Secured Notes, which include a required historical and projected 12-month debt service coverage ratio (DSCR) of not less than 1.25 and other limitations on additional indebtedness. If OFC fails to comply with these financial ratios it will be precluded from making distributions to its shareholders. In addition, subject to certain cure rights, such failure will constitute an event of default by OFC. As of December 31, 2011, the actual historical 12-month DSCR was 1.49. As of December 31, 2011, there were \$125.0 million of OFC Senior Secured Notes outstanding.

***OrCal Geothermal Senior Secured Notes – Non-Recourse***

On December 8, 2005, OrCal, one of our subsidiaries, issued \$165.0 million of OrCal Senior Secured Notes in an offering subject to Rule 144A and Regulation S of the Securities Act, for the purpose of refinancing the acquisition cost of the Heber projects. The OrCal Senior Secured Notes have been rated BBB- by Fitch. The OrCal Senior Secured Notes have a final maturity date of December 30, 2020. Principal and interest on the OrCal Senior Secured Notes are payable in semi-annual payments that commenced on June 30, 2006. The OrCal Senior Secured Notes are collateralized by substantially all of the assets of OrCal and those of its wholly owned subsidiaries and are fully and unconditionally guaranteed by all of the wholly owned subsidiaries of OrCal. There are various restrictive covenants under the OrCal Senior Secured Notes, which include a required historical and projected 12-month DSCR of not less than 1.25 and other limitations on additional indebtedness. If OrCal fails to comply with these financial ratios it will be precluded from making distributions to its shareholders. In addition, subject to certain cure rights, such failure will constitute an event of default by OrCal. As of December 31, 2011, the actual historical 12-month DSCR was 2.02. As of December 31, 2011, there were \$85.9 million of OrCal Senior Secured Notes outstanding.

***OFC 2 Senior Secured Notes – Limited Recourse during Construction and Non-Recourse Thereafter***

On September 23, 2011, OFC 2, one of our subsidiaries, and its wholly owned project subsidiaries (collectively, the Issuers) entered into a note purchase agreement (the Note Purchase Agreement) with OFC 2 Noteholder Trust, as purchaser, John Hancock, as administrative agent, and the DOE, as guarantor, in connection with the offer and sale of up to \$350.0 million aggregate principal amount of OFC 2 Senior Secured Notes due December 31, 2034.

Subject to the fulfillment of customary and other specified conditions precedent, the OFC 2 Senior Secured Notes may be issued in up to six distinct series associated with the phased construction (Phase I and Phase II) of

---

**Table of Contents**

the Jersey Valley, McGinness Hills and Tuscarora geothermal power facilities owned by the Issuers. The OFC 2 Senior Secured Notes will mature and the principal amount of the OFC 2 Senior Secured Notes will be payable in equal quarterly installments in accordance with an amortization schedule attached to such Notes and in any event not later than December 31, 2034. Each Series of Notes will bear interest at a rate calculated based on a spread over the Treasury yield curve that will be set at least ten business days prior to the issuance of such Series of Notes. Interest will be payable quarterly in arrears. The DOE will guarantee payment of 80% of principal and interest on the OFC 2 Senior Secured Notes (the DOE Guarantee) pursuant to Section 1705 of Title XVII of the Energy Policy Act of 2005, as amended. The conditions precedent to the issuance of the OFC 2 Senior Secured Notes include certain specified conditions required by the DOE in connection with the DOE Guarantee.

On October 31, 2011 the Issuers completed the sale of \$151.7 million in aggregate principal amount of 4.687% Series A Notes due 2032 (the Series A Notes). The net proceeds from the sale of the Series A Notes, after deducting transaction fees and expenses, were approximately \$147.4 million, and were used to finance a portion of the construction costs of Phase I of the McGinness Hills and Tuscarora facilities and to fund certain reserves. Interest on the Series A Notes is payable quarterly in arrears on the last day of March, June, September and December, commencing December 31, 2011. Principal on the Series A Notes is payable on the same quarterly dates, commencing September 30, 2012.

Issuance of the Series B Notes is dependent on the Jersey Valley facility reaching certain operational targets in addition to the other conditions precedent noted above. If issued, the aggregate principal amount of the Series B Notes will not exceed \$28.0 million, and such proceeds would be used to finance a portion of the construction costs of Phase I of the Jersey Valley facility.

The Issuers have sole discretion regarding whether to commence construction of Phase II of any of the Jersey Valley, McGinness Hills and Tuscarora facilities. If Phase II construction is undertaken for any of the facilities, the Issuers may issue Phase II tranches of Notes, comprised of one or more of the Series C Notes, the Series D Notes, the Series E Notes and the Series F Notes, to finance a portion of the construction costs of such Phase II of any facility. The aggregate principal amount of all Phase II Notes may not exceed \$170.0 million. The aggregate principal amount of each series of Notes comprising a Phase II tranche will be determined by the Issuers in their sole discretion provided that certain financial ratios are satisfied pursuant to the terms of the Note Purchase Agreement and subject to the aggregate limit noted above.

The OFC 2 Senior Secured Notes are collateralized by substantially all of the assets of OFC 2 and those of its wholly owned subsidiaries and are fully and unconditionally guaranteed by all of the wholly owned subsidiaries of OFC 2. There are various restrictive covenants under the OFC 2 Senior Secured Notes, which include a required 12-month DSCR of not less than 1.65 and other limitations on additional indebtedness and payment of dividends. The covenants will become effective after completion of construction of the McGinness Hills and Tuscarora facilities.

In addition, in connection with the issuance of each Series of OFC 2 Senior Secured Notes, we will provide a guarantee with respect to the OFC 2 Senior Secured Notes, which will be available to be drawn upon if specific trigger events occur. One trigger event is the failure of any facility financed by the relevant series of OFC 2 Senior Secured Notes to reach completion and meet certain operational performance levels (the non-performance trigger) which gives rise to a prepayment obligation on the OFC 2 Senior Secured Notes. The other trigger event is a payment default on the OFC 2 Senior Secured Notes or the occurrence of certain fundamental defaults that result in the acceleration of the Notes, in each case that occurs prior to the date that the relevant facility financed by such OFC 2 Senior Secured Notes reaches completion and meets certain operational performance levels. A demand on our guarantee based on the non-performance trigger is limited to an amount equal to the prepayment amount on the OFC 2 Senior Secured Notes necessary to bring the Issuers into compliance with certain coverage ratios. A demand on our guarantee based on the other trigger event is not so limited.

As of December 31, 2011, there were \$151.7 million of OFC 2 Senior Secured Notes outstanding.

---

**Table of Contents***Olkaria III Loan Non-Recourse*

OrPower 4 has a project financing loan of \$105.0 million to refinance its investment in the 48 MW Olkaria III complex located in Kenya. The loan was provided by a group of European DFIs arranged by DEG. The loan will mature on December 15, 2018, and is payable in 19 equal semi-annual installments. Interest on the loan is variable based on 6-month LIBOR plus 4.0%. We fixed the interest rate on \$77.0 million of the loan at 6.90%. There are various restrictive covenants under the loan, including a requirement to comply with the following financial ratios for each calculation period: (i) an historical and projected 12-month DSCR of not less than 1.15; (ii) a debt to equity ratio which does not exceed 3; and (iii) an equity to total assets ratio of not less than 0.25. If OrPower 4 fails to comply with these financial ratios it will be precluded from making distributions to its shareholders. In addition, subject to certain cure rights, such failure will constitute an event of default by OrPower 4. As of December 31, 2011: (i) the actual 12-month historical DSCR was 2.34; (ii) the debt to equity ratio was 1.3; and (iii) the equity to total assets ratio was 0.34. As of December 31, 2011, \$77.4 million of the above loan was outstanding.

We plan to refinance the existing Olkaria III Loan as described under *New Financing of our Projects* below.

*Amatitlan Loan Non-Recourse*

In May 2009, Ortitlan entered into a note purchase agreement in an aggregate principal amount of \$42.0 million to refinance its investment in the 20 MW Amatitlan geothermal power plant located in Amatitlan, Guatemala. The loan was provided by TCW Global Project Fund II, Ltd. The loan will mature on June 15, 2016, and is payable in 28 quarterly installments. The annual interest rate on the loan is 9.83%, but the effective cost for us is approximately 8%, due to the elimination, following the refinancing, of the political risk insurance premiums that we had been paying on our equity investment in the power plant. There are various restrictive covenants under the Amatitlan Loan, which include a projected 12-month DSCR of not less than 1.2, a long-term debt to equity ratio not to exceed 4.0 and other limitations on Ortitlan's ability to make distributions to its shareholders. If Ortitlan fails to comply with these financial ratios it will be precluded from making distributions to its shareholders. In addition, subject to certain cure rights, such failure will constitute an event of default by Ortitlan. As of December 31, 2011, the actual projected 12-month DSCR was 1.54 and the debt to equity ratio was 2.67. As of December 31, 2011, \$36.8 million of the above loan was outstanding.

*New Financing of our Projects*

## Refinancing of the Olkaria III Loan and Financing of the Construction of the Olkaria III Complex Expansion

In September 2011, Ormat International, one of our subsidiaries, signed a commitment letter with OPIC to provide project financing of up to \$310.0 million to refinance and expand our 48 MW Olkaria III complex located in Kenya. Under the agreed term sheet attached to the commitment letter, the loan will be comprised of a refinancing tranche of up to \$85.0 million to prepay the existing loan with DEG and fund transaction costs, a construction loan tranche of up to \$165.0 million to finance the construction of an additional 36 MW expansion currently underway, and a \$60.0 million stand-by facility to finance an additional 16 MW capacity expansion at our option, that, if exercised by us, could bring the total capacity of the complex to approximately 100 MW. The maturity dates of the construction tranche and the refinancing tranche are expected to be June 2030 and December 2030, respectively. The maturity date and certain other terms of the stand-by facility will be finalized following our decision, if any, to exercise the option to construct the additional 16 MW expansion.

*Full-Recourse Third-Party Debt*

In December 2008, our wholly owned subsidiary, Ormat Nevada, entered into an amendment to its credit agreement with Union Bank. Under the amendment, the credit termination date was extended to February 15,

---

**Table of Contents**

2012 and the aggregate amount available under the credit agreement was increased to \$37.5 million. Under the credit agreement, as amended, Ormat Nevada could request extensions of credit in the form of loans and/or the issuance of one or more letters of credit. In August 2011, the credit agreement was further amended to increase the credit line to \$39.0 million. On February 7, 2012, Ormat Nevada entered into an amended and restated credit agreement with Union Bank to increase the available credit to \$50.0 million and extend the termination date to February 7, 2014. The facility is limited to the issuance, extension, modification or amendment of letters of credit. Union Bank is currently the sole lender and issuing bank under the credit agreement, but is also designated as an administrative agent on behalf of banks that may, from time to time in the future, join the credit agreement as parties thereto. In connection with this transaction, we have entered into a guarantee in favor of the administrative agent for the benefit of the banks, pursuant to which we agreed to guarantee Ormat Nevada's obligations under the credit agreement. Ormat Nevada's obligations under the credit agreement are otherwise unsecured.

Draws under the credit agreement will bear interest at a floating rate based on the Eurodollar plus a margin. There are various restrictive covenants under the credit agreement, which include; (i) minimum tangible net worth assets of not less than \$164.0 million; (ii) 12-month debt to EBITDA ratio not to exceed 5; and (iii) 12-month DSCR of not less than 1.25. As of December 31, 2011: (i) the actual tangible net worth assets of Ormat Nevada was \$1.4 billion; (ii) the 12-month debt to EBITDA ratio was 3.45; and (iii) the DSCR was 2.69. In addition, there are restrictions on dividend distributions in the event of a payment default or noncompliance with such ratios, and subject to specified carve-outs and exceptions, a negative pledge on the assets of Ormat Nevada in favor of Union Bank.

Under the February 7, 2012 amendment to the credit agreement, the restrictive covenants were amended to the following: (i) 12-month debt to EBITDA ratio not to exceed 4.5; (ii) 12-month DSCR of not less than 1.35; and (iii) distribution leverage ratio not to exceed 2.

As of December 31, 2011, letters of credit in the aggregate amount of \$32.5 million remain issued and outstanding under this credit agreement with Union Bank.

We also have credit agreements with five commercial banks for an aggregate amount of \$370.0 million. Under the terms of these credit agreements, we or our Israeli subsidiary, Ormat Systems, can request: (i) extensions of credit in the form of loans and/or the issuance of one or more letters of credit in the amount of up to \$265.0 million; and (ii) the issuance of one or more letters of credit in the amount of up to \$105.0 million. The credit agreements mature between December 2012 and December 2014. Loans and draws under the credit agreements or under any letters of credit will bear interest at the respective bank's cost of funds plus a margin.

As of December 31, 2011, loans in the total amount of \$214.0 million (including \$10.0 million under a non-committed line of credit with an additional commercial bank) were outstanding, and letters of credit with an aggregate stated amount of \$97.4 million were issued and outstanding under these credit agreements. The \$214.0 million in loans are for terms of three months or less and bear interest at a weighted average rate of 3.32%.

We have a \$20.0 million term loan with a group of institutional investors, which matures on July 16, 2015, is payable in twelve semi-annual installments commencing January 16, 2010, and bears interest of 6.5%. As of December 31, 2011, \$14.2 million was outstanding under this loan.

We have a \$20.0 million term loan with a group of institutional investors, which matures on August 1, 2017, is payable in twelve semi-annual installments commencing February 1, 2012, and bears interest at 6-month LIBOR plus 5.0%. As of December 31, 2011, \$20.0 million was outstanding under this loan.

We have a \$20.0 million term loan with a group of institutional investors, which matures on November 16, 2016, is payable in ten semi-annual installments commencing May 16, 2012, and bears interest of 5.75%. As of December 31, 2011, \$20.0 million was outstanding under this loan.

---

## **Table of Contents**

We have a \$50.0 million term loan with a commercial bank, which matures on November 10, 2014, is payable in ten semi-annual installments commencing May 10, 2010, and bears interest at 6-month LIBOR plus 3.25%. As of December 31, 2011, \$30.0 million was outstanding under this loan.

We have an aggregate principal amount of approximately \$250.0 million of Senior Unsecured Bonds issued and outstanding. We issued approximately \$142.0 million of these bonds in August 2010 and an additional \$107.5 million in February 2011. Subject to early redemption, the principal of the bonds is repayable in a single bullet payment upon the final maturity of the bonds on August 1, 2017. The bonds bear interest at a fixed rate of 7%, payable semi-annually. The bonds that we issued in February 2011 were issued at a premium which reflects an effective fixed interest of 6.75%. We issued the bonds outside the United States to investors who are not U.S. persons in an unregistered offering pursuant to, and subject to the requirements of, Regulation S under the Securities Act.

Our obligations under the credit agreements, the loan agreements, and the trust instrument governing the bonds, described above, are unsecured, but we are subject to a negative pledge in favor of the banks and the other lenders and certain other restrictive covenants. These include, among other things, a prohibition on: (i) creating any floating charge or any permanent pledge, charge or lien over our assets without obtaining the prior written approval of the lender; (ii) guaranteeing the liabilities of any third party without obtaining the prior written approval of the lender; and (iii) selling, assigning, transferring, conveying or disposing of all or substantially all of our assets, or a change of control in our ownership structure. Some of the credit agreements, the loan agreements, and the trust instrument contain cross-default provisions with respect to other material indebtedness owed by us to any third party. In some cases, we have agreed to maintain certain financial ratios, such as: (i) stockholders equity of at least \$600 million and in no event less than 30% of total assets; (ii) 12-month debt, net of cash, cash equivalents and marketable securities to EBITDA ratio not to exceed 7; and (iii) dividend distribution not to exceed 35% of net income for that year. As of December 31, 2011, the actual equity to total assets ratio was 39.2%, the stockholders equity was \$906.6 million, and the 12-month debt, net of cash, cash equivalents and marketable securities to EBITDA ratio was 5.42. The failure to perform or observe any of the covenants set forth in such agreements, subject to various cure periods, would result in the occurrence of an event of default and would enable the lenders to accelerate all amounts due under each such agreement.

As described above, we are currently in compliance with our covenants with respect to the credit agreements, the loan agreements and the trust instrument, and believe that the restrictive covenants, financial ratios and other terms of any of our (or Ormat Systems ) full-recourse bank credit agreements will not materially impact our business plan or plan of operations.

### ***Letters of Credit***

Some of our customers require our project subsidiaries to post letters of credit in order to guarantee their respective performance under relevant contracts. We are also required to post letters of credit to secure our obligations under various leases and licenses and may, from time to time, decide to post letters of credit in lieu of cash deposits in reserve accounts under certain financing arrangements. In addition, our subsidiary, Ormat Systems, is required from time to time to post performance letters of credit in favor of our customers with respect to orders of products.

As of December 31, 2011, letters of credit in the aggregate amount of \$196.6 million remained issued and outstanding (out of which \$129.9 million were issued under the credit agreements with Union Bank and five of the commercial banks as described under Full-Recourse Third Party Debt and \$66.7 million were issued under non-committed lines of credit).

### ***Puna Power Plant Lease Transactions***

On May 19, 2005, our subsidiary in Hawaii, PGV, entered into a transaction involving the Puna geothermal power plant located on the Big Island of Hawaii. The transaction was concluded with financing parties by means of a leveraged lease transaction. A secondary stage of the lease transaction relating to two new geothermal wells

---

## **Table of Contents**

that PGV drilled in the second half of 2005 (for production and injection) was completed on December 30, 2005. Pursuant to a 31-year head lease, PGV leased its geothermal power plant to the abovementioned financing parties in return for payments of \$83.0 million by such financing parties to PGV, which are accounted for as deferred lease income.

### ***OPC Transaction***

In June 2007, our wholly owned subsidiary, Ormat Nevada, entered into agreements with affiliates of Morgan Stanley & Co. Incorporated and Lehman Brothers Inc. (Morgan Stanley Geothermal LLC and Lehman-OPC), under which those investors purchased, for cash, interests in a newly formed subsidiary of Ormat Nevada, OPC, entitling the investors to certain tax benefits (such as PTCs and accelerated depreciation) and distributable cash associated with four geothermal power plants.

The first closing under the agreements occurred in 2007 and covered our Desert Peak 2, Steamboat Hills, and Galena 2 power plants. The investors paid \$71.8 million at the first closing. The second closing under the agreements occurred in 2008 and covered the Galena 3 power plant. The investors paid \$63.0 million at the second closing.

Ormat Nevada continues to operate and maintain the power plants. Under the agreements, Ormat Nevada initially received all of the distributable cash flow generated by the power plants, while the investors received substantially all of the PTCs and the taxable income or loss (together, the Economic Benefits). Once it recovers the capital that it invested in the power plants, which occurred in the fourth quarter of 2010, the investors receive both the distributable cash flow and the Economic Benefits. The investors' return is limited by the terms of the transaction. Once the investors reach a target after-tax yield on their investment in OPC (the Flip Date), Ormat Nevada will receive 95% of both distributable cash and taxable income, on a going forward basis. Following the Flip Date, Ormat Nevada also has the option to buy out the investors' remaining interest in OPC at the then-current fair market value or, if greater, the investors' capital account balances in OPC. Should Ormat Nevada exercise this purchase option, it would thereupon revert to being sole owner of the power plants.

The Class B membership units are provided with a 5% residual economic interest in OPC. The 5% residual interest commences on achievement by the investors of a contractually stipulated return that triggers the Flip Date. The actual Flip Date is not known with certainty, and is determined by the operating results of OPC. This residual 5% interest represents a noncontrolling interest and is not subject to mandatory redemption or guaranteed payments.

Our voting rights in OPC are based on a capital structure that is comprised of Class A and Class B membership units. We own, through our subsidiary, Ormat Nevada, all of the Class A membership units, which represent 75% of the voting rights in OPC. The investors own all of the Class B membership units, which represent 25% of the voting rights of OPC. Other than in respect of customary protective rights, all operational decisions in OPC are decided by the vote of a majority of the membership units. Following the Flip Date, Ormat Nevada's voting rights will increase to 95% and the investors' voting rights will decrease to 5%. Ormat Nevada retains the controlling voting interest in OPC both before and after the Flip Date and therefore has continued to consolidate OPC.

On October 30, 2009, Ormat Nevada acquired from Lehman-OPC all of the Class B membership units of OPC held by Lehman-OPC pursuant to a right of first offer for a purchase price of \$18.5 million in cash.

On February 3, 2011, Ormat Nevada sold to JPM Capital Corporation all of the Class B membership units of OPC that it had acquired on October 30, 2009 for a sale price of \$24.9 million in cash.

### ***Liquidity Impact of Uncertain Tax Positions***

As discussed in Note 19 to our consolidated financial statements set forth in Part II, Item 8 of this annual report, we have a liability associated with unrecognized tax benefits and related interest and penalties in the

**Table of Contents**

amount of approximately \$5.9 million as of December 31, 2011. This liability is included in long-term liabilities in our consolidated balance sheet, because we generally do not anticipate that settlement of the liability will require payment of cash within the next twelve months. We are not able to reasonably estimate when we will make any cash payments required to settle this liability, but do not believe that the ultimate settlement of our obligations will materially affect our liquidity.

**Dividend**

The following are the dividends declared by us during the past two years:

<b>Date Declared</b>	<b>Dividend Amount per Share</b>	<b>Record Date</b>	<b>Payment Date</b>
February 23, 2010	\$ 0.12	March 16, 2010	March 25, 2010
May 5, 2010	\$ 0.05	May 18, 2010	May 25, 2010
August 4, 2010	\$ 0.05	August 17, 2010	August 26, 2010
November 2, 2010	\$ 0.05	November 17, 2010	November 30, 2010
February 22, 2011	\$ 0.05	March 15, 2011	March 24, 2011
May 4, 2011	\$ 0.04	May 18, 2011	May 25, 2011
August 3, 2011	\$ 0.04	August 16, 2011	August 25, 2011

**Historical Cash Flows**

The following table sets forth the components of our cash flows for the relevant periods indicated:

	<b>Year Ended December 31,</b>		
	<b>2011</b>	<b>2010</b>	<b>2009</b>
	<b>(In thousands)</b>		
Net cash provided by operating activities	\$ 132,734	\$ 101,403	\$ 110,772
Net cash used in investing activities	(341,002)	(203,820)	(286,036)
Net cash provided by financing activities	225,339	138,925	187,036
Translation adjustments on cash and cash equivalents			142
Net change in cash and cash equivalents	17,071	36,508	11,914

*For the Year Ended December 31, 2011*

Net cash provided by operating activities for the year ended December 31, 2011 was \$132.7 million, compared to \$101.4 million for the year ended December 31, 2010. The net increase of \$31.3 million resulted primarily from: (i) an increase of \$9.7 million in depreciation and amortization, as described above; (ii) a gain on acquisition of controlling interest in the Mammoth complex of \$36.9 million in the year ended December 31, 2010; (iii) a gain on sale of GDL of \$6.3 million in the year ended December 31, 2010; (iv) an increase in deferred income tax provision, net of \$38.1 million in the year ended December 31, 2011, compared to a decrease of \$10.1 million in the year ended December 31, 2010; and (v) an increase in billing in excess of costs and estimated earnings on uncompleted contracts, net of \$32.1 million in our Product Segment in the year ended December 31, 2011, compared to \$8.7 million in the year ended December 31, 2010, as a result of timing in billing of our customers. Such increase was partially offset by: (i) a net loss to \$42.7 million in the year ended December 31, 2011, compared to net income of \$37.2 million in the year ended December 31, 2010, as described above, and (ii) an increase in accounts payable and accrued expenses of \$5.5 million in the year ended December 31, 2011, compared to an increase of \$9.7 million in the year ended December 31, 2010, as a result of timing of payments to our vendors.

Net cash used in investing activities for the year ended December 31, 2011 was \$341.0 million, compared to \$203.8 million for the year ended December 31, 2010. The principal factors that affected our net cash used in

---

**Table of Contents**

investing activities during the year ended December 31, 2011 were: (i) capital expenditures of \$269.7 million, primarily for our facilities under construction; (ii) net increase of \$50.6 million in restricted cash, cash equivalents and marketable securities as a result of the issuance of the OFC 2 Senior Secured Notes, and (iii) net increase of \$17.5 million in marketable securities.

Net cash provided by financing activities for the year ended December 31, 2011 was \$225.3 million, compared to \$138.9 million for the year ended December 31, 2010. The principal factors that affected the net cash provided by financing activities during the year ended December 31, 2011 were: (i) the issuance of an aggregate amount of approximately \$107.4 million of Senior Unsecured Bonds in February 2011; (ii) \$141.1 million net proceeds from the issuance of the OFC 2 Senior Secured Notes; (iii) proceeds from the sale of all of the Class B membership units of OPC acquired on October 30, 2009 for a sale price of 24.9 million in February 2011; and (iv) a net increase of \$24.6 million against our revolving lines of credit with commercial banks; offset by: (i) the repayment of long-term debt in the amount of \$48.4 million; (ii) cash paid to noncontrolling interest in the amount of \$14.0 million; and (iii) the payment of a dividend to our shareholders in the amount of \$5.9 million.

*For the Year Ended December 31, 2010*

Net cash provided by operating activities for the year ended December 31, 2010 was \$101.4 million, compared to \$110.8 million for the year ended December 31, 2009. The net decrease of \$9.4 million resulted primarily from: (i) a decrease in net income to \$37.2 million in the year ended December 31, 2010, from \$68.6 million in the year ended December 31, 2009, mainly as a result of the decrease in operating income, as described above; (ii) a gain on acquisition of controlling interest of \$36.9 million in the year ended December 31, 2010; (iii) a gain on sale of GDL of \$6.4 million in the year ended December 31, 2010; and (iv) a net decrease in deferred income taxes of \$10.1 million in the year ended December 31, 2010, compared to a net increase of \$4.0 million in the year ended December 31, 2009. Such decrease was partially offset by: (i) an increase of \$22.4 million in depreciation and amortization mainly due to the placement in service of our North Brawley power plant in January 2010, as described above; (ii) a gain from extinguishment of liability of \$13.3 million in the year ended December 31, 2009; (iii) a net decrease in costs and estimated earnings in excess of billings on uncompleted contracts of \$8.7 million in the year ended December 31, 2010, compared to a net increase of \$20.0 million in the year ended December 31, 2009; and (iv) an increase in accounts payable and accrued expenses of \$9.7 million in the year ended December 31, 2010, compared to a decrease of \$2.1 million in the year ended December 31, 2009.

Net cash used in investing activities for the year ended December 31, 2010 was \$203.8 million, compared to \$286.0 million for the year ended December 31, 2009. The principal factors that affected our net cash used in investing activities during the year ended December 31, 2010 were: (i) capital expenditures of \$283.3 million, primarily for our facilities under construction; and (ii) net payment of \$64.5 million for acquisition of controlling interest in Mammoth Pacific (\$72.5 million purchase price less \$8.0 million available cash in such subsidiary at the acquisition date); offset by: (i) \$108.3 million of cash grant received in September 2010 for Specified Energy Property in Lieu of Tax Credits relating to our North Brawley geothermal power plant under Section 1603 of the ARRA; (ii) \$19.6 million cash received from the sale of GDL; and (iii) a \$17.5 million decrease in restricted cash, cash equivalents and marketable securities.

Net cash provided by financing activities for the year ended December 31, 2010 was \$138.9 million, compared to \$187.0 million for the year ended December 31, 2009. The principal factors that affected the net cash provided by financing activities during the year ended December 31, 2010 were: (i) the issuance of an aggregate amount of approximately \$142.0 million of Senior Unsecured Bonds on August 3, 2010; (ii) \$20.0 million proceeds from a long-term loan agreement with a group of institutional investors; and (iii) \$55.5 million increase in amounts drawn under revolving lines of credit from banks; offset by: (i) the repayment of long-term debt to our parent in the amount of \$9.6 million; (ii) the repayment of debt to third parties in the amount of \$52.2 million; and (iii) the payment of a dividend to our shareholders in the amount of \$12.3 million.

**Table of Contents****Adjusted EBITDA**

We calculate EBITDA as net income before interest, taxes, depreciation and amortization. We calculate adjusted EBITDA to include depreciation and amortization, interest and taxes attributable to our equity investments in the Mammoth complex. EBITDA and adjusted EBITDA are not measurements of financial performance or liquidity under

GAAP and should not be considered as an alternative to cash flow from operating activities or as a measure of liquidity or an alternative to net earnings as indicators of our operating performance or any other measures of performance derived in accordance with GAAP. EBITDA and adjusted EBITDA are presented because we believe they are frequently used by securities analysts, investors and other interested parties in the evaluation of a company's ability to service and/or incur debt. However, other companies in our industry may calculate EBITDA and adjusted EBITDA differently than we do. This information should not be considered in isolation or as a substitute for, or superior to, measures of financial performance prepared in accordance with GAAP or other non-GAAP financial measures.

Adjusted EBITDA for the year ended December 31, 2011 increased to \$166.7 million, compared to \$164.3 million for the year ended December 31, 2010. Adjusted EBITDA for the year ended December 31, 2010 decreased to \$164.3 million, compared to \$167.0 million for the year ended December 31, 2009. Adjusted EBITDA includes consolidated EBITDA and our share in the interest, taxes, depreciation and amortization related to our unconsolidated 50% interest in the Mammoth complex in the years ended December 31, 2010 and 2009.

The following table reconciles net cash provided by operating activities to EBITDA and adjusted EBITDA, for the years ended December 31, 2011, 2010, and 2009:

	Year Ended December 31,		
	2011	2010	2009
	(in thousands)		
Net cash provided by operating activities	\$ 132,734	\$ 101,403	\$ 110,772
Adjusted for:			
Interest expense, net (excluding amortization of deferred financing costs)	65,920	37,590	13,623
Interest income	(1,427)	(343)	(639)
Income tax provision (benefit)	48,535	908	16,924
Adjustments to reconcile net income to net cash provided by operating activities (excluding depreciation and amortization)	(79,060)	22,586	22,392
<b>EBITDA</b>	<b>166,702</b>	<b>162,144</b>	<b>163,072</b>
Interest, taxes, depreciation and amortization attributable to the Company's equity interest in Mammoth-Pacific L.P.		2,115	3,891
<b>Adjusted EBITDA</b>	<b>\$ 166,702</b>	<b>\$ 164,259</b>	<b>\$ 166,963</b>
Net cash used in investing activities	\$ (341,002)	\$ (203,820)	\$ (286,036)
Net cash provided by financing activities	\$ 225,339	\$ 138,925	\$ 187,036

**Capital Expenditures**

Our capital expenditures primarily relate to two principal components: (i) the enhancement of our existing power plants; and (ii) the development and construction of new power plants.

We have estimated approximately \$677 million in capital expenditures for construction of new projects that are still under construction and that are expected to be completed by 2013, of which we have invested

---

## **Table of Contents**

approximately \$221 million as of December 31, 2011. We expect to invest an additional \$192 million of such total in 2012. The remaining \$264 million will be invested in 2013.

In addition, we estimate approximately \$175 million in additional capital expenditures in 2012 to be allocated as follows: (i) \$70 million in development of new projects; (ii) \$67 million for enhancement of our operating power plants; (iii) \$31 million in exploration activities in various leases for geothermal resources in which we have started the exploration activity; and (iv) \$7 million in enhancement of our production facilities. In the aggregate, we estimate our total capital expenditures for 2012 to be approximately \$367 million.

### **Exposure to Market Risks**

Based on current conditions, we believe that we have sufficient financial resources to fund our activities and execute our business plans. However, the cost of obtaining financing for our project needs may increase significantly or such financing may be difficult to obtain. A prolonged economic slowdown could reduce worldwide demand for energy, including our geothermal energy, REG and other products.

One market risk to which power plants are typically exposed is the volatility of electricity prices. Our exposure to such market risk is currently limited because our long-term PPAs (except for Puna) have fixed or escalating rate provisions that limit our exposure to changes in electricity prices. However, beginning in May 2012, the energy payments under the PPAs of the Heber 1 and 2 power plants, the Ormesa complex and the Mammoth complex will be determined by reference to the relevant power purchaser's SRAC, which will be impacted by U.S. natural gas prices that may decline. A decline in the price of natural gas will result in a decrease in the incremental cost that the power purchaser avoids by not generating its electrical energy needs from natural gas, which in turn will reduce the variable energy rate that we may charge under the relevant PPA. The Puna power plant is currently benefiting from energy prices that are higher than the floor under the Puna PPA as a result of the high fuel costs that impact HELCO's avoided costs.

As of December 31, 2011, 72.2% of our consolidated long-term debt was in the form of fixed rate securities and therefore not subject to interest rate volatility risk. As of such date, 27.8% of our debt was in the form of a floating rate instrument, exposing us to changes in interest rates in connection therewith. As of December 31, 2011, \$284.6 million of our debt remained subject to some floating rate risk.

We currently maintain our surplus cash in short-term, interest-bearing bank deposits, money market securities and commercial paper (with a minimum investment grade rating of AA by Standard & Poor's Ratings Services).

Our cash equivalents and our portfolio of marketable securities are subject to market risk due to changes in interest rates. Fixed rate securities may have their market value adversely impacted due to a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future investment income may fall short of expectation due to changes in interest rates or we may suffer losses in principal if we are forced to sell securities that decline in market value due to changes in interest rates. However, because we classify our debt securities as available-for-sale, no gains or losses are recognized due to changes in interest rates unless such securities are sold prior to maturity or declines in fair value are determined to be other-than-temporary.

Another market risk to which we are exposed is primarily related to potential adverse changes in foreign currency exchange rates, in particular the fluctuation of the U.S. dollar versus the NIS. Risks attributable to fluctuations in currency exchange rates can arise when we or any of our foreign subsidiaries borrow funds or incur operating or other expenses in one type of currency but receive revenues in another. In such cases, an adverse change in exchange rates can reduce such subsidiary's ability to meet its debt service obligations, reduce the amount of cash and income we receive from such foreign subsidiary, or increase such subsidiary's overall expenses. Risks attributable to fluctuations in foreign currency exchange rates can also arise when the currency

**Table of Contents**

denomination of a particular contract is not the U.S. dollar. Substantially all of our PPAs in the international markets are either U.S. dollar-denominated or linked to the U.S. dollar. Our construction contracts from time to time contemplate costs which are incurred in local currencies. The way we often mitigate such risk is to receive part of the proceeds from the sale contract in the currency in which the expenses are incurred. Currently, we have forward and option contracts in place to reduce our foreign currency exposure, and expect to continue to use currency exchange and other derivative instruments to the extent we deem such instruments to be the appropriate tool for managing such exposure. We do not believe that our exchange rate exposure has or will have a material adverse effect on our financial condition, results of operations or cash flows.

**Effect of Inflation**

We do not expect that inflation will be a significant risk in the near term, given the current global economic conditions. However, that could change in the future. To address rising inflation, some of our contracts include certain mitigating factors against any inflation risk. In connection with the Electricity Segment, inflation may directly impact an expense incurred for the operation of our projects, hence increasing the overall operating cost to us. The negative impact of inflation may be partially offset by price adjustments built into some of our PPAs that could be triggered upon such occurrences. The energy payments pursuant to the PPAs for the Brady power plant, the Steamboat 2 and 3 power plant, the Steamboat Hills power plant, and the Burdette power plant increase every year through the end of the relevant terms of such agreements, though such increases are not directly linked to the CPI or any other inflationary index. Lease payments are generally fixed, while royalty payments are generally determined as a percentage of revenues and therefore are not significantly impacted by inflation. In our Product Segment, inflation may directly impact fixed and variable costs incurred in the construction of our power plants, hence increasing our operating costs in that segment. In this segment, it is more likely that we will be able to offset part or all of the inflationary impact through our project pricing. With respect to power plants that we construct for our own electricity production, inflationary pricing may impact our operating costs which may be partially offset in the pricing of the new long-term PPAs that we negotiate. Overall, we believe that the impact of inflation on our business will not be significant.

**Contractual Obligations and Commercial Commitments**

The following tables set forth our material contractual obligations as of December 31, 2011 (in thousands):

	Remaining Total	Payments Due By Period					
		2012	2013	2014	2015	2016	Thereafter
Long-term liabilities principal	\$ 1,025,010	\$ 55,554	\$ 176,848	\$ 167,761	\$ 61,345	\$ 76,683	\$ 486,819
Interest on long-term liabilities <sup>(1)</sup>	315,118	59,030	55,361	46,198	40,428	35,212	78,889
Future minimum operating lease	72,127	8,199	8,062	8,647	8,222	8,374	30,623
Benefits upon retirement <sup>(2)</sup>	16,597	3,992	663	715	689	391	10,147
Asset retirement obligation	21,284						21,284
Purchase commitments <sup>(3)</sup>	103,700	103,700					
	\$ 1,553,836	\$ 230,475	\$ 240,934	\$ 223,321	\$ 110,684	\$ 120,660	\$ 627,762

<sup>(1)</sup> Interest on the OFC Senior Secured Notes due in 2020 is fixed at a rate of 8.25%. Interest on the OrCal Senior Secured Notes due in 2020 is fixed at a rate of 6.21%. Interest on the OFC 2 Senior Secured Notes Series A due in 2032 is fixed at a rate of 4.687%. Interest on the Olkaria III loan due in 2018 is fixed for \$56.8 million at a rate of 6.9% and variable on the remaining balance. Interest on the Amatitlan Loan due in 2016 is fixed at a rate of 9.83%. Interest on a loan from institutional investors due in 2015 is fixed at a rate of 6.5%. Interest on a loan from institutional investors due in 2016 is fixed at a rate of 5.75%. Interest on the Senior Unsecured Bonds due in 2017 is fixed at a rate of 7%. Interest on the remaining debt is variable (based primarily on changes in LIBOR rates). Accordingly, for purposes of the above calculation of interest payments pertaining to variable rate debt, future LIBOR rates were based on Constant Maturity Swaps.

**Table of Contents**

(2) The above amounts were determined based on the employees' current salary rates and the number of years' service that will have been accumulated at their retirement date. These amounts do not include amounts that might be paid to employees that will cease working with us before reaching their normal retirement age.

(3) We purchase raw materials for inventories, construction-in-process and services from a variety of vendors. During the normal course of business, in order to manage manufacturing lead times and help assure adequate supply, we enter into agreements with contract manufacturers and suppliers that either allow them to procure goods and services based upon specifications defined by us, or that establish parameters defining our requirements. At December 31, 2011, total obligations related to such supplier agreements were approximately \$103.7 million (approximately \$54.9 million of which relate to construction-in-process). All such obligations are payable in 2012.

The above table does not reflect unrecognized tax benefits of \$5.9 million, the timing of which is uncertain. Refer to Note 19 to our consolidated financial statements set forth in Part II, Item 8 of this annual report for additional discussion of unrecognized tax benefits. The above table also does not reflect a liability associated with the sale of tax benefits of \$69.3 million, the timing of which is uncertain. Refer to Note 13 to our consolidated financial statements as set forth in Part II, Item 8 of this annual report for additional discussion of our liability associated with the sale of tax benefits.

**Concentration of Credit Risk**

Our credit risk is currently concentrated with the following major customers: Southern California Edison, HELCO, KPLC and Sierra Pacific Power Company and Nevada Power Company (subsidiaries of NV Energy, Inc.). If any of these electric utilities fails to make payments under its PPAs with us, such failure would have a material adverse impact on our financial condition.

Southern California Edison accounted for 27.7%, 29.1%, and 21.1% of our total revenues for the three years ended December 31, 2011, 2010, and 2009, respectively. Southern California Edison is also the power purchaser and revenue source for our Mammoth project, which we accounted for separately under the equity method of accounting through August 1, 2010.

Sierra Pacific Power Company and Nevada Power Company accounted for 13.0%, 15.0%, and 13.0% of our total revenues for the three years ended December 31, 2011, 2010, and 2009, respectively.

HELCO accounted for 10.6%, 8.6%, and 6.3% of our total revenues for the three years ended December 31, 2011, 2010, and 2009, respectively.

KPLC accounted for 8.0%, 9.4%, and 8.5% of our total revenues for the three years ended December 31, 2011, 2010, and 2009, respectively.

**Government Grants and Tax Benefits**

The U.S. government encourages production of electricity from geothermal resources through certain tax subsidies under the ARRA. We are permitted to claim 30% of the eligible cost of each new geothermal power plant in the United States as an ITC against our federal income taxes. Alternatively, we are permitted to claim a PTC, which in 2011 was 2.2 cents per kWh and which is adjusted annually for inflation. The PTC may be claimed for ten years on the electricity output of new geothermal power plants put into service by December 31, 2013. The owner of the project must choose between the PTC and the 30% ITC described above. In either case, under current tax rules, any unused tax credit has a 1-year carry back and a 20-year carry forward. Whether we claim the PTC or the ITC, we are also permitted to depreciate most of the plant for tax purposes over five years on an accelerated basis, meaning that more of the cost may be deducted in the first few years than during the remainder of the depreciation period. If we claim the ITC, our tax basis in the plant that we can recover

**Table of Contents**

through depreciation must be reduced by half of the tax credit. If we claim the PTC, there is no reduction in the tax basis for depreciation. Companies that place qualifying renewable energy facilities in service during 2009, 2010 or 2011 or that begin construction of qualifying renewable energy facilities during 2009, 2010 or 2011 and place them in service by December 31, 2013, may choose to apply for a cash grant from the U.S. Treasury in an amount equal to the ITC. Under the ARRA, the U.S. Treasury is instructed to pay the cash grant within 60 days of the application or the date on which the qualifying facility is placed in service.

Our subsidiary, Ormat Systems, received Benefited Enterprise status under Israel's Law for Encouragement of Capital Investments, 1959 (the Investment Law), with respect to two of its investment programs. As a Benefited Enterprise, Ormat Systems was exempt from Israeli income taxes with respect to income derived from the first benefited investment for a period of two years that started in 2004, and thereafter such income was subject to reduced Israeli income tax rates, which will not exceed 25% for an additional five years until 2010. Ormat Systems was also exempt from Israeli income taxes with respect to income derived from the second benefited investment for a period of two years that started in 2007, and thereafter such income is subject to reduced Israeli income tax rates which will not exceed 25% for an additional five years (see also below). These benefits are subject to certain conditions, including among other things, that all transactions between Ormat Systems and our affiliates are at arm's length, and that the management and control of Ormat Systems will be from Israel during the entire period of the tax benefits. A change in control should be reported to the Israel Tax Authority in order to maintain the tax benefits. In January 2011, new legislation amending the Investment Law was enacted. Under the new legislation, a uniform rate of corporate tax would apply to all qualified income of certain industrial companies, as opposed to the current law's incentives that are limited to income from a Benefited Enterprise during its benefits period. According to the amendment, the uniform tax rate applicable to the zone where the production facilities of Ormat Systems are located would be 15% in 2011 and 2012, 12.5% in 2013 and 2014, and 12% in 2015 and thereafter. Under the transitory provisions of the new legislation, Ormat Systems had the option either to irrevocably comply with the new law while waiving benefits provided under the previous law or to continue to comply with the previous law during the transition period, with an option to move from the previous law to the new law at any stage. Ormat Systems decided to irrevocably comply with the new law starting in 2011.

**ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Information responding to Item 7A is included in Item 7 Management's Discussion and Analysis of Financial Condition and Results of Operations of this annual report.

**Table of Contents**

**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

**Index to Consolidated Financial Statements of Ormat Technologies, Inc. and Subsidiaries**

<u>Report of Independent Registered Public Accounting Firm</u>	135
Consolidated Financial Statements as of December 31, 2011 and 2010 and for Each of the Three Years in the Period Ended December 31, 2011	
<u>Consolidated Balance Sheets</u>	136
<u>Consolidated Statements of Operations and Comprehensive Income (Loss)</u>	137
<u>Consolidated Statements of Equity</u>	138
<u>Consolidated Statements of Cash Flows</u>	139
<u>Notes to Consolidated Financial Statements</u>	140

**Table of Contents**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Stockholders of Ormat Technologies, Inc.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations and comprehensive income (loss), equity, and cash flows present fairly, in all material respects, the financial position of Ormat Technologies, Inc. and its subsidiaries at December 31, 2011 and 2010, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2011 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company’s management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements and on the Company’s internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

San Francisco, California

February 29, 2012

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****CONSOLIDATED BALANCE SHEETS**

	<b>December 31,</b>	
	<b>2011</b>	<b>2010</b>
	<b>(In thousands)</b>	
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 99,886	\$ 82,815
Marketable securities	18,521	
Restricted cash, cash equivalents and marketable securities (all related to VIEs)	75,521	23,309
Receivables:		
Trade	51,274	54,495
Related entity	287	303
Other	9,415	8,173
Due from Parent	260	272
Inventories	12,541	12,538
Costs and estimated earnings in excess of billings on uncompleted contracts	3,966	6,146
Deferred income taxes	1,842	1,674
Prepaid expenses and other	18,672	14,929
<b>Total current assets</b>	<b>292,185</b>	<b>204,654</b>
Long-term marketable securities		1,287
Restricted cash, cash equivalents and marketable securities (all related to VIEs)		1,740
Unconsolidated investments	3,757	4,244
Deposits and other	22,194	21,353
Deferred income taxes		17,087
Deferred charges	40,236	37,571
Property, plant and equipment, net (\$1,477,580 and \$1,371,400 related to VIEs, respectively)	1,518,532	1,425,467
Construction-in-process (\$271,859 and \$149,851 related to VIEs, respectively)	370,551	270,634
Deferred financing and lease costs, net	28,482	19,017
Intangible assets, net	38,781	40,274
<b>Total assets</b>	<b>\$ 2,314,718</b>	<b>\$ 2,043,328</b>
<b>LIABILITIES AND EQUITY</b>		
Current liabilities:		
Accounts payable and accrued expenses	\$ 105,112	\$ 85,549
Billings in excess of costs and estimated earnings on uncompleted contracts	33,104	3,153
Current portion of long-term debt:		
Limited and non-recourse (all related to VIEs):		
Senior secured notes	21,464	20,990
Other loans	13,547	15,020
Full recourse	20,543	13,010
<b>Total current liabilities</b>	<b>193,770</b>	<b>137,722</b>
Long-term debt, net of current portion:		
Limited and non-recourse (all related to VIEs):		
Senior secured notes	341,157	210,882
Other loans	100,585	114,132
Full recourse:		
Senior unsecured bonds (plus unamortized premium based upon 7% of \$1,745)	250,042	142,003
Other loans	63,623	84,166
Revolving credit lines with banks	214,049	189,466
Liability associated with sale of tax benefits	69,269	66,587
Deferred lease income	68,955	71,264
Deferred income taxes	54,665	30,878
Liability for unrecognized tax benefits	5,875	5,431
Liabilities for severance pay	20,547	20,706

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Asset retirement obligation	21,284	19,903
Other long-term liabilities	4,253	4,961
Total liabilities	1,408,074	1,098,101
Commitments and contingencies		
Equity:		
The Company's stockholders' equity:		
Common stock, par value \$0.001 per share; 200,000,000 shares authorized; 45,430,886 shares issued and outstanding, respectively	46	46
Additional paid-in capital	725,746	716,731
Retained earnings	172,331	221,311
Accumulated other comprehensive income	595	1,044
	898,718	939,132
Noncontrolling interest	7,926	6,095
Total equity	906,644	945,227
Total liabilities and equity	\$ 2,314,718	\$ 2,043,328

The accompanying notes are an integral part of the consolidated financial statements

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)**

	<b>Year Ended December 31,</b>		
	<b>2011</b>	<b>2010</b>	<b>2009</b>
	<b>(In thousands, except per share data)</b>		
<b>Revenues:</b>			
Electricity	\$ 323,849	\$ 291,820	\$ 252,621
Product	113,160	81,410	159,389
<b>Total revenues</b>	<b>437,009</b>	<b>373,230</b>	<b>412,010</b>
<b>Cost of revenues:</b>			
Electricity	244,037	242,326	179,101
Product	76,072	53,277	112,450
<b>Total cost of revenues</b>	<b>320,109</b>	<b>295,603</b>	<b>291,551</b>
<b>Gross margin</b>	<b>116,900</b>	<b>77,627</b>	<b>120,459</b>
<b>Operating expenses:</b>			
Research and development expenses	8,801	10,120	10,502
Selling and marketing expenses	16,207	13,447	14,584
General and administrative expenses	27,885	27,442	26,412
Write-off of unsuccessful exploration activities		3,050	2,367
<b>Operating income</b>	<b>64,007</b>	<b>23,568</b>	<b>66,594</b>
<b>Other income (expense):</b>			
Interest income	1,427	343	639
Interest expense, net	(69,459)	(40,473)	(16,241)
Foreign currency translation and transaction gains (losses)	(1,350)	1,557	(1,695)
Income attributable to sale of tax benefits	11,474	8,729	15,515
Gain on acquisition of controlling interest		36,928	
Gain from extinguishment of liability			13,348
Other non-operating income, net	671	130	200
<b>Income from continuing operations, before income taxes and equity in income (losses) of investees</b>	<b>6,770</b>	<b>30,782</b>	<b>78,360</b>
Income tax benefit (provision)	(48,535)	1,098	(15,430)
Equity in income (losses) of investees, net	(959)	998	2,136
<b>Income (loss) from continuing operations</b>	<b>(42,724)</b>	<b>32,878</b>	<b>65,066</b>
<b>Discontinued operations:</b>			
Income from discontinued operations, net of related tax of \$0 and \$6, respectively		14	3,487
Gain on sale of a subsidiary in New Zealand, net of related tax of \$2,000		4,336	
<b>Net income (loss)</b>	<b>(42,724)</b>	<b>37,228</b>	<b>68,553</b>
Net loss (income) attributable to noncontrolling interest	(332)	90	298
<b>Net income (loss) attributable to the Company's stockholders</b>	<b>\$ (43,056)</b>	<b>\$ 37,318</b>	<b>\$ 68,851</b>
<b>Comprehensive income (loss):</b>			
Net income (loss)	(42,724)	37,228	68,553
<b>Other comprehensive income, net of related taxes:</b>			
Currency translation adjustment		43	842
Amortization of unrealized gains in respect of derivative instruments designated for cash flow hedge	(212)	(234)	(254)
Change in unrealized gains or losses on marketable securities available-for-sale	(237)	(80)	594

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Comprehensive income (loss)	(43,173)	36,957	69,735
Comprehensive loss (income) attributable to noncontrolling interest	(332)	90	298
Comprehensive income (loss) attributable to the Company's stockholders	\$ (43,505)	\$ 37,047	\$ 70,033
<b>Earnings (loss) per share attributable to the Company's stockholders:</b>			
<b>Basic:</b>			
Income (loss) from continuing operations	\$ (0.95)	\$ 0.72	\$ 1.44
Discontinued operations		0.10	0.08
Net income (loss)	\$ (0.95)	\$ 0.82	\$ 1.52
<b>Diluted:</b>			
Income (loss) from continuing operations	\$ (0.95)	\$ 0.72	\$ 1.43
Discontinued operations		0.10	0.08
Net income (loss)	\$ (0.95)	\$ 0.82	\$ 1.51
<b>Weighted average number of shares used in computation of earnings (loss) per share attributable to the Company's stockholders:</b>			
<b>Basic</b>			
	45,431	45,431	45,391
Diluted	45,431	45,452	45,533
Dividend per share declared	\$ 0.13	\$ 0.27	\$ 0.25

The accompanying notes are an integral part of the consolidated financial statements.

Table of Contents

## ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF EQUITY

	Common Stock		The Company's Stockholders' Equity			Total	Noncontrolling Interest	Total Equity
	Shares	Amount	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income			
	(In thousands, except per share data)							
<b>Balance at December 31, 2008</b>	45,353	\$ 45	\$ 701,273	\$ 138,241	\$ 645	\$ 840,204	\$ 7,031	\$ 847,235
Stock-based compensation			5,755			5,755		5,755
Cumulative effect of adopting the other-than-temporary impairment standard as of April 1, 2009 (net of related tax of \$650)				1,205	(1,205)			
Cash dividend declared, \$0.25 per share				(11,347)		(11,347)		(11,347)
Exercise of options by employees	78	1	1,241			1,242		1,242
Acquisition of noncontrolling interest			1,085			1,085	(2,010)	(925)
Net income (loss)				68,851		68,851	(298)	68,553
Other comprehensive income, net of related taxes:								
Currency translation adjustment					842	842		842
Amortization of unrealized gains in respect of derivative instruments designated for cash flow hedge (net of related tax of \$158)					(254)	(254)		(254)
Change in unrealized gains or losses on marketable securities available-for-sale (net of related tax of \$339)					594	594		594
<b>Balance at December 31, 2009</b>	45,431	46	709,354	196,950	622	906,972	4,723	911,695
Stock-based compensation			7,377			7,377		7,377
Cumulative effect of adopting the guidance on evaluation of credit derivatives embedded in beneficial interests in securitized financial assets as of July 1, 2010 (net of related tax of \$370)				(693)	693			
Increase in noncontrolling interest, due to acquisition							1,462	1,462
Cash dividend declared, \$0.27 per share				(12,264)		(12,264)		(12,264)
Net income (loss)				37,318		37,318	(90)	37,228
Other comprehensive income (loss), net of related taxes:								
Currency translation adjustment					43	43		43
Amortization of unrealized gains in respect of derivative instruments designated for cash flow hedge (net of related tax of \$143)					(234)	(234)		(234)
Change in unrealized gains or losses on marketable securities available-for-sale (net of related tax of \$43)					(80)	(80)		(80)
<b>Balance at December 31, 2010</b>	45,431	46	716,731	221,311	1,044	939,132	6,095	945,227
Stock-based compensation			6,672			6,672		6,672
Increase in noncontrolling interest due to sale of equity interest in OPC LLC			2,343			2,343	1,499	3,842
Cash dividend declared, \$0.13 per share				(5,924)		(5,924)		(5,924)
Net (loss) income				(43,056)		(43,056)	332	(42,724)
Other comprehensive income (loss), net of related taxes:								
Amortization of unrealized gains in respect of derivative instruments designated for cash flow hedge (net of related tax of \$130)					(212)	(212)		(212)
Change in unrealized gains or losses on marketable securities available-for-sale (net of					(237)	(237)		(237)

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

related tax of \$0)

<b>Balance at December 31, 2011</b>	45,431	\$	46	\$	725,746	\$	172,331	\$	595	\$	898,718	\$	7,926	\$	906,644
-------------------------------------	--------	----	----	----	---------	----	---------	----	-----	----	---------	----	-------	----	---------

The accompanying notes are an integral part of the consolidated financial statements.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Year Ended December 31,		
	2011	2010	2009
	(In thousands)		
<b>Cash flows from operating activities:</b>			
Net income (loss)	\$ (42,724)	\$ 37,228	\$ 68,553
Adjustments to reconcile net income or loss to net cash provided by operating activities:			
Depreciation and amortization	96,398	86,761	64,376
Amortization of premium from senior secured bonds	(256)		
Accretion of asset retirement obligation	1,593	1,249	1,060
Stock-based compensation	6,672	7,377	5,755
Amortization of deferred lease income	(2,685)	(2,685)	(2,685)
Income attributable to sale of tax benefits, net of interest expense	(4,315)	(3,523)	(8,322)
Equity in income (losses) of investees	959	(998)	(2,136)
Impairment of auction rate securities	205	137	473
Loss on disposal of property, plant and equipment		1,245	2,469
Write-off of unsuccessful exploration activities		3,050	2,367
Return on investment in unconsolidated investments		3,734	
Loss (Gain) on severance pay fund asset	588	(1,889)	(468)
Premium from issuance Senior Unsecured Bonds	1,957		
Gain from extinguishment of liability			(13,348)
Gain on sale of a subsidiary		(6,350)	
Gain on acquisition of controlling interest		(36,928)	
Deferred income tax provision (benefit)	38,061	(10,139)	3,957
Liability for unrecognized tax benefits	444	500	1,506
Deferred lease revenues	376	1,082	1,125
Changes in operating assets and liabilities, net of amounts acquired:			
Receivables	1,979	1,259	3,921
Costs and estimated earnings in excess of billings on uncompleted contracts	2,180	8,894	(7,658)
Inventories	(3)	2,948	(1,762)
Prepaid expenses and other	(3,743)	(2,595)	4,146
Deposits and other	(710)	(164)	(49)
Accounts payable and accrued expenses	6,646	9,695	(2,081)
Due from/to related entities, net	16	(89)	(103)
Billings in excess of costs and estimated earnings on uncompleted contracts	29,951	(198)	(12,319)
Liabilities for severance pay	(159)	2,610	692
Other long-term liabilities	(708)	(540)	
Due from/to Parent	12	(268)	1,303
<b>Net cash provided by operating activities</b>	<b>132,734</b>	<b>101,403</b>	<b>110,772</b>
<b>Cash flows from investing activities:</b>			
Return of investment in unconsolidated investments		3,516	
Marketable securities, net	(17,534)		1,580
Net change in restricted cash, cash equivalents and marketable securities	(50,614)	17,536	(15,873)
Cash received from sale of a subsidiary		19,594	
Capital expenditures	(269,677)	(283,313)	(270,623)
Cash grant received		108,286	
Investment in unconsolidated companies	(472)	(2,715)	(261)
Cash paid for acquisition of controlling interest in a subsidiary, net of cash acquired		(64,517)	
Cash paid for investment in a joint venture	(200)	(100)	
Intangible assets acquired	(1,786)	(1,472)	
Decrease in severance pay fund asset, net of payments made to retired employees	(719)	(635)	(921)
Repayment from unconsolidated investment			62
<b>Net cash used in investing activities</b>	<b>(341,002)</b>	<b>(203,820)</b>	<b>(286,036)</b>

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

**Cash flows from financing activities:**

Proceeds from issuance of senior unsecured bonds	107,447	142,003	
Proceeds from long-term loans		20,000	237,000
Proceeds from exercise of options by employees			1,242
Proceeds from issuance of senior secured notes, net of transaction costs	141,108		
Proceeds from the sale of limited liability company interest in OPC LLC, net of transaction costs	24,878		
Payment for acquiring OPC LLC shares			(18,500)
Proceeds from revolving credit lines with banks	891,583	1,159,869	1,152,500
Repayment of revolving credit lines with banks	(867,000)	(1,104,403)	(1,118,500)
Repayments of long-term debt			
Parent		(9,600)	(16,600)
Other	(50,130)	(52,242)	(33,193)
Cash paid to non-controlling interest	(14,039)	(3,136)	
Deferred debt issuance costs	(2,584)	(1,302)	(5,566)
Cash dividends paid	(5,924)	(12,264)	(11,347)
<b>Net cash provided by financing activities</b>	<b>225,339</b>	<b>138,925</b>	<b>187,036</b>
Effect of exchange rate changes on cash and cash equivalents			142
<b>Net change in cash and cash equivalents</b>	<b>17,071</b>	<b>36,508</b>	<b>11,914</b>
Cash and cash equivalents at beginning of year	82,815	46,307	34,393
<b>Cash and cash equivalents at end of year</b>	<b>\$ 99,886</b>	<b>\$ 82,815</b>	<b>\$ 46,307</b>

**Supplemental disclosure of cash flow information:**

Cash paid during the year for:

Interest, net of interest capitalized	\$ 33,274	\$ 34,587	\$ 369
Income taxes, net	\$ 13,575	\$ 7,570	\$ 5,098

**Supplemental non-cash investing and financing activities:**

Increase (decrease) in accounts payable related to purchases of property, plant and equipment	\$ 13,117	\$ 507	\$ (23,890)
Payable related to investment in joint venture	\$	\$ 2,400	\$
Increase (decrease) in asset retirement cost and asset retirement obligation	\$ (212)	\$ 1,238	\$ (260)

The accompanying notes are an integral part of the consolidated financial statements.

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**NOTE 1 BUSINESS AND SIGNIFICANT ACCOUNTING POLICIES**

***Business***

Ormat Technologies, Inc. (the *Company*), a subsidiary of Ormat Industries Ltd. (the *Parent*), is primarily engaged in the geothermal and recovered energy business, including the supply of equipment that is manufactured by the Company and the design and construction of power plants for projects owned by the Company or for third parties. The Company owns and operates geothermal and recovered energy-based power plants in various countries, including the United States of America ( *U.S.* ), Kenya, Guatemala, and Nicaragua. The Company's equipment manufacturing operations are located in Israel.

Most of the Company's domestic power plant facilities are Qualifying Facilities under the Public Utility Regulatory Policies Act of 1978 ( *PURPA* ). The power purchase agreements ( *PPAs* ) for certain of such facilities are dependent upon their maintaining Qualifying Facility status. Management believes that all of the facilities were in compliance with Qualifying Facility status requirements as of December 31, 2011.

***Cash dividends***

During the years ended December 31, 2011, 2010, and 2009, the Company's Board of Directors declared, approved, and authorized the payment of cash dividends in the aggregate amount of \$5.9 million (\$0.13 per share), \$12.3 million (\$0.27 per share), and \$11.3 million (\$0.25 per share), respectively. Such dividends were paid in the years declared.

***Rounding***

Dollar amounts, except per share data, in the notes to these financial statements are rounded to the closest \$1,000, unless otherwise indicated.

***Basis of presentation***

The consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America ( *U.S. GAAP* ) and include the accounts of the Company and of all majority-owned subsidiaries in which the Company exercises control over operating and financial policies, and variable interest entities in which the Company has an interest and is the primary beneficiary. Intercompany accounts and transactions have been eliminated in consolidation.

Investments in less-than-majority-owned entities or other entities in which the Company exercises significant influence over operating and financial policies are accounted for using the equity method of accounting. Under the equity method, original investments are recorded at cost and adjusted by the Company's share of undistributed earnings or losses of such companies. The Company's earnings in investments accounted for under the equity method have been reflected as equity in income of investees, net on the Company's consolidated statements of operations and comprehensive income (loss).

***Cash and cash equivalents***

The Company considers all highly liquid instruments, with an original maturity of three months or less, to be cash equivalents.

---

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

***Marketable securities***

Marketable securities consist of debt securities. The Company determines the appropriate classification of all marketable securities as held-to-maturity, available-for-sale or trading at the time of the purchase and re-evaluates such classification at each balance sheet date. At December 31, 2011 and 2010, all of the Company's investments in marketable securities were classified as available-for-sale securities and as a result, were reported at their fair value. The fair value of auction rate securities as of December 31, 2010 was determined based on the factors discussed in Note 7.

***Restricted cash, cash equivalents, and marketable securities***

Under the terms of certain long-term debt agreements, the Company is required to maintain certain debt service reserves, cash collateral and operating fund accounts that have been classified as restricted cash, cash equivalents, and marketable securities. Funds that will be used to satisfy obligations due during the next twelve months are classified as current restricted cash, cash equivalents, and marketable securities, with the remainder classified as non-current restricted cash, cash equivalents and marketable securities (see Note 7). Such amounts were invested primarily in money market accounts and commercial paper with a minimum investment grade of AA, and also some auction rate securities as of December 31, 2010. At December 31, 2011 the Company did not have any investments in auction rate securities.

***Concentration of credit risk***

Financial instruments which potentially subject the Company to concentration of credit risk consist principally of temporary cash investments, marketable securities and accounts receivable.

The Company places its temporary cash investments and marketable securities with high credit quality financial institutions located in the U.S. and in foreign countries. At December 31, 2011 and 2010, the Company had deposits totaling \$39,569,000 and \$55,537,000, respectively, in seven U.S. financial institutions that were federally insured up to \$250,000 per account (after December 31, 2013, the deposits will be insured up to \$100,000 per account). At December 31, 2011 and 2010, the Company's deposits in foreign countries of approximately \$57,838,000 and \$37,929,000, respectively, were not insured.

At December 31, 2011 and 2010, accounts receivable related to operations in foreign countries amounted to approximately \$21,453,000 and \$26,128,000, respectively. At December 31, 2011, and 2010, accounts receivable from the Company's major customers that have generated 10% or more of its revenues (see Note 20) amounted to approximately 58% and 40%, respectively, of the Company's accounts receivable.

Southern California Edison Company (SCE) accounted for 27.7%, 29.1%, and 21.1% of the Company's total revenues for the years ended December 31, 2011, 2010, and 2009, respectively. SCE is also the power purchaser and revenue source for the Mammoth complex, which was accounted for separately under the equity method through August 1, 2010.

Sierra Pacific Power Company and Nevada Power Company (subsidiaries of NV Energy, Inc.) accounted for 13.0%, 15.0%, and 13.0% of the Company's total revenues for the years ended December 31, 2011, 2010, and 2009, respectively.

Hawaii Electric Light Company accounted for 10.6%, 8.6%, and 6.3% of the Company's total revenues for the years ended December 31, 2011, 2010, and 2009, respectively.

Kenya Power and Lighting Co. Ltd. accounted for 8.0%, 9.4%, and 8.5% of the Company's total revenues for the years ended December 31, 2011, 2010, and 2009, respectively.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The Company performs ongoing credit evaluations of its customers' financial condition. The Company has historically been able to collect on substantially all of its receivable balances, and accordingly, no provision for doubtful accounts has been made.

***Inventories***

Inventories consist primarily of raw material parts and sub-assemblies for power units, and are stated at the lower of cost or market value, using the weighted-average cost method. Inventories are reduced by a provision for slow-moving and obsolete inventories. This provision was not significant at December 31, 2011 and 2010.

***Deposits and other***

Deposits and other consist primarily of performance bonds for construction projects, long-term insurance contract and receivables, and derivative instruments.

***Deferred Charges***

Deferred charges represent prepaid income taxes on intercompany sales. Such amounts are amortized and included in income tax provision over the life of the related property, plant and equipment.

***Property, plant and equipment***

Property, plant and equipment are stated at cost. All costs associated with the acquisition, development and construction of power plants operated by the Company are capitalized. Major improvements are capitalized and repairs and maintenance (including major maintenance) costs are expensed. Power plants operated by the Company, which include geothermal wells and exploration and resource development costs, are depreciated using the straight-line method over their estimated useful lives, which range from 25 to 30 years. The geothermal power plant in Zunil, Guatemala is to be fully depreciated over the term of the PPA, since the Company does not own the geothermal resource used by the plant. The geothermal power plant in Nicaragua is to be fully depreciated over the period that the plant is operated by the Company (see Note 8). The other assets are depreciated using the straight-line method over the following estimated useful lives of the assets:

Leasehold improvements	15-20 years
Machinery and equipment – manufacturing and drilling	10 years
Machinery and equipment – computers	3-5 years
Office equipment – furniture and fixtures	5-15 years
Office equipment – other	5-10 years
Automobiles	5-7 years

The cost and accumulated depreciation of items sold or retired are removed from the accounts. Any resulting gain or loss is recognized currently and is recorded in operating income.

The Company capitalizes interest costs as part of constructing power plant facilities. Such capitalized interest is recorded as part of the asset to which it relates and is amortized over the asset's estimated useful life. Capitalized interest costs amounted to \$11,709,000, \$9,493,000, and \$27,395,000 for the years ended December 31, 2011, 2010, and 2009, respectively.

---

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

***Cash Grants***

From time to time, the Company is awarded cash grants from the U.S. Department of the Treasury ( U.S. Treasury ) for Specified Energy Property in Lieu of Tax Credits under Section 1603 of the American Recovery and Reinvestment Act of 2009 ( ARRA ). The Company records the cash grant as a reduction in the carrying value of the related plant and amortize the grant as a reduction in depreciation expense over the plant s estimated useful life.

For federal income tax purposes, the tax basis of the plant is reduced only by 50% of the cash grant. To account for the tax effect of the difference between the tax and book basis of the plant, the Company records a deferred tax asset with a corresponding decrease in the carrying value of the plant.

***Exploration and development costs***

The Company capitalizes costs incurred in connection with the exploration and development of geothermal resources once it acquires land rights to the potential geothermal resource. Prior to acquiring land rights, the Company makes an initial assessment that an economically feasible geothermal reservoir is probable on that land. The Company determines the economic feasibility of potential geothermal resources internally, with all available data and external assessments vetted through the exploration department and occasionally using outside service providers. Costs associated with the initial assessment are expensed and included in cost of electricity revenues in the consolidated statements of operations and comprehensive income (loss). Such costs were immaterial during the years ended December 31, 2011, 2010, and 2009. It normally takes one to two years from the time active exploration of a particular geothermal resource begins to the time a production well is in operation, assuming the resource is commercially viable.

In most cases, the Company obtains the right to conduct the geothermal development and operations on land owned by the Bureau of Land Management ( BLM ), various states or with private parties. In consideration for certain of these leases, the Company may pay an up-front bonus payment which is a component of the competitive lease process. The up-front bonus payments and other related costs, such as legal fees, are capitalized and included in construction-in-process. The annual land lease payments made during the exploration, development and construction phase are expensed as incurred and included in electricity cost of revenues in the consolidated statements of operations and comprehensive income (loss). Upon commencement of power generation on the leased land, the Company begins to pay to the lessors long-term royalty payments based on the utilization of the geothermal resources as defined in the respective agreements. Such payments are expensed when the related revenues are earned and included in electricity cost of revenues in the consolidated statements of operations and comprehensive income (loss).

Following the acquisition of land rights to the potential geothermal resource, the Company conducts further studies and surveys, including water and soil analyses among others, and augments its database with the results of these studies. The Company then initiates a suite of geophysical surveys to assess the resource and determine drilling locations. If the results of these activities support the initial assessment of the feasibility of the geothermal resource, the Company then proceeds to exploratory drilling and other related activities which may include drilling of temperature gradient holes, drilling of slim holes, building access roads to drilling locations, drilling full size production and/or injection wells and flow tests. If the slim hole supports a conclusion that the geothermal resource will support a commercially viable power plant, it may either be converted to a full-size commercial well, used either for extraction or re-injection or geothermal fluids, or used as an observation well to monitor and define the geothermal resource. Costs associated with these activities and other directly attributable costs, including interest once physical exploration activities begin and permitting costs, are capitalized and included in construction-in-process . If the Company concludes that a geothermal resource will not support commercial operations, capitalized costs are expensed in the period such determination is made.

---

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Grants received from the U.S. Department of Energy ( DOE ) and Alaska Energy Authority are offset against the related exploration and development costs. Such grants amounted to \$6,194,000, \$1,116,000, and \$0 for the years ended December 31, 2011, 2010, and 2009, respectively.

All exploration and development costs that are being capitalized, including the up-front bonus payments made to secure land leases, will be depreciated over their estimated useful lives when the related geothermal power plant is substantially complete and ready for use. A geothermal power plant is substantially complete and ready for use when electricity generation commences.

***Asset retirement obligation***

The Company records the fair value of a legal liability for an asset retirement obligation in the period in which it is incurred. The Company's legal liabilities include plugging wells and post-closure costs of power producing sites. When a new liability for asset retirement obligations is recorded, the Company capitalizes the costs of the liability by increasing the carrying amount of the related long-lived asset. The liability is accreted to its present value each period, and the capitalized cost is depreciated over the useful life of the related asset. At retirement, the obligation is settled for its recorded amount at a gain or loss.

***Deferred financing and lease transaction costs***

Deferred financing costs are amortized over the term of the related obligation using the effective interest method. Amortization of deferred financing costs is presented as interest expense in the consolidated statements of operations and comprehensive income (loss). Accumulated amortization related to deferred financing costs amounted to \$16,533,000 and \$12,966,000 at December 31, 2011 and 2010, respectively. Amortization expense for the years ended December 31, 2011, 2010, and 2009 amounted to \$3,567,000, \$3,042,000, and \$3,060,000, respectively. In the year ended December 31, 2009 an amount of \$834,000 was written-off as a result of the extinguishment of a liability.

Deferred transaction costs relating to the Puna operating lease (see Note 12) in the amount of \$4,172,000 are amortized using the straight-line method over the 23-year term of the lease. Amortization of deferred transaction costs is presented in cost of revenues in the consolidated statements of operations and comprehensive income (loss). Accumulated amortization related to deferred lease costs amounted to \$1,221,000 and \$1,037,000 at December 31, 2011 and 2010, respectively. Amortization expense for each of the years ended December 31, 2011, 2010, and 2009 amounted to \$184,000.

***Intangible assets***

Intangible assets consist of allocated acquisition costs of PPAs, which are amortized using the straight-line method over the 13 to 25-year terms of the agreements.

***Impairment of long-lived assets and long-lived assets to be disposed of***

The Company evaluates long-lived assets, such as property, plant and equipment, construction-in-process, PPAs, and unconsolidated investments for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Factors which could trigger an impairment include, among others, significant underperformance relative to historical or projected future operating results, significant changes in the Company's use of assets or its overall business strategy, negative industry or economic trends, a determination that an exploration project will not support commercial operations, a determination that a

---

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

suspended project is not likely to be completed, a significant increase in costs necessary to complete a project, legal factors relating to its business or when it concludes that it is more likely than not that an asset will be disposed of or sold.

The Company tests its operating plants that are operated together as a complex for impairment at the complex level because the cash flows of such plants result from significant shared operating activities. For example, the operating power plants in a complex are managed under a combined operation management generally with one central control room that controls all of the power plants in a complex and one maintenance group that services all of the power plants in a complex. As a result, the cash flows from individual plants within a complex are not largely independent of the cash flows of other plants within the complex. The Company tests for impairment its operating plants which are not operated as a complex as well as its projects under exploration, development or construction that are not part of an existing complex at the plant or project level. To the extent an operating plant becomes part of a complex, the Company will test for impairment at the complex level.

Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the estimated future net undiscounted cash flows expected to be generated by the asset. The significant assumptions that the Company uses in estimating its undiscounted future cash flows include: (i) projected generating capacity of the complex or power plant and rates to be received under the respective PPA(s) and (ii) projected operating expenses of the relevant complex or power plant. Estimates of future cash flows used to test recoverability of a long-lived asset under development also include cash flows associated with all future expenditures necessary to develop the asset.

If the assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds their fair value. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell. Management believes that no impairment exists for long-lived assets; however, estimates as to the recoverability of such assets may change based on revised circumstances (see Note 8).

***Derivative instruments***

Derivative instruments (including certain derivative instruments embedded in other contracts) are measured at their fair value and recorded as either assets or liabilities unless exempted from derivative treatment as a normal purchase and sale. All changes in the fair value of derivatives are recognized currently in earnings unless specific hedge criteria are met, which requires a company to formally document, designate and assess the effectiveness of transactions that receive hedge accounting.

The Company maintains a risk management strategy that incorporates the use of forward exchange contracts, interest rate swaps, and interest rate caps to minimize significant fluctuation in cash flows and/or earnings that are caused by exchange rate or interest rate volatility. Gains or losses on contracts that initially qualify for cash flow hedge accounting, net of related taxes, are included as a component of other comprehensive income or loss and are subsequently reclassified into earnings when the hedged forecasted transaction affects earnings. Gains or losses on contracts that are not designated to qualify as a cash flow hedge are included currently in earnings.

***Foreign currency translation***

The U.S. dollar is the functional currency for substantially all of the Company's consolidated operations and those of its equity affiliates. For those entities, all gains and losses from currency translations are included in results of operations. For the subsidiary in New Zealand that was sold in January 2010, and which was using a functional currency other than the U.S. dollar, the cumulative translation effects were included in accumulated other comprehensive income (loss) in the consolidated balance sheets.

---

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

***Comprehensive income (loss) reporting***

Comprehensive income (loss) includes net income or loss plus other comprehensive income (loss), which for the Company consists of foreign currency translation adjustments, the non-credit portion of unrealized gain or loss on available-for-sale marketable securities and the mark-to-market gains or losses on derivative instruments designated as a cash flow hedge.

***Revenues and cost of revenues***

Revenues are primarily related to: (i) sale of electricity from geothermal and recovered energy-based power plants owned and operated by the Company and (ii) geothermal and recovered energy-based power plant equipment engineering, sale, construction and installation, and operating services.

Revenues related to the sale of electricity from geothermal and recovered energy-based power plants and capacity payments are recorded based upon output delivered and capacity provided at rates specified under relevant contract terms. For PPAs agreed to, modified, or acquired in business combinations on or after July 1, 2003, the Company determines whether such PPAs contain a lease element requiring lease accounting. Revenue from such PPAs are accounted for in electricity revenues. The lease element of the PPAs is also assessed in accordance with the revenue arrangements with multiple deliverables guidance, which requires that revenues be allocated to the separate earnings processes based on their relative fair value. PPAs with minimum lease rentals which vary over time are generally recognized on the straight-line basis over the term of the PPAs. PPAs with contingent rentals are recognized when earned.

Revenues from engineering, operating services, and parts and product sales are recorded upon providing the service or delivery of the products and parts and when collectability is reasonably assured. Revenues from the supply and/or construction of geothermal and recovered energy-based power plant equipment and other equipment to third parties are recognized using the percentage-of-completion method. Revenue is recognized based on the percentage relationship that incurred costs bear to total estimated costs. Costs include direct material, labor, and indirect costs. Selling, marketing, general, and administrative costs are charged to expense as incurred. Provisions for estimated losses on uncompleted contracts are made in the period in which such losses are determined. Changes in job performance, job conditions, and estimated profitability, including those arising from contract penalty provisions and final contract settlements, may result in revisions to costs and revenues and are recognized in the period in which the revisions are determined.

In specific instances where there is a lack of dependable estimates or inherent risks cause forecast to be doubtful, then the completed-contract method is followed. Revenue is recognized when the contract is substantially complete and when collectability is reasonably assured. Costs that are closely associated with the project are deferred as contract costs and recognized similarly to the associated revenues.

***Warranty on products sold***

The Company generally provides a one-year warranty against defects in workmanship and materials related to the sale of products for electricity generation. Estimated future warranty obligations are included in operating expenses in the period in which the related revenue is recognized. Such charges are immaterial for the years ended December 31, 2011, 2010, and 2009.

***Research and development***

Research and development costs incurred by the Company for the development of existing and new geothermal, recovered energy and remote power technologies are expensed as incurred. Grants received from the

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

DOE are offset against the related research and development expenses. Such grants amounted to \$1,143,000, \$704,000, and \$1,330,000 for the years ended December 31, 2011, 2010, and 2009, respectively.

***Stock-based compensation***

The Company accounts for stock-based compensation using the fair value method whereby compensation cost is measured at the grant date, based on the calculated fair value of the award, and is recognized as an expense over the requisite employee service period (generally the vesting period of the grant). The Company uses the simplified method in developing an estimate of the expected term of plain vanilla stock-based awards.

***Income taxes***

Income taxes are accounted for using the asset and liability approach, which requires the recognition of taxes payable or refundable for the current year and deferred tax assets and liabilities for the future tax consequences of events that have been recognized in the Company's financial statements or tax returns. The measurement of current and deferred tax assets and liabilities are based on provisions of the enacted tax law. The effects of future changes in tax laws or rates are not anticipated. The Company accounts for investment tax credits and production tax credits as a reduction to income taxes in the year in which the credit arises. The measurement of deferred tax assets is reduced, if necessary, by the amount of any tax benefits that, based on available evidence, are not more likely than not expected to be realized. A valuation allowance has been established to reduce the Company's deferred tax assets to the amount that is expected to be realized in the future. Tax benefits from uncertain tax positions are recognized only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position (see Note 19).

***Earnings (loss) per share***

Basic earnings (loss) per share attributable to the Company's stockholders (earnings (loss) per share) is computed by dividing net income or loss attributable to the Company's stockholders by the weighted average number of shares of common stock outstanding for the period. The Company does not have any equity instruments that are dilutive, except for stock-based awards.

The stock options granted to employees of the Company in the Parent's stock are not dilutive to the Company's earnings per share in any year.

The table below shows the reconciliation of the number of shares used in the computation of basic and diluted earnings per share:

	Year Ended December 31,		
	2011	2010	2009
	(In thousands)		
Weighted average number of shares used in computation of basic earnings (loss) per share	45,431	45,431	45,391
Add:			
Additional shares from the assumed exercise of employee stock options		21	142
Weighted average number of shares used in computation of diluted earnings (loss) per share	45,431	45,452	45,533

In the year ended December 31, 2011, the employee stock options are anti-dilutive because of the Company's net loss, and therefore, they have been excluded from the diluted earnings (loss) per share calculation.

---

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The number of stock-based awards that could potentially dilute future earnings per share and were not included in the computation of diluted earnings per share because to do so would have been anti-dilutive was 4,337,475, 2,676,712, and 1,161,870, respectively, for the years ended December 31, 2011, 2010, and 2009.

*Use of estimates in preparation of financial statements*

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the dates of such financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates. The most significant estimates with regard to the Company's consolidated financial statements relate to the useful lives of property, plant and equipment, impairment of long-lived assets and assets to be disposed of, revenue recognition of product sales using the percentage of completion method, asset retirement obligations, and the provision for income taxes.

**New Accounting Pronouncements**

*New accounting pronouncements effective in the year ended December 31, 2011*

*Accounting for Revenue Recognition*

In October 2009, the Financial Accounting Standards Board ( FASB ) issued amendments to the accounting and disclosures for revenue recognition. These amendments modify the criteria for recognizing revenue in multiple element arrangements and require companies to develop a best estimate of the selling price to separate deliverables and allocate arrangement consideration using the relative selling price method. Additionally, the amendments eliminate the residual method for allocating arrangement considerations. The adoption by the Company on January 1, 2011 did not have a material impact on the Company's consolidated financial statements.

In April 2010, the FASB issued guidance for revenue recognition milestone method, which provides guidance on the criteria that should be met for determining whether the milestone method of revenue recognition is appropriate. A vendor can recognize consideration that is contingent upon achievement of a milestone in its entirety as revenue in the period in which the milestone is achieved only if the milestone meets all criteria to be considered substantive. A milestone should be considered substantive in its entirety. An individual milestone may not be bifurcated. This guidance is effective on a prospective basis for milestones achieved in fiscal years, and interim periods within those years, beginning on or after the effective date of the guidance. The adoption by the Company on January 1, 2011 did not have a material impact on the Company's consolidated financial statements.

*Accounting for Share-based Payments*

In April 2010, the FASB issued an accounting standards update, which addresses the classification of an employee share-based payment award with an exercise price denominated in the currency of a market in which the underlying equity securities trades. This update clarifies that an employee share-based payment award with an exercise price denominated in the currency of a market in which a substantial portion of the entity's equity securities trades should not be considered to contain a condition that is not a market, performance, or service condition. Therefore, an entity should not classify such an award as a liability if it otherwise qualifies as equity. The adoption by the Company on January 1, 2011 did not have a material impact on the Company's consolidated financial statements.

---

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

*New accounting pronouncements effective in future periods*

*Accounting for Fair Value Measurement*

In May 2011, the FASB issued authoritative guidance amending existing guidance for measuring fair value and for disclosing information about fair value measurements. The FASB indicated that for many of the requirements it does not intend for the amendments to result in a change to current accounting. Required disclosures are expanded under the new guidance, especially for fair value measurements that are categorized within Level 3 of the fair value hierarchy, for which quantitative information about the unobservable inputs, the valuation processes used by the entity, and the sensitivity of the measurement to the unobservable inputs will be required. In addition, entities will be required to disclose the categorization by level of the fair value hierarchy for items that are not measured at fair value in the statement of financial position but for which the fair value is required to be disclosed. The guidance is effective for periods beginning after December 15, 2011 (January 1, 2012 for the Company) and is required to be applied prospectively. The adaptation of this amendment is not expected to have a material effect on the Company's consolidated financial statements.

*Update on Presentation of Comprehensive Income in the Financial Statements*

In June 2011, the FASB issued authoritative guidance requiring entities to present net income and other comprehensive income in a single continuous statement of comprehensive income or in two separate, but consecutive, statements. The new guidance does not change the components that are recognized in net income and the components that are recognized in other comprehensive income. The guidance originally required entities to present reclassifications between net income and other comprehensive income at the financial statement line item level; however, in December 2011, the FASB deferred this requirement. This guidance is effective for periods beginning after December 15, 2011 (January 1, 2012 for the Company) and is required to be applied retroactively. The adoption of this amendment is not expected to have a material impact on the Company's consolidated financial statements.

*Update on Disclosures about Offsetting Assets and Liabilities*

In December 2011, the FASB issued new accounting guidance that revises the manner in which entities disclose the offsetting of assets and liabilities. The new guidance requires entities to disclose both gross information and net information about both instruments and transactions eligible for offset in the balance sheet and instruments and transactions subject to an agreement similar to a master netting arrangement. The amendment is applicable retrospectively effective for fiscal years, and interim periods within those years, beginning on or after January 1, 2013 (January 1, 2013 for the Company). The adoption of this amendment is not expected to have a material effect on the Company's consolidated financial statements.

**NOTE 2 MAMMOTH COMPLEX ACQUISITION**

On August 2, 2010, the Company acquired the remaining 50% interest in Mammoth-Pacific, L.P. (Mammoth Pacific), which owns the Mammoth complex located near the city of Mammoth, California, for a purchase price of \$72.5 million in cash. The Company acquired the remaining interest in Mammoth Pacific to increase its geothermal power plant operations in the United States.

Prior to the acquisition, the Company had a 50% interest in Mammoth Pacific that was accounted for under the equity method of accounting. Following the acquisition, the Company became the sole owner of the Mammoth complex, as well as the sole owner of rights to over 10,000 acres of undeveloped federal lands.

As a result of the acquisition of the remaining 50% interest in Mammoth Pacific, the financial statements of Mammoth Pacific have been consolidated with the Company's financial statements effective August 2, 2010.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The acquisition-date fair value of the previously held 50% equity interest was \$64.9 million, which takes into account a control premium of \$7.6 million. In the year ended December 31, 2010, the Company recognized a pre-tax gain of \$36.9 million, which is equal to the difference between the acquisition-date fair value of the previously held 50% equity interest in Mammoth Pacific and the acquisition-date carrying value of such investment. The gain is included in gain on acquisition of controlling interest in the consolidated statements of operations and comprehensive income (loss).

The values of the assets acquired and liabilities assumed at the acquisition date are based on management's estimates using the methodology and assumptions described below.

***Valuation methodology and assumptions***

In estimating the fair value for the assets acquired, the Company primarily relied on the Income Approach. After reviewing several geothermal transactions, the Company concluded that those transactions were not sufficiently comparable to the assets acquired in this transaction. The Company also considered the Cost Approach as a reasonableness check to compare to the Income Approach value, but did not rely on it as a final indicator of the value.

The Income Approach is based on the premise that the value of an asset is equal to the present value of the cash flows that the assets are expected to generate. To estimate the fair value of the existing and replacement tangible and intangible assets as well as the development project at the Mammoth Pacific site, a discounted cash flow (DCF) analysis was utilized whereby the cash flows expected to be generated by the acquired assets were discounted to their present value equivalent using the rate of return that reflects the relative risk of each asset, as well as the time value of money. This return, known as the weighted average cost of capital (WACC), is an overall rate based upon the individual rates of return for invested capital (equity and interest-bearing debt), and was calculated by weighting the acquired return on interest-bearing debt and common equity capital in proportion to their estimated percentage in the expected capital structure. The estimates for the WACC, which ranged from 9.5% to 14.0%, developed in the valuation are for independent power producers and geothermal power producers.

The following table summarizes the fair value of the assets acquired and liabilities assumed at the acquisition date:

	<b>(dollars in thousands)</b>
<b>Assets:</b>	
Cash and cash equivalents	\$ 7,983
Trade receivables	3,239
Prepaid expenses and other	254
Deposits and other	622
Property, plant and equipment, net (including construction-in-process)	129,764
<b>Total identifiable assets acquired</b>	<b>141,862</b>
<b>Liabilities:</b>	
Current liabilities—accounts payable and accrued expenses	(1,072)
Asset retirement obligation	(3,342)
<b>Total identifiable liabilities assumed</b>	<b>(4,414)</b>
<b>Total net assets acquired</b>	<b>\$ 137,448</b>

The acquired property, plant and equipment will be depreciated over their estimated useful lives.



**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The revenues of the Mammoth complex and the net loss of the Mammoth complex were \$7,567,000 and \$645,000, respectively, for the period from August 2, 2010 to December 31, 2010.

The following unaudited consolidated pro forma financial information for the years ended December 31, 2010 and 2009, assumes the Mammoth Pacific acquisition occurred as of January 1, 2009, after giving effect to certain adjustments, including the depreciation based on the adjustments to the fair market value of the property, plant and equipment acquired, and related income tax effects. The pro forma results have been prepared for comparative purposes only and are not necessarily indicative of the results of operations that may occur in the future or that would have occurred had the acquisition of Mammoth Pacific been effected on the dates indicated.

	<b>Year Ended December 31,</b>	
	<b>2010</b>	<b>2009</b>
	<b>(Dollars in thousands, except per share data)</b>	
Revenues	\$ 384,706	\$ 431,851
Loss from continuing operations	8,954	67,144
Net income	13,304	70,631
Net loss attributable to noncontrolling interest	90	298
Net income attributable to the Company's stockholders	\$ 13,394	\$ 70,929
Earnings per share attributable to the Company's stockholders - basic and diluted:		
Income from continuing operations	\$ 0.20	\$ 1.47
Income from discontinued operations	0.10	0.08
Net income	\$ 0.30	\$ 1.55

**NOTE 3 INVENTORIES**

Inventories consist of the following:

	<b>December 31,</b>	
	<b>2011</b>	<b>2010</b>
	<b>(Dollars in thousands)</b>	
Raw materials and purchased parts for assembly	\$ 6,058	\$ 7,030
Self-manufactured assembly parts and finished products	6,483	5,508
Total	\$ 12,541	\$ 12,538

**NOTE 4 COST AND ESTIMATED EARNINGS ON UNCOMPLETED CONTRACTS**

Cost and estimated earnings on uncompleted contracts consist of the following:

	<b>December 31,</b>	
	<b>2011</b>	<b>2010</b>
	<b>(Dollars in thousands)</b>	
Costs and estimated earnings incurred on uncompleted contracts	\$ 69,427	\$ 26,228
Less billings to date	(98,565)	(23,235)
<b>Total</b>	<b>\$ (29,138)</b>	<b>\$ 2,993</b>

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

These amounts are included in the consolidated balance sheets under the following captions:

	<b>December 31,</b>	
	<b>2011</b>	<b>2010</b>
	<b>(Dollars in thousands)</b>	
Costs and estimated earnings in excess of billings on uncompleted contracts	\$ 3,966	\$ 6,146
Billings in excess of costs and estimated earnings on uncompleted contracts	(33,104)	(3,153)
<b>Total</b>	<b>\$ (29,138)</b>	<b>\$ 2,993</b>

The completion costs of the Company's construction contracts are subject to estimation. Due to uncertainties inherent in the estimation process, it is reasonably possible that estimated contract earnings will be further revised in the near term.

**NOTE 5 UNCONSOLIDATED INVESTMENTS**

Unconsolidated investments, mainly in power plants, consist of the following:

	<b>December 31,</b>	
	<b>2011</b>	<b>2010</b>
	<b>(Dollars in thousands)</b>	
Sarulla	\$ 2,215	\$ 2,244
Watts & More Ltd.	1,542	2,000
	<b>\$ 3,757</b>	<b>\$ 4,244</b>

***The Sarulla Project***

The Company is a 12.75% member of a consortium which is in the process of developing a geothermal power project in Indonesia with expected generating capacity of approximately 340 MW. The project is located in Tapanuli Utara, North Sumatra, Indonesia and will be owned and operated by the consortium members under the framework of a Joint Operating Contract with PT Pertamina Geothermal Energy ( PGE ). The project will be constructed in three phases over five years, with each phase utilizing the Company's 110 MW to 120 MW combined cycle geothermal plants in which the steam first produces power in a backpressure steam turbine and is subsequently condensed in a vaporizer of a binary plant, which produces additional power. The consortium is still negotiating certain contractual amendments for facilitation of project financing and for signing the resulting amended energy sales contract, and intends to proceed with the project after those amendments have become effective.

The Company's share in the results of operations of the Sarulla project was not significant for each of the years presented in these consolidated financial statements.

***Watts & More Ltd.***

In October 2010, the Company invested \$2.0 million in Watts & More Ltd. ( W&M ), an early stage start-up company, engaged in the development of energy harvesting and system balancing solutions for electrical sources and, in particular, solar photovoltaic systems. The Company holds approximately 28.6% of W&M's shares.

The Company's investment in W&M was not significant for the years ended December 31, 2011 and 2010.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)*****The Mammoth Complex***

Prior to August 2, 2010, the Company had a 50% interest in Mammoth Pacific, which owns the Mammoth complex. The Company's 50% ownership interest in Mammoth Pacific was accounted for under the equity method of accounting as the Company had the ability to exercise significant influence, but not control, over Mammoth Pacific. On August 2, 2010, the Company acquired the remaining 50% interest in Mammoth Pacific (see Note 2).

The unaudited condensed results of Mammoth Pacific are summarized below:

	<b>Period from January 1, 2010 to August 1, 2010</b>	<b>Year Ended December 31, 2009</b>
	<b>(Dollars in thousands)</b>	
<b>Condensed statements of operations:</b>		
Revenues	\$ 11,484	\$ 19,841
Gross margin	2,670	6,181
Net income	2,528	5,993
<b>Company's equity in income of Mammoth:</b>		
50% of Mammoth net income	\$ 1,264	\$ 2,997
Plus amortization of basis difference	345	593
	1,609	3,590
Less income taxes	(611)	(1,363)
Total	\$ 998	\$ 2,227

**NOTE 6 VARIABLE INTEREST ENTITIES**

Effective January 1, 2010, the Company adopted accounting and disclosure guidance for variable interest entities ( VIEs ). Among other accounting and disclosure requirements, the guidance requires the primary beneficiary of a VIE to be identified as the party that both (i) has the power to direct the activities of a VIE that most significantly impact its economic performance; and (ii) has an obligation to absorb losses or a right to receive benefits that could potentially be significant to the VIE. The adoption of this accounting guidance did not result in the Company consolidating any additional VIEs or deconsolidating any VIEs.

The Company evaluated all transactions and relationships with VIEs to determine whether the Company is the primary beneficiary of the entities in accordance with the guidance. The Company's overall methodology for evaluating transactions and relationships under the VIE requirements includes the following two steps: (i) determining whether the entity meets the criteria to qualify as a VIE; and (ii) determining whether the Company is the primary beneficiary of the VIE.

In performing the first step, the significant factors and judgments that the Company considers in making the determination as to whether an entity is a VIE include:

The design of the entity, including the nature of its risks and the purpose for which the entity was created, to determine the variability that the entity was designed to create and distribute to its interest holders;

The nature of the Company's involvement with the entity;

Whether control of the entity may be achieved through arrangements that do not involve voting equity;

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Whether there is sufficient equity investment at risk to finance the activities of the entity; and

Whether parties other than the equity holders have the obligation to absorb expected losses or the right to receive residual returns. If the Company identifies a VIE based on the above considerations, it then performs the second step and evaluates whether it is the primary beneficiary of the VIE by considering the following significant factors and judgments:

Whether the Company has the power to direct the activities of the VIE that most significantly impact the entity's economic performance; and

Whether the Company has the obligation to absorb losses of the entity that could potentially be significant to the VIE or the right to receive benefits from the entity that could potentially be significant to the VIE.

The Company's VIEs include certain of its wholly owned subsidiaries that own one or more power plants with long-term PPAs. In most cases, the PPAs require the utility to purchase substantially all of the plant's electrical output over a significant portion of its estimated useful life. Most of the VIEs have associated project financing debt that is non-recourse to the general creditors of the Company, is collateralized by substantially all of the assets of the VIE and those of its wholly owned subsidiaries (also VIEs) and is fully and unconditionally guaranteed by such subsidiaries. The Company has concluded that such entities are VIEs primarily because the entities do not have sufficient equity at risk and/or subordinated financial support is provided through the long-term PPAs. The Company has evaluated each of its VIEs to determine the primary beneficiary by considering the party that has the power to direct the most significant activities of the entity. Such activities include, among others, construction of the power plant, operations and maintenance, dispatch of electricity, financing and strategy. Except for power plants that it acquired, the Company is responsible for the construction of its power plants and generally provides operation and maintenance services. Primarily due to its involvement in these and other activities, the Company has concluded that it directs the most significant activities at each of its VIEs and, therefore, is considered the primary beneficiary. The Company performs an ongoing reassessment of the VIEs to determine the primary beneficiary and may be required to deconsolidate certain of its VIEs in the future. The Company has aggregated its consolidated VIEs into the following categories: (i) wholly owned subsidiaries with project debt; (ii) wholly owned subsidiaries with PPAs; and (iii) less than majority-owned subsidiaries.

***Agreement for joint development, construction, ownership and operation of one or more geothermal power plants in Oregon***

On October 29, 2010, the Company entered into an agreement to jointly develop, construct, finance, own and operate one or more geothermal power plants in the Crump Geothermal Area located in Lake County, Oregon (the "Crump Project"). Under the terms of the agreement, the other joint owner, Nevada Geothermal Power Inc., contributed all of its rights, titles and interest in the Crump Project, consisting mainly of geothermal rights, to the newly formed entity. The Company paid \$0.1 million and will pay an additional \$2.4 million over a three-year period to the other joint owner for its ownership interest in the Crump Project and related rights. The Company has a 50% voting interest and will have equal representation with the other joint owner on the governing board. During the development stage of the Crump Project, the Company has the obligation to fund the first \$15.0 million on behalf of the Crump Project. All other funding requirements will be required jointly by each owner. If the other joint owner is unable to obtain the necessary capital to fund its share of the Crump Project, the Company will provide financing directly to the joint owner in an aggregate amount of up to \$15.0 million. In addition, the Company will be responsible for leading the development of the Crump Project and once operational, will be considered the operator of the facility. At any time during the development or construction of

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

the Crump Project, the Company may terminate its involvement in the Crump Project, whereby the Company would transfer its 50% ownership interest to the other joint owner, at no cost to the other joint owner. If this occurs, the Company will have no obligation to make any additional payments to the other joint owner.

The Company concluded that the entity is a VIE primarily because the entity does not have sufficient equity at risk. Through the Company's equity ownership and other variable interest, the Company determined that it is the primary beneficiary of the Crump Project and therefore will consolidate the assets, liabilities and operations. In making the determination to consolidate, the Company considered the activities that most significantly impact the project's economic performance, which party has the power to direct those activities, and whether the obligation to absorb the losses or the right to receive the benefits could potentially be significant to the Crump Project. The Company determined that the activities that most significantly impact the economic performance of the Crump Project currently include the development of the project. As the Company is the managing member and is primarily responsible during the development phase and further, since the Company's obligations and benefits would be significant to the Crump Project, the Company determined that it is the primary beneficiary.

The Company has incurred \$8.0 million in development costs of the Crump Project, as of December 31, 2011, which are presented in the Company's consolidated balance sheet in construction-in-process. No amounts related to this transaction have been included in the statement of operations and comprehensive income (loss) during the years ended December 31, 2011 and 2010. In addition, the assets related to the Crump Project can only be used to settle the obligations related to the Crump Project.

The tables below detail the assets and liabilities (excluding intercompany balances which are eliminated in consolidation) for the Company's VIEs, combined by VIE classifications, that were included in the consolidated balance sheets as of December 31, 2011 and 2010:

	<b>Project Debt</b>	<b>December 31, 2011</b>	
		<b>PPAs</b>	<b>Less than Majority- owned Subsidiary</b>
		<b>(Dollars in thousands)</b>	
<b>Assets:</b>			
Restricted cash, cash equivalents and marketable securities	\$ 75,521	\$	\$
Other current assets	78,013	12,725	
Property, plant and equipment, net	1,019,082	428,498	
Construction-in-process	236,101	24,585	11,173
Other long-term assets	57,386	272	
<b>Total assets</b>	<b>\$ 1,466,103</b>	<b>\$ 466,080</b>	<b>\$ 11,173</b>
<b>Liabilities:</b>			
Accounts payable and accrued expenses	\$ 13,621	\$ 4,590	\$
Long-term debt	476,753		
Other long-term liabilities	84,619	7,998	
<b>Total liabilities</b>	<b>\$ 574,993</b>	<b>\$ 12,588</b>	<b>\$</b>

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

	Project Debt	December 31, 2010	
		PPAs	Less Than Majority- Owned Subsidiary
		(Dollars in thousands)	
<b>Assets:</b>			
Restricted cash, cash equivalents and marketable securities	\$ 25,049	\$	\$
Other current assets	55,696	15,530	
Property, plant and equipment, net	933,560	437,840	
Construction-in-process	113,937	29,985	5,929
Other long-term assets	52,484	270	
<b>Total assets</b>	<b>\$ 1,180,726</b>	<b>\$ 483,625</b>	<b>\$ 5,929</b>
<b>Liabilities:</b>			
Accounts payable and accrued expenses	\$ 11,195	\$ 4,533	\$
Long-term debt	361,024		
Other long-term liabilities	85,373	7,121	
<b>Total liabilities</b>	<b>\$ 457,592</b>	<b>\$ 11,654</b>	<b>\$</b>

**NOTE 7 FAIR VALUE OF FINANCIAL INSTRUMENTS**

The fair value measurement guidance clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. It establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy under the fair value measurement guidance are described below:

*Level 1* Unadjusted quoted prices in active markets that are accessible at the measurement date for identical assets or liabilities;

*Level 2* Quoted prices in markets that are not active, or inputs that are observable, either directly or indirectly, for substantially the full term of the asset or liability;

*Level 3* Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (supported by little or no market activity).

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following table sets forth certain fair value information at December 31, 2011 and 2010 for financial assets and liabilities measured at fair value by level within the fair value hierarchy, as well as cost or amortized cost. As required by the fair value measurement guidance, assets and liabilities are classified in their entirety based on the lowest level of inputs that is significant to the fair value measurement.

	Cost or Amortized Cost at December 31, 2011	Fair Value at December 31, 2011			
		Total	Level 1 (Dollars in thousands)	Level 2	Level 3
<b>Assets</b>					
Current assets:					
Cash equivalents (including restricted cash accounts)	\$ 61,649	\$ 61,649	\$ 61,649	\$	\$
Marketable Securities	18,284	18,521	18,521		
<b>Liabilities:</b>					
Current liabilities:					
Derivatives <sup>(1)</sup>		(890)		(890)	
	\$ 79,933	\$ 79,280	\$ 80,170	\$ (890)	\$

	Cost or Amortized Cost at December 31, 2010	Fair Value at December 31, 2010			
		Total	Level 1 (Dollars in thousands)	Level 2	Level 3
<b>Assets</b>					
Current assets:					
Cash equivalents (including restricted cash accounts)	\$ 14,370	\$ 14,370	\$ 14,370	\$	\$
Derivatives <sup>(1)</sup>		1,030		1,030	
<b>Non-current assets:</b>					
Illiquid auction rate securities including restricted cash accounts (\$4.5 million par value), see below <sup>(2)</sup>	4,011	3,027			3,027
	\$ 18,381	\$ 18,427	\$ 14,370	\$ 1,030	\$ 3,027

<sup>(1)</sup> Derivatives represent foreign currency forward contracts which are valued primarily based on observable inputs including forward and spot prices for currencies.

<sup>(2)</sup> Included in the consolidated balance sheets as follows:

	December 31, 2010 (Dollars in thousands)
Long-term marketable securities	\$ 1,287
Long-term restricted cash, cash equivalents and marketable securities	1,740

\$ 3,027

The Company's financial assets measured at fair value (including restricted cash accounts) at December 31, 2011 include investments in debt securities (which are included in marketable securities) and money market funds (which are included in cash equivalents). The Company's financial assets measured at fair value (including restricted cash accounts) at December 31, 2010 include investments in illiquid auction rate securities and money

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

market funds (which are included in cash equivalents). Those securities, except for the illiquid auction rate securities, are classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices in an active market.

As of December 31, 2010, all of the Company's auction rate securities are associated with failed auctions. Such securities have par values totaling \$4.5 million, all of which have been in a loss position since the fourth quarter of 2007. Such auction rate securities were valued using Level 3 inputs. Historically, the carrying value of auction rate securities approximated fair value due to the frequent resetting of the interest rates. While the Company continued to earn interest on these investments at the contractual rates, the estimated market value of these auction rate securities no longer approximated par value. Due to the lack of observable market quotes on the Company's illiquid auction rate securities, the Company utilized valuation models that relied exclusively on Level 3 inputs including, among other things: (i) the underlying structure of each security; (ii) the present value of future principal and interest payments discounted at rates considered to reflect the uncertainty of current market conditions; (iii) consideration of the probabilities of default, auction failure, or repurchase at par for each period; (iv) assessments of counterparty credit quality; (v) estimates of the recovery rates in the event of default for each security; and (vi) overall capital market liquidity. These estimated fair values were subject to uncertainties that were difficult to predict. Therefore, such auction rate securities were classified as Level 3 in the fair value hierarchy.

In the year ended December 31, 2011, the Company identified a buyer outside of the auction process, and sold the balance of the auction rate securities for consideration of \$2,822,000.

The table below sets forth a summary of the changes in the fair value of the Company's financial assets classified as Level 3 (i.e., illiquid auction rate securities) for the years ended December 31, 2011, 2010 and 2009:

	Year Ended December 31,		
	2011	2010	2009
	(Dollars in thousands)		
Balance at beginning of period	\$ 3,027	\$ 3,164	\$ 4,945
Sale of auction rate securities	(2,822)		(2,005)
Total unrealized gains (losses):			
Included in net income	(205)	(137)	(279)
Realization of unrealized losses due to sale of auction rate securities			(430)
Included in other comprehensive income			933
Balance at end of year	\$	\$ 3,027	\$ 3,164

Effective April 1, 2009, the Company adopted the recognition and presentation of the other-than-temporary impairments standard, which requires an entity to separate an other-than-temporary impairment of a debt security into two components when there are credit-related losses associated with the impaired security for which management does not have the intent to sell the security and it is not more likely than not, that it will be required to sell the security before recovery of its cost basis. For those securities, the amount of the other-than-temporary impairment related to a credit loss is recognized in earnings and reflected as a reduction in the cost basis of the security, and the amount of the other-than-temporary impairment related to other factors is recorded in other comprehensive loss with no change to the cost basis of the security. For securities for which there is an intent to sell before recovery of the cost basis, the full amount of the other-than-temporary impairment is recognized in earnings and reflected as a reduction in the cost basis of the security. Upon adoption of this standard, the Company reclassified \$1,205,000 (net of taxes of \$650,000) to other comprehensive income with an offset to

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

retained earnings related to the other-than-temporary impairment charges previously recognized in earnings. This cumulative effect adjustment is related to auction rate securities for which the Company did not have the intent to sell and would not, more likely than not, be required to sell prior to recovery of its cost basis.

Effective July 1, 2010, the Company adopted an accounting standards update that amends and clarifies the guidance on how entities should evaluate credit derivatives embedded in beneficial interests in securitized financial assets. The updated guidance eliminates the scope exception for bifurcation of embedded credit derivatives in interests in securitized financial assets unless they are created solely by subordination of one beneficial interest to another. The auction rate securities held by the Company are considered securitized financial assets and therefore fall under the guideline in the abovementioned accounting standards update. The Company elected the fair value option for its auction rate securities as permitted by the update. Upon adoption of this accounting standards update, the Company reclassified \$693,000 (net of income taxes of \$377,000) to retained earnings with an offset to other comprehensive income. Effective with the adoption of this new guidance, all changes in the fair value of auction rate securities are recognized in earnings.

The funds invested in auction rate securities that have experienced failed auctions will not be accessible until a successful auction occurs, a buyer is found outside of the auction process, or the underlying securities reach maturity. As a result, the Company classified those securities with failed auctions as long-term assets in the consolidated balance sheet as of December 31, 2010.

There were no transfers of assets or liabilities between Level 1 and Level 2 during the year ended December 31, 2011.

The fair value of the Company's long-term debt approximates its carrying amount, except for the following:

	Fair Value December 31,		Carrying Amount December 31,	
	2011 (Dollars in millions)	2010 (Dollars in millions)	2011 (Dollars in millions)	2010 (Dollars in millions)
Orzunil Senior Loans	\$ 1.7	\$ 1.7	\$ 1.7	\$ 1.7
Olkaria III Loan	79.2	88.7	77.4	88.4
Amatitlan Loan	37.2	39.5	36.8	39.0
Senior Secured Notes:				
Ormat Funding Corp. ( OFC )	114.8	129.5	125.0	136.3
OrCal Geothermal Inc. ( OrCal )	84.4	93.5	85.9	95.6
OFC 2 LLC ( OFC 2 )	131.0		151.7	
Senior Unsecured Bonds	252.8	144.8	248.3	142.0
Loan from institutional investors	34.2	37.1	34.2	37.2

The fair value of OFC Senior Secured Notes is determined using observable market prices as these securities are traded. The fair value of other long-term debt is determined by a valuation model which is based on a conventional discounted cash flow methodology and utilizes assumptions of current market pricing curves.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****NOTE 8 PROPERTY, PLANT AND EQUIPMENT AND CONSTRUCTION-IN-PROCESS***Property, plant and equipment*

Property, plant and equipment, net, consist of the following:

	December 31,	
	2011	2010
	(Dollars in thousands)	
Land owned by the Company where the geothermal resource is located	\$ 32,411	\$ 25,812
Leasehold improvements	1,325	1,190
Machinery and equipment	92,227	73,745
Office equipment	16,444	14,979
Automobiles	5,581	5,283
Geothermal and recovered energy generation power plants, including geothermal wells and exploration and resource development costs:		
United States of America	1,534,001	1,379,565
Foreign countries	281,896	280,525
Asset retirement cost	9,441	9,562
	1,973,326	1,790,661
Less accumulated depreciation	(454,794)	(365,194)
Property, plant and equipment, net	\$ 1,518,532	\$ 1,425,467

Depreciation expense for the years ended December 31, 2011, 2010, and 2009 amounted to \$89,600,000, \$80,669,000, and \$60,811,000, respectively. Depreciation expense for the years ended December 31, 2011 and 2010 is net of the impact of the cash grant in the amount of \$3,681,000 and \$1,382,000, respectively.

*U.S. Operations*

The net book value of the property, plant and equipment, including construction-in-process, located in the United States was approximately \$1,625,961,000 and \$1,485,527,000 as of December 31, 2011 and 2010, respectively. These amounts as of December 31, 2011 and 2010 are net of cash grants in the amount of \$103,222,000 and \$106,900,000, respectively (net of accumulated depreciation of \$5,063,000 and \$1,382,000 as of December 31, 2011 and 2010, respectively).

The North Brawley power plant, which is under development, was tested for impairment in the current year due to the low output and higher than expected operating costs. Based on these indicators, the Company tested North Brawley for recoverability by estimating its future cash flows taking into consideration the various outcomes from different generating capacities, different outcomes of future rates based under its current PPA versus a new PPA that is expected to be signed and expected market rates thereafter, possible penalties for underperformance during periods when the plant is expected to operate below the stated capacity in the PPA, projected capital expenditures to complete development of the plant and projected operating expenses over the life of the plant. The Company applied a probability-weighted approach and considered alternative courses of action.

Using a probability-weighted approach, the estimated undiscounted cash flows exceed the carrying value of the plant (\$259 million as of December 31, 2011) by approximately \$103 million and therefore, no impairment occurred. Estimated undiscounted cash flows are subject to significant uncertainties. If actual cash flows differ from the Company's current estimates due to factors that include, among others, if the plant's future generating capacity is less than approximately 37 MW, or if the capital expenditures required to complete development of the plant and/or

future operating costs exceed the level of our current projections, a material impairment write-down may be required in the future.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)***Foreign Operations*

The net book value of property, plant and equipment, including construction-in-process, located outside of the United States was approximately \$263,122,000 and \$210,574,000 as of December 31, 2011 and 2010, respectively.

The Company, through its wholly owned subsidiary, OrPower 4, Inc. ( OrPower 4 ) owns and operates geothermal power plants in Kenya. The net book value of assets associated with the power plants was \$169,701,000 and \$111,112,000 as of December 31, 2011 and 2010, respectively. The Company sells the electricity produced by the power plants to Kenya Power and Lighting Co. Ltd. ( KPLC ) under a 20-year PPA. The Company has incurred approximately \$67,551,000 and \$4,688,000 (included in construction-in-process) at December 31, 2011 and 2010, respectively, in connection with the construction of Phase III of the complex.

Pursuant to an agreement with Empresa Nicaraguense de Electricidad ( ENEL ), a Nicaraguan power utility, the Company rehabilitated existing wells, drilled new wells, and is operating the geothermal facilities. The Company owns the plants for a fifteen-year period ending in 2014, at which time they will be transferred to ENEL at no cost. The net book value of the assets related to the plant and wells was \$7,987,000 and \$10,509,000 at December 31, 2011 and 2010, respectively.

The Company, through its wholly owned subsidiary, Orzunil I de Electricidad, Limitada ( Orzunil ), owns a power plant in Guatemala. The geothermal resources used by the power plant are owned by Instituto Nacional de Electrificación ( INDE ), a Guatemalan power utility, who granted the use of these resources to Orzunil for the period of the PPA. The net book value of the assets related to the power plant was \$24,732,000 and \$27,836,000 at December 31, 2011 and 2010, respectively.

The Company, through its wholly owned subsidiary, Ortitlan, Limitada ( Ortitlan ), owns a power plant in Guatemala. The net book value of the assets related to the power plant was \$45,189,000 and \$46,995,000 at December 31, 2011 and 2010, respectively.

*Construction-in-process*

Construction-in-process consists of the following:

	<b>December 31,</b>	
	<b>2011</b>	<b>2010</b>
	<b>(Dollars in thousands)</b>	
Projects under exploration and development:		
Up-front bonus lease costs	\$ 36,832	\$ 33,600
Exploration and development costs	40,223	20,997
Interest capitalized	1,598	100
	<b>78,653</b>	<b>54,697</b>
Projects under construction:		
Up-front bonus lease costs	31,179	31,179
Drilling and construction costs	246,878	176,968
Interest capitalized	13,841	7,790
	<b>291,898</b>	<b>215,937</b>
<b>Total</b>	<b>\$ 370,551</b>	<b>\$ 270,634</b>



**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

	Up-front Bonus Lease Costs	Projects under Exploration and Development		Total
		Drilling and Construction Costs	Interest Capitalized	
		(Dollars in thousands)		
Balance at December 31, 2008	\$ 17,286	\$ 17,057	\$ 615	\$ 34,958
Cost incurred during the year	1,760	24,961	2,003	28,724
Write off of unsuccessful exploration costs		(1,505)	(862)	(2,367)
Transfer of projects under exploration and development to projects under construction	(3,179)	(22,815)	(1,704)	(27,698)
Balance at December 31, 2009	15,867	17,698	52	33,617
Cost incurred during the year	17,733	21,483	158	39,374
Write off of unsuccessful exploration costs		(2,940)	(110)	(3,050)
Transfer of projects under exploration and development to projects under construction		(15,244)		(15,244)
Balance at December 31, 2010	33,600	20,997	100	54,697
Cost incurred during the year	3,232	19,226	1,498	23,956
Balance at December 31, 2011	\$ 36,832	\$ 40,223	\$ 1,598	\$ 78,653

	Up-front Bonus Lease Costs	Projects under Construction		Total
		Drilling and Construction Costs	Interest Capitalized	
		(Dollars in thousands)		
Balance at December 31, 2008	\$	\$ 344,439	\$ 14,827	\$ 359,266
Cost incurred during the year		191,470	25,393	216,863
Transfer of completed projects to property, plant and equipment		(116,506)	(2,343)	(118,849)
Transfer from projects under exploration and development	3,179	22,815	1,704	27,698
Balance at December 31, 2009	3,179	442,218	39,581	484,978
Cost incurred during the year	28,000	249,072	9,335	286,407
Transfer of completed projects to property, plant and equipment		(529,566)	(41,126)	(570,692)
Transfer from projects under exploration and development		15,244		15,244
Balance at December 31, 2010	31,179	176,968	7,790	215,937
Cost incurred during the year		242,066	10,207	252,273
Transfer of completed projects to property, plant and equipment		(172,156)	(4,156)	(176,312)
Balance at December 31, 2011	\$ 31,179	\$ 246,878	\$ 13,841	\$ 291,898



**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****NOTE 9 INTANGIBLE ASSETS**

Intangible assets consist mainly of the Company's PPAs acquired in business combinations and amounted to \$38,781,000 and \$40,274,000, net of accumulated amortization of \$25,365,000 and \$22,086,000, as of December 31, 2011 and 2010, respectively. Amortization expense for the years ended December 31, 2011, 2010, and 2009 amounted to \$3,279,000, \$3,179,000, and \$3,197,000, respectively.

Estimated future amortization expense for the intangible assets as of December 31, 2011 is as follows:

	(Dollars in thousands)	
<b>Year ending December 31:</b>		
2012	\$	3,319
2013		3,319
2014		3,319
2015		3,319
2016		3,319
Thereafter		22,186
Total	\$	38,781

**NOTE 10 ACCOUNTS PAYABLE AND ACCRUED EXPENSES**

Accounts payable and accrued expenses consist of the following:

	December 31,	
	2011	2010
	(Dollars in thousands)	
Trade payables	\$ 69,894	\$ 51,915
Salaries and other payroll costs	10,174	10,519
Customer advances	4,900	2,903
Accrued interest	9,273	6,383
Income tax payable	1,464	5,305
Property tax	3,323	2,960
Scheduling and transmission	1,059	1,376
Royalty	1,065	1,058
Other	3,960	3,130
Total	\$ 105,112	\$ 85,549

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****NOTE 11 LONG-TERM DEBT AND CREDIT AGREEMENTS**

Long-term debt consists of notes payable under the following agreements:

	December 31,	
	2011	2010
	(Dollars in thousands)	
<b>Limited and non-recourse agreements:</b>		
Loans (non-recourse):		
Senior loans (the Zunil power plant)	\$	\$ 1,713
Loan agreement (the Olkaria III power plant)	77,368	88,420
Loan agreement (the Amatitlan power plant)	36,764	39,019
Senior Secured Notes:		
Non-recourse:		
Ormat Funding Corp. ( OFC )	125,022	136,312
OrCal Geothermal Inc. ( OrCal )	85,860	95,560
Limited recourse:		
OFC 2 LLC ( OFC 2 )	151,739	
	476,753	361,024
Less current portion	(35,011)	(36,010)
Non current portion	\$ 441,742	\$ 325,014
<b>Full recourse agreements:</b>		
Senior unsecured bonds	\$ 250,042	\$ 142,003
Loans from institutional investors:	54,166	57,176
Loan from a commercial bank	30,000	40,000
Revolving credit lines with banks	214,049	189,466
	548,257	428,645
Less current portion	(20,543)	(13,010)
Non current portion	\$ 527,714	\$ 415,635

**Senior Loan (the Zunil Power Plant)**

Orzunil, a wholly owned subsidiary of the Company, entered into a senior loan agreement with International Finance Corporation ( IFC ). The loan under the senior loan agreement was fully repaid during the year ended December 31, 2011.

**Loan Agreement (the Olkaria III Complex)**

In March 2009, the Company's wholly owned subsidiary, OrPower 4, Inc. ( OrPower 4 ), entered into a project financing loan of \$105.0 million to refinance its investment in the 48 MW Olkaria III complex located in Kenya (the Olkaria Loan ). The Olkaria Loan is provided by a group of European Development Finance Institutions ( DFIs ) arranged by DEG Deutsche Investitions und Entwicklungsgesellschaft mbH ( DEG ). The first disbursement of \$90.0 million occurred on March 23, 2009 and the second disbursement of \$15.0 million occurred on July 10, 2009. The Olkaria Loan will mature on December 15, 2018, and is payable in 19 equal semi-annual installments, commencing December 15, 2009. Interest

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

on the Olkaria Loan is variable based on 6-month LIBOR plus 4.0% and the Company had the option to fix the interest rate upon each disbursement. Upon the first disbursement, the Company fixed the interest rate on \$77.0 million of the Olkaria Loan at 6.90%.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

There are various restrictive covenants under the Olkaria Loan including a requirement to comply with the following financial ratios for each calculation period: (i) an historical and projected 12-month debt service coverage ratio ( DSCR ) of not less than 1.15; (ii) a debt to equity ratio which does not exceed 3; and (iii) an equity to total assets ratio of not less than 0.25. If OrPower 4 fails to comply with these financial ratios it will be precluded from making distributions to its shareholders. In addition, subject to certain cure rights, such failure will constitute an event of default by OrPower 4. As of December 31, 2011: (i) the actual 12-month historical DSCR was 2.34; (ii) the debt to equity ratio was 1.3; and (iii) the equity to total assets ratio was 0.34.

*Debt service reserve*

As required under the terms of the Olkaria Loan, OrPower 4 maintains an account which may be funded by cash or backed by letters of credit in an amount sufficient to pay scheduled debt service amounts, including principal and interest, due under the terms of the Olkaria Loan in the following six months. This restricted cash account is classified as current in the consolidated balance sheets. As of December 31, 2011, the balance of such account was \$13.9 million. In addition, as of December 31, 2011 and 2010, part of the required debt service reserve was backed by a letter of credit in the amount of \$5.9 million for both years (see Note 23).

*Loan Agreement (the Amatitlan Power Plant)*

In May 2009, the Company's wholly owned subsidiary, Ortitlan, entered into a note purchase agreement, in an aggregate principal amount of \$42.0 million, to refinance its investment in the 20 MW Amatitlan geothermal power plant located in Amatitlan, Guatemala (the Amatitlan Loan ). The Amatitlan Loan is provided by TCW Global Project Fund II, Ltd. ( TCW ). The Amatitlan Loan will mature on June 15, 2016, and will be payable in 28 quarterly installments. The Amatitlan Loan bears annual interest at a rate of 9.83%.

There are various restrictive covenants under the Amatitlan Loan, which include a projected 12-month DSCR of not less than 1.2, a long-term debt to equity ratio not to exceed 4, and other limitations on Ortitlan's ability to make distributions to its shareholders. If Ortitlan fails to comply with these financial ratios it will be precluded from making distributions to its shareholders. In addition, subject to certain cure rights, such failure will constitute an event of default by Ortitlan. As of December 31, 2011, the actual projected 12-month DSCR was 1.54, and the debt to equity ratio was 2.67.

*Debt service reserve*

As required under the terms of the Amatitlan Loan, Ortitlan maintains an account which may be funded by cash or backed by letters of credit in an amount sufficient to pay scheduled debt service amounts, including principal and interest, due under the terms of the Amatitlan Loan in the following three months. This restricted cash account is classified as current in the consolidated balance sheets. As of December 31, 2011 and 2010, the balance of such account was \$3.8 million and \$2.0 million, respectively. In addition, as of December 31, 2011 and 2010, part of the required debt service reserve was backed by a letter of credit in the amount of \$3.1 million for both years (see Note 23).

*OFC Senior Secured Notes*

On February 13, 2004, OFC, a wholly owned subsidiary, issued \$190.0 million, 8.25% Senior Secured Notes ( OFC Senior Secured Notes ) in an offering subject to Rule 144A and Regulation S of the Securities Act of 1933, as amended (the Securities Act ), and received net cash proceeds of approximately \$179.7 million, after deduction of issuance costs of approximately \$10.3 million, which have been included in deferred financing

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

costs in the consolidated balance sheet. The OFC Senior Secured Notes have a final maturity of December 30, 2020. Principal and interest on the OFC Senior Secured Notes are payable in semi-annual payments that commenced on June 30, 2004. The OFC Senior Secured Notes are collateralized by substantially all of the assets of OFC and those of its wholly owned subsidiaries and are fully and unconditionally guaranteed by all of the wholly owned subsidiaries of OFC. There are various restrictive covenants under the OFC Senior Secured Notes, which include a required historical and projected 12-month DSCR of not less than 1.25 and other limitations on additional indebtedness. If OFC fails to comply with these financial ratios it will be precluded from making distributions to its shareholders. In addition, subject to certain cure rights, such failure will constitute an event of default by OFC. As of December 31, 2011, the actual historical 12-month DSCR was 1.49.

OFC may redeem the OFC Senior Secured Notes, in whole or in part, at any time, at a redemption price equal to the principal amount of the OFC Senior Secured Notes to be redeemed plus accrued interest, premium and liquidated damages, if any, plus a make-whole premium. Upon certain events, as defined in the indenture governing the OFC Senior Secured Notes, OFC may be required to redeem a portion of the OFC Senior Secured Notes at a redemption price ranging from 100% to 101% of the principal amount of the OFC Senior Secured Notes being redeemed plus accrued interest, premium and liquidated damages, if any.

*Debt service reserve*

As required under the terms of the OFC Senior Secured Notes, OFC maintains an account which may be funded by cash or backed by letters of credit (see below) in an amount sufficient to pay scheduled debt service amounts, including principal and interest, due under the terms of the OFC Senior Secured Notes in the following six months. This restricted cash account is classified as current in the consolidated balance sheets. As of December 31, 2011 and 2010, the balance of such account was \$1.8 million and \$1.4 million, respectively. In addition, as of December 31, 2011 and 2010, part of the required debt service reserve was backed by a letter of credit in the amount of \$10.6 and \$11.1 million, respectively (see Note 23).

*OrCal Senior Secured Notes*

On December 8, 2005, OrCal, a wholly owned subsidiary, issued \$165.0 million, 6.21% Senior Secured Notes ( OrCal Senior Secured Notes ) in an offering subject to Rule 144A and Regulation S of the Securities Act, and received net cash proceeds of approximately \$161.1 million, after deduction of issuance costs of approximately \$3.9 million, which have been included in deferred financing costs in the consolidated balance sheet. The OrCal Senior Secured Notes have been rated BBB- by Fitch. The OrCal Senior Secured Notes have a final maturity of December 30, 2020. Principal and interest on the OrCal Senior Secured Notes are payable in semi-annual payments which commenced on June 30, 2006. The OrCal Senior Secured Notes are collateralized by substantially all of the assets of OrCal, and those of its subsidiaries and are fully and unconditionally guaranteed by all of the wholly owned subsidiaries of OrCal. There are various restrictive covenants under the OrCal Senior Secured Notes, which include a required historical and projected 12-month DSCR of not less than 1.25 and other limitations on additional indebtedness. If OrCal fails to comply with these financial ratios it will be precluded from making distributions to its shareholders. In addition, subject to certain cure rights, such failure will constitute an event of default by OrCal. As of December 31, 2011, the actual historical 12-month DSCR was 2.02.

OrCal may redeem the OrCal Senior Secured Notes, in whole or in part, at any time at a redemption price equal to the principal amount of the OrCal Senior Secured Notes to be redeemed plus accrued interest, and a make-whole premium. Upon certain events, as defined in the indenture governing the OrCal Senior Secured Notes, OrCal may be required to redeem a portion of the OrCal Senior Secured Notes at a redemption price of 100% of the principal amount of the OrCal Senior Secured Notes being redeemed plus accrued interest.

---

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

*Debt service reserve*

As required under the terms of the OrCal Senior Secured Notes, OrCal maintains an account which may be funded by cash or backed by letters of credit (see below) in an amount sufficient to pay scheduled debt service amounts, including principal and interest, due under the terms of the OrCal Senior Secured Notes in the following six months. This restricted cash account is classified as current in the consolidated balance sheets. As of December 31, 2011 and 2010, the balance of such account was \$0 and \$0.3 million, respectively. In addition, as of December 31, 2011 and 2010, part of the required debt service reserve was backed by a letter of credit in the amount of \$4.8 million and \$10.8 million, respectively (see Note 23).

*OFC 2 Senior Secured Notes*

On September 23, 2011, the Company's subsidiary OFC 2 and its wholly owned project subsidiaries (collectively, the Issuers) entered into a note purchase agreement (the Note Purchase Agreement) with OFC 2 Noteholder Trust, as purchaser, John Hancock Life Insurance Company (U.S.A.), as administrative agent, and the DOE, as guarantor, in connection with the offer and sale of up to \$350.0 million aggregate principal amount of OFC 2's Senior Secured Notes (OFC 2 Senior Secured Notes) due December 31, 2034.

Subject to the fulfillment of customary and other specified conditions precedent, the OFC 2 Senior Secured Notes may be issued in up to six distinct series associated with the phased construction (Phase I and Phase II) of the Jersey Valley, McGinness Hills and Tuscarora geothermal power facilities (collectively, the Projects) owned by the Issuers. The OFC 2 Senior Secured Notes will mature and the principal amount of the OFC 2 Senior Secured Notes will be payable in equal quarterly installments in accordance with an amortization schedule attached to such Notes and in any event not later than December 31, 2034. Each Series of Notes will bear interest at a rate calculated based on a spread over the Treasury yield curve that will be set at least ten business days prior to the issuance of such Series of Notes. Interest will be payable quarterly in arrears. The DOE will guarantee payment of 80% of principal and interest on the OFC 2 Senior Secured Notes (the DOE Guarantee) pursuant to Section 1705 of Title XVII of the Energy Policy Act of 2005, as amended. The conditions precedent to the issuance of the OFC 2 Senior Secured Notes include certain specified conditions required by the DOE in connection with the DOE Guarantee.

On October 31, 2011, the Issuers completed the sale of \$151.7 million in aggregate principal amount of 4.687% Series A Notes due 2032 (the Series A Notes). The net proceeds from the sale of the Series A Notes, after deducting transaction fees and expenses, were approximately \$141.1 million, and were used to finance a portion of the construction costs of Phase I of the McGinness Hills and Tuscarora facilities and to fund certain reserves. Interest on the Series A Notes is payable quarterly in arrears on the last day of March, June, September and December, commencing December 31, 2011. Principal on the Series A Notes is payable on the same quarterly dates, commencing September 30, 2012.

Issuance of the Series B Notes is dependent on the Jersey Valley facility reaching certain operational targets in addition to the other conditions precedent noted above. If issued, the aggregate principal of the Series B Notes will not exceed \$28.0 million, and such proceeds would be used to finance a portion of the construction costs of Phase I of the Jersey Valley facility.

The Issuers have sole discretion regarding whether to commence construction of Phase II of any of the Jersey Valley, McGinness Hills and Tuscarora facilities. If a facility Phase II is undertaken for any of the facilities, the Issuers may issue Phase II tranches of Notes, comprised of one or more of the Series C Notes, the Series D Notes, the Series E Notes and the Series F Notes, to finance a portion of the construction costs of such Phase II of any facility. The aggregate principal amount of all Phase II Notes may not exceed \$170.0 million. The

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

aggregate principal amount of each series of Notes comprising a Phase II tranche will be determined by the Issuers in their sole discretion provided that certain financial ratios are satisfied pursuant to the terms of the Note Purchase Agreement and subject to the aggregate limit noted above.

The OFC 2 Senior Secured Notes are collateralized by substantially all of the assets of OFC 2 and those of its wholly owned subsidiaries and are fully and unconditionally guaranteed by all of the wholly owned subsidiaries of OFC 2. There are various restrictive covenants under the OFC 2 Senior Secured Notes, which include a required 12-month DSCR of not less than 1.65 and other limitations on additional indebtedness and payment of dividends. The covenants will become effective after completion of construction of the McGinness Hills and Tuscarora facilities.

In addition, in connection with the issuance of each Series of OFC 2 Senior Secured Notes, the Company will provide a guarantee with respect to the OFC 2 Senior Secured Notes, which will be available to be drawn upon if specific trigger events occur. One trigger event is the failure of any facility financed by the relevant Series of OFC 2 Senior Secured Notes to reach completion and meet certain operational performance levels (the non-performance trigger) which gives rise to a prepayment obligation on the OFC 2 Senior Secured Notes. The other trigger event is a payment default on the OFC 2 Senior Secured Notes or the occurrence of certain fundamental defaults that result in the acceleration of the Notes, in each case that occurs prior to the date that the relevant facility(ies) financed by such OFC 2 Senior Secured Notes reaches completion and meets certain operational performance levels. A demand on the Company's guarantee based on the non-performance trigger is limited to an amount equal to the prepayment amount on the OFC 2 Senior Secured Notes necessary to bring the Issuers into compliance with certain coverage ratios. A demand on the Company's guarantee based on the other trigger event is not so limited.

*Debt service reserve; other restricted funds*

Under the terms of the OFC 2 Senior Secured Notes, OFC 2 is required to maintain a debt service reserve and certain other reserves, as follows:

- (i) A debt service reserve account which may be funded by cash or backed by letters of credit (see below) in an amount sufficient to pay scheduled debt service amounts, including principal and interest, due under the terms of the OFC 2 Senior Secured Notes in the following six months. This restricted cash account is classified as current in the consolidated balance sheet. As of December 31, 2011, the balance of such account was \$32.0 million. In addition, as of December 31, 2011, part of the required debt service reserve was backed by a letter of credit in the amount of \$9.3 million (see Note 23).
- (ii) A performance level reserve account, intended to provide additional security for the OFC 2 Senior Secured Notes, which may be funded by cash or backed by letters of credit. This reserve builds up over time and reduces gradually each time the project achieves certain milestones. Upon issuance of the Series A Notes, this reserve was funded in the amount of \$20.0 million. On January 19, 2012, OFC 2 funded \$10.0 million in a letter of credit issued, which is required to be maintained at all times until this reserve reduces to zero.
- (iii) Under the terms of the OFC 2 Senior Secured Notes, OFC 2 is also required to maintain a well field drilling and maintenance reserve that builds up over time and is dedicated to costs and expenses associated with drilling and maintenance of the project's well field, which may be funded by cash or backed by letters of credit. Certain other reserves are required in the event OFC 2 elects to commence construction of Phase II of any facility and fund such construction with any Series of Notes (other than Series A and Series B Notes).

---

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

***Senior Unsecured Bonds***

On August 3, 2010, the Company entered into a trust instrument governing the issuance of, and accepted subscriptions for, an aggregate principal amount of approximately \$142.0 million of senior unsecured bonds (the *Bonds*). The Company issued the Bonds outside the United States to investors who are not U.S. persons in an unregistered offering pursuant to, and subject to the requirements of, Regulation S under the Securities Act.

Subject to early redemption, the principal of the Bonds is repayable in a single bullet payment upon the final maturity of the Bonds on August 1, 2017. The Bonds bear interest at a fixed rate of 7%, payable semi-annually.

In February 2011, the Company accepted subscription for an aggregate principal amount of approximately \$108.0 million of additional senior unsecured bonds (the *Additional Bonds*) under two addendums to the trust instrument. The Company issued the Additional Bonds outside the United States to investors who are not U.S. persons in an unregistered offering pursuant to, and subject to the requirements of, Regulation S under the Securities Act. The terms and conditions of the Additional Bonds are identical to the original Bonds. The Additional Bonds were issued at a premium which reflects an effective fixed interest of 6.75%.

***Loans from institutional investors***

In July 2009, the Company entered into a 6-year loan agreement of \$20.0 million with a group of institutional investors (the *First Loan*). The First Loan matures on July 16, 2015, is payable in 12 semi-annual installments commencing January 16, 2010, and bears interest of 6.5%.

In July 2009, the Company entered into an 8-year loan agreement of \$20.0 million with another group of institutional investors (the *Second Loan*). The Second Loan matures on August 1, 2017, is payable in 12 semi-annual installments commencing February 1, 2012, and bears interest at 6-month LIBOR plus 5.0%.

In November 2010, the Company entered into a 6-year loan agreement of \$20.0 million with a group of institutional investors (the *Third Loan*). The Third Loan matures on November 16, 2016, is payable in ten semi-annual installments commencing May 16, 2012, and bears interest of 5.75%.

***Loan from a commercial bank***

On November 4, 2009, the Company entered into a 5-year loan agreement of \$50.0 million with a commercial bank. The bank loan matures on November 10, 2014 and is payable in 10 semi-annual installments commencing May 10, 2010, and bears interest at 6-month LIBOR plus 3.25%.

***Revolving credit lines with commercial banks***

As of December 31, 2011, the Company has credit agreements with six commercial banks for an aggregate amount of \$409.0 million (including \$39.0 million from Union Bank, N.A. ( *Union Bank* )), see below. Under the terms of these credit agreements, the Company, or its Israeli subsidiary, Ormat Systems, can request: (i) extensions of credit in the form of loans and/or the issuance of one or more letters of credit in the amount of up to \$304.0 million; and (ii) the issuance of one or more letters of credit in the amount of up to \$105.0 million. The credit agreements mature between June 2012 and December 2014. Loans and draws under the credit agreements or under any letters of credit will bear interest at the respective bank's cost of funds plus a margin.

As of December 31, 2011, loans in the total amount of \$214.0 million (including \$10 million under a non-committed line of credit with another commercial bank) were outstanding, and letters of credit with an aggregate stated amount of \$129.9 million were issued and outstanding under such credit agreements. The \$214.0 million in loans are for terms of three months or less and bear interest at an annual weighted average rate of 3.32%.



---

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)*****Restrictive covenants***

The credit agreements, the loan agreements, and the trust instrument governing the Bonds, described above, are unsecured; however, the Company is subject to a negative pledge in favor of the banks and the other lenders and certain other restrictive covenants. These include, among other things, a prohibition on: (i) creating any floating charge or any permanent pledge, charge or lien over the Company's assets without obtaining the prior written approval of the lender; (ii) guaranteeing the liabilities of any third party without obtaining the prior written approval of the lender; and (iii) selling, assigning, transferring, conveying or disposing of all or substantially all of its assets, or a change of control in the Company's ownership structure. The various other restrictive covenants under the credit agreements, the loan agreements, and the trust instrument governing the Bonds, described above, include maintaining stockholders' equity of at least \$600 million and in any event not less than 30% of total assets, 12-month debt, net of cash, cash equivalents and marketable securities to EBITDA ratio not to exceed 7, and the dividend distribution not to exceed 35% of net income for that year. As of December 31, 2011, the actual equity to total assets ratio was 39.2%, the stockholders' equity was \$906.6 million, and the 12-month debt, net of cash, cash equivalents and marketable securities to EBITDA ratio was 5.42. The Company does not expect that these covenants or ratios, which apply to the Company on a consolidated basis, will materially limit its ability to execute its future business plans or operations. The failure to perform or observe any of the covenants set forth in such agreements, subject to various cure periods, would result in the occurrence of an event of default and would enable the lenders to accelerate all amounts due under each such agreement. Some of the credit agreements, the loan agreements, and the trust instrument contain cross-default provisions with respect to other material indebtedness owed by the Company to any third party.

***Credit agreement with Union Bank***

On February 15, 2006, the Company's wholly owned subsidiary, Ormat Nevada Inc. (Ormat Nevada), entered into a \$25.0 million credit agreement with Union Bank. In December 2008, Ormat Nevada entered into an amendment to the credit agreement. Under the amendment, the credit termination date was extended to February 15, 2012 and the aggregate amount available under the credit agreement was increased to \$37.5 million. Under the credit agreement, as amended, Ormat Nevada can request extensions of credit in the form of loans and/or the issuance of one or more letters of credit. In August 2011, the credit agreement was further amended to increase the credit line to \$39.0 million. On February 7, 2012, Ormat Nevada entered into an amended and restated credit agreement with Union Bank to increase the available credit to \$50.0 million and extend the termination date to February 7, 2014. The facility is limited to the issuance, extension, modification or amendment of letters of credit. Union Bank is currently the sole lender and issuing bank under the credit agreement, but is also designated as an administrative agent on behalf of banks that may, from time to time in the future, join the credit agreement as parties thereto. In connection with this transaction, the Company has entered into a guarantee in favor of the administrative agent for the benefit of the banks, pursuant to which the Company agreed to guarantee Ormat Nevada's obligations under the credit agreement. Ormat Nevada's obligations under the credit agreement are otherwise unsecured by any of its (or any of its subsidiaries') assets. Draws under the credit agreement will bear interest at a floating rate based on the Eurodollar plus a margin. There are various restrictive covenants under the credit agreement, which include: (i) minimum tangible net worth assets of not less than \$164 million; (ii) 12-month debt to EBITDA ratio not to exceed 5; and (iii) 12-month DSCR of not less than 1.25. As of December 31, 2011: (i) the actual tangible net worth assets of Ormat Nevada was \$1.4 billion; (ii) the 12-month debt to EBITDA ratio was 3.45; and (iii) the DSCR was 2.69. In addition, there are restrictions on dividend distributions in the event of a payment default or noncompliance with such ratios, and subject to specified carve-outs and exceptions, a negative pledge on the assets of Ormat Nevada in favor of Union Bank. Under the February 7, 2012 amendment of the credit agreement, the restrictive covenants were amended to the following: (i) 12-month debt to EBITDA ratio not to exceed 4.5; (ii) 12-month DSCR of not less than 1.35; and (iii) a distribution leverage ratio not to exceed 2. As of December 31, 2011, 20 letters of credit in the aggregate amount of \$32.5 million remain issued and outstanding under this credit agreement with Union Bank.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)*****Future minimum payments***

Future minimum payments under long-term obligations, excluding revolving credit lines with commercial banks, as of December 31, 2011 are as follows:

	(Dollars in thousands)	
<b>Year ending December 31:</b>		
2012	\$	55,554
2013		62,799
2014		67,761
2015		61,345
2016		76,683
Thereafter		486,819
Total	\$	810,961

**NOTE 12 PUNA POWER PLANT LEASE TRANSACTIONS**

In 2005, the Company's wholly owned subsidiary in Hawaii, Puna Geothermal Ventures ( PGV ), entered into transactions involving the Puna geothermal power plant located on the Big Island of Hawaii (the Puna Power Plant ).

Pursuant to a 31-year head lease (the Head Lease ), PGV leased its geothermal power plant to an unrelated company in return for prepaid lease payments in the total amount of \$83.0 million (the Deferred Lease Income ). The carrying value of the leased assets as of December 31, 2011 and 2010 amounted to \$42.4 million and \$45.1 million, net of accumulated depreciation of \$20.0 million and \$17.3 million, respectively. The unrelated company (the Lessor ) simultaneously leased back the Puna Power Plant to PGV under a 23-year lease (the Project Lease ). PGV's rent obligations under the Project Lease will be paid solely from revenues generated by the Puna Power Plant under a PPA that PGV has with Hawaii Electric Light Company ( HELCO ). The Head Lease and the Project Lease are non-recourse lease obligations to the Company. PGV's rights in the geothermal resource and the related PPA have not been leased to the Lessor as part of the Head Lease but are part of the Lessor's security package.

The Head Lease and the Project Lease are being accounted for separately. Each was classified as an operating lease in accordance with the accounting standards for leases. The Deferred Lease Income is amortized into revenue, using the straight-line method, over the 31-year term of the Head Lease. Deferred transaction costs amounting to \$4.2 million are being amortized, using the straight-line method, over the 23-year term of the Project Lease.

Future minimum lease payments under the Project Lease, as of December 31, 2011, are as follows:

	(Dollars in thousands)	
<b>Year ending December 31:</b>		
2012	\$	8,199
2013		8,062
2014		8,647
2015		8,222
2016		8,374
Thereafter		30,623

Total	\$	72,127
-------	----	--------

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

*Depository accounts*

As required under the terms of the lease agreements, there are certain reserve funds that need to be managed by the indenture trustee in accordance with certain balance requirements. Such reserve funds amounted to \$3.9 million and \$8.1 million as of December 31, 2011 and 2010, respectively, and were included in restricted cash accounts in the consolidated balance sheets. As of December 31, 2010, \$1.7 million of such accounts were classified as non-current, since they were invested in auction rate securities which experienced multiple failed auctions due to a lack of liquidity in the market for these securities, as explained in Note 7. The Company had no investments in auction rate securities at December 31, 2011. The remaining \$6.4 million at December 31, 2010 and the total amount of \$3.9 million as of December 31, 2011, were classified as current as they were used for current payments.

*Distribution account*

PGV maintains an account to deposit its remaining cash, after making all of the necessary payments and transfers as provided for in the lease agreements, in order to make distributions to the Company's wholly owned subsidiary, Ormat Nevada. The distributions are allowed only if PGV maintains various restrictive covenants under the lease agreements, which include limitations on additional indebtedness. As of December 31, 2011 and 2010, the balance of such account was \$0.

**NOTE 13 OPC TRANSACTION**

In June 2007, the Company's wholly owned subsidiary Ormat Nevada entered into agreements with affiliates of Morgan Stanley & Co. Incorporated (Morgan Stanley Geothermal LLC) and Lehman Brothers Inc. (Lehman-OPC LLC (Lehman-OPC)), under which those investors purchased, for cash, interests in a newly formed subsidiary of Ormat Nevada, OPC LLC (OPC), entitling the investors to certain tax benefits (such as production tax credits and accelerated depreciation) and distributable cash associated with four geothermal power plants.

The first closing under the agreements occurred in 2007 and covered the Company's Desert Peak 2, Steamboat Hills, and Galena 2 power plants. The investors paid \$71.8 million at the first closing. The second closing under the agreements occurred in 2008 and covered the Galena 3 power plant. The investors paid \$63.0 million at the second closing.

Ormat Nevada continues to operate and maintain the power plants. Under the agreements, Ormat Nevada initially received all of the distributable cash flow generated by the power plants, while the investors received substantially all of the production tax credits and taxable income or loss (together, the Economic Benefits). Once it recovered the capital that it has invested in the power plants, which occurred in the fourth quarter of 2010, the investors receive both the distributable cash flow and the Economic Benefits. The investors' return is limited by the term of the transaction. Once the investors reach a target after-tax yield on their investment in OPC (the Flip Date), Ormat Nevada will receive 95% of both distributable cash and taxable income, on a going forward basis. Following the Flip Date, Ormat Nevada also has the option to buy out the investors' remaining interest in OPC at the then-current fair market value or, if greater, the investors' capital account balances in OPC. Should Ormat Nevada exercise this purchase option, it would thereupon revert to being sole owner of the power plants.

The Class B membership units are provided with a 5% residual economic interest in OPC. The 5% residual interest commences on achievement by the investors of a contractually stipulated return that triggers the Flip Date. The actual Flip Date is not known with certainty and is determined by the operating results of OPC. This residual 5% interest represents a noncontrolling interest and is not subject to mandatory redemption or

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

guaranteed payments. Cash is distributed each period in accordance with the cash allocation percentages stipulated in the agreements. Until the fourth quarter of 2010, Ormat Nevada was allocated the cash earnings in OPC and therefore, the amount allocated to the 5% residual interest represented the noncash loss of OPC which principally represented depreciation on the property, plant and equipment. As from the fourth quarter of 2010, the distributable cash is allocated to the Class B membership units. As a result of the acquisition by Ormat Nevada, on October 30, 2009, of all of the Class B membership units of OPC held by Lehman-OPC (see below), the residual interest decreased to 3.5%. Such residual interest increased to 5% on February 3, 2011 when Ormat Nevada sold its Class B membership units to JPM Capital Corporation ( JPM ) (see below).

The Company's voting rights in OPC are based on a capital structure that is comprised of Class A and Class B membership units. The Company owns, through Ormat Nevada, all of the Class A membership units, which represent 75% of the voting rights in OPC. The investors own all of the Class B membership units, which represent 25% of the voting rights in OPC. In the period from October 30, 2009 to February 3, 2011, the Company owned, through Ormat Nevada, all of the Class A membership units, which represented 75% of the voting rights in OPC, and 30% of the Class B membership units, which represented 7.5% of the voting rights of OPC. In total the Company had 82.5% of the voting rights in OPC as of December 31, 2010. In that period, the investors owned 70% of the Class B membership units, which represented 17.5% of the voting rights of OPC. Other than in respect of customary protective rights, all operational decisions in OPC are decided by the vote of a majority of the membership units. Following the Flip Date, Ormat Nevada's voting rights will increase to 95% and the investor's voting rights will decrease to 5%. Ormat Nevada retains the controlling voting interest in OPC both before and after the Flip Date and therefore continues to consolidate OPC.

On October 30, 2009, Ormat Nevada acquired from Lehman-OPC all of the Class B membership units of OPC held by Lehman-OPC pursuant to a right of first offer for a price of \$18.5 million. A substantial portion of the initial sale of the Class B membership units by Ormat Nevada was accounted for as a financing transaction. As a result, the repurchase of these interests at a discount resulted in a pre-tax gain of \$13.3 million in the year ended December 31, 2009. In addition, an amount of approximately \$1.1 million has been reclassified from noncontrolling interest to additional paid-in capital representing the 1.5% residual interest of Lehman-OPC's Class B membership units.

On February 3, 2011, Ormat Nevada sold to JPM all of the Class B membership units of OPC that it had acquired on October 30, 2010 for a sale price of \$24.9 million in cash. The Company did not record any gain from the sale of its Class B membership interests in OPC to JPM. A substantial portion of the Class B membership units are accounted for as a financing transaction. As a result, the majority of these proceeds were recorded as a liability. In addition, \$2.3 million has been reclassified from additional paid-in capital to noncontrolling interest representing the 1.5% residual interest of JPM's Class B membership units.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****NOTE 14 ASSET RETIREMENT OBLIGATION**

The following table presents a reconciliation of the beginning and ending aggregate carrying amount of asset retirement obligation for the years presented below:

	Year Ended December 31,	
	2011	2010
	(Dollars in thousands)	
Balance at beginning of year	\$ 19,903	\$ 14,238
Liability associated with acquisition of controlling interest in a subsidiary		3,342
Changes in estimates	(1,071)	527
Liabilities incurred	859	547
Accretion expense	1,593	1,249
Balance at end of year	\$ 21,284	\$ 19,903

During the year ended December 31, 2011, the Company decreased the aggregate carrying amount of its asset retirement obligation by \$1,071,000 due to changes in useful life and price estimates.

During the year ended December 31, 2010, the Company increased the aggregate carrying amount of its asset retirement obligation by \$527,000 due to increased costs associated with demolition and abandonment of property, plant and equipment.

**NOTE 15 STOCK-BASED COMPENSATION**

The Company makes an estimate of expected forfeitures and recognizes compensation costs only for those stock-based awards expected to vest. As of December 31, 2011, the total future compensation cost related to unvested stock-based awards that are expected to vest is \$9,305,000, which amount will be recognized over a weighted average period of 1.3 years.

During the years ended December 31, 2011, 2010 and 2009, the Company recorded compensation related to stock-based awards as follows:

	Year Ended December 31,		
	2011	2010	2009
	(in thousands, except per share data)		
Cost of revenues	\$ 4,325	\$ 4,403	\$ 3,296
Selling and marketing expenses	600	780	708
General and administrative expenses	1,747	2,195	1,751
Total stock-based compensation expense	6,672	7,378	5,755
Tax effect on stock-based compensation expense	834	924	701
Net effect of stock-based compensation expense	\$ 5,838	\$ 6,454	\$ 5,054

## Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Effect of stock-based compensation expense on earnings (loss) per share	\$ 0.13	\$ 0.14	\$ 0.11
---	---------	---------	---------

During the third quarter of 2011, the Company evaluated the trends in the stock-based award forfeiture rate and determined that the actual rate is 7.5%. This change resulted in an immaterial decrease in the stock-based award in the year ended December 31, 2011.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)*****Valuation assumptions***

The fair value of each grant of stock-based awards is estimated using the Black-Scholes valuation model and the assumptions noted in the following table. The Company's expected term represents the period that the Company's stock-based awards are expected to be outstanding. In the absence of enough historical information, the expected term was determined using the simplified method giving consideration to the contractual term and vesting schedule. Since the Company does not have any traded stock-based award and was listed for trading on the New York Stock Exchange beginning in November 2004, the Company's expected volatility was calculated based on the Company's historical volatility and for the period of time prior to the Company's listing, the historical volatility of the Parent. There is a high correlation between the stock behavior of the Company and its Parent. The dividend yield forecast is expected to be 20% of the Company's yearly net profit, which is equivalent to a 0.0% yearly weighted average dividend rate in the year ended December 31, 2011. The risk-free interest rate was based on the yield from U.S. constant treasury maturities bonds with an equivalent term. The forfeiture rate is based on trends in actual stock-based awards forfeitures.

The Company calculated the fair value of each stock-based award on the date of grant based on the following assumptions:

	<b>Year Ended December 31,</b>		
	<b>2011</b>	<b>2010</b>	<b>2008</b>
For stock options issued by the Company:			
Risk-free interest rates	2.2%	2.5%	1.6%
Expected lives (in years)	5.1	5.1	5.1
Dividend yield	0.80%	0.72%	0.38%
Expected volatility	46.4%	47.6%	48.6%
Forfeiture rate	7.5%	13.0%	13.0%

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****Stock-based awards***The 2004 Incentive Compensation Plan*

In 2004, the Company's Board of Directors adopted the 2004 Incentive Compensation Plan ( 2004 Incentive Plan ), which provides for the grant of the following types of awards: incentive stock options, non-qualified stock options, restricted stock, stock appreciation rights ( SARs ), stock units, performance awards, phantom stock, incentive bonuses, and other possible related dividend equivalents to employees of the Company, directors and independent contractors. Under the 2004 Incentive Plan, a total of 3,750,000 shares of the Company's common stock have been reserved for issuance, all of which could be issued as options or as other forms of awards. Options and SARs granted to employees under the 2004 Incentive Plan cliff vest and are exercisable from the grant date as follows: 25% after 24 months, 25% after 36 months, and the remaining 50% after 48 months. Options granted to non-employee directors under the 2004 Incentive Plan cliff vest and are exercisable one year after the grant date. Vested shares may be exercised for up to ten years from the date of grant. The shares of common stock will be issued upon exercise of options or SARs from the Company's authorized share capital.

	Year Ended December 31,					
	2011		2010		2009	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Outstanding at beginning of year	2,335	\$ 34.35	1,745	\$ 36.08	1,233	\$ 39.14
Granted, at fair value:						
Stock Options	30	19.10	37	28.39	30	38.50
SARs*	622	25.65	592	29.95	573	26.84
Exercised					(79)	15.96
Forfeited	(53)	31.69	(39)	38.96	(12)	44.20
Outstanding at end of year	2,934	32.40	2,335	34.35	1,745	36.08
Options exercisable at end of year	1,086	37.46	621	37.65	331	35.23
Weighted-average fair value of options granted during the year		\$ 9.69		\$ 12.51		\$ 11.63

\* Upon exercise, SARs entitle the recipient to receive shares of common stock equal to the increase in value of the award between the grant date and the exercise date.

As of December 31, 2011, 641,550 shares of the Company's common stock are available for future grants.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following table summarizes information about stock-based awards outstanding at December 31, 2011 (shares in thousands):

Exercise Price	Number of Shares Outstanding	Options Outstanding Weighted Average Remaining Contractual Life in Years	Aggregate Intrinsic Value (Dollars in thousands)	Number of Shares Exercisable	Options Exercisable Weighted Average Remaining Contractual Life in Years	Aggregate Intrinsic Value (Dollars in thousands)
\$15.00	33	2.8	\$ 100	33	2.8	\$ 100
19.10	30	6.8				
20.10	8	2.8		8	2.8	
25.65	612	6.3				
25.74	22	3.8		22	3.8	
26.84	559	4.2		140	4.2	
28.19	30	5.8		30	5.8	
29.21	8	5.3		8	5.3	
29.95	578	5.3				
34.13	227	4.3		227	4.3	
37.90	15	1.8		15	1.8	
38.50	22	4.8		22	4.8	
38.85	8	2.2		8	2.2	
42.08	343	2.3		343	2.3	
45.78	417	3.3		208	3.3	
52.98	22	2.8		22	2.8	
	2,934	4.5	\$ 100	1,086	3.3	\$ 100

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following table summarizes information about stock-based awards outstanding at December 31, 2010 (shares in thousands):

Exercise Price	Number of Shares Outstanding	Options Outstanding Weighted Average Remaining Contractual Life in Years	Aggregate Intrinsic Value (Dollars in thousands)	Number of Shares Exercisable	Options Exercisable Weighted Average Remaining Contractual Life in Years	Aggregate Intrinsic Value (Dollars in thousands)
15.00	34	3.8	\$ 500	34	3.8	\$ 500
20.10	8	3.8	71	8	3.8	71
25.74	22	4.8	84	22	4.8	84
26.84	570	5.2	1,562			
28.19	30	6.8	42			
29.21	7	6.7	3			
29.95	592	6.7				
34.13	232	5.3		232	5.3	
37.90	15	2.8		15	2.8	
38.50	22	5.8				
38.85	8	3.2		8	3.2	
42.08	350	3.3		173	3.3	
45.78	423	4.3		106	4.3	
52.98	22	3.8		22	3.8	
	2,335	5.1	\$ 2,262	620	4.3	\$ 655

The aggregate intrinsic value in the above tables represents the total pretax intrinsic value, based on the Company's stock price of \$18.03 and \$29.58 as of December 31, 2011 and 2010, respectively, which would have potentially been received by the stock-based award holders had all stock-based award holders exercised their stock-based award as of those dates. The total number of in-the-money stock-based awards exercisable as of December 31, 2011 and 2010 was 32,901 and 64,301, respectively.

The total pretax intrinsic value of stock-based awards exercised during the year ended December 31, 2009 was \$1,835,000 based on the Company's average stock price of \$35.98 during the year ended December 31, 2009. No options were exercised during the years ended December 31, 2011 and 2010.

*The Parent's Stock Option Plans*

The Parent had four stock option plans. Under the Parent's stock option plans, employees of the Company were granted options in the Parent's ordinary shares, which are registered and traded on the Tel-Aviv Stock Exchange. None of the options were exercisable or convertible into shares of the Company.

During the year ended December 31, 2009, 284,000 options were exercised at an average exercise price of \$3.78 per share. The total pretax intrinsic value of such options was \$1,163,000 based on the Parent's average stock price of \$7.88 during such year. No options were exercised during the years ended December 31, 2010 and December 31, 2011.

As of December 31, 2011 and 2010, all the options under the parent stock options plans have been fully exercised or expired, and no shares of the Parent's ordinary shares are available for future grants.



**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****NOTE 16 POWER PURCHASE AGREEMENTS**

Substantially all of the Company's electricity revenues are recognized pursuant to PPAs in the U.S. and in various foreign countries, including Kenya, Nicaragua, and Guatemala. These PPAs generally provide for the payment of energy payments or both energy and capacity payments through their respective terms which expire in varying periods from 2014 to 2034. Generally, capacity payments are calculated based on the amount of time that the power plants are available to generate electricity. The energy payments are calculated based on the amount of electrical energy delivered at a designated delivery point. The price terms are customary in the industry and include, among others, a fixed price, short-run avoided cost (SRAC) (the incremental cost that the power purchaser avoids by not having to generate such electrical energy itself or purchase it from others), and a fixed price with an escalation clause that includes the value for environmental attributes, known as renewable energy credits. Certain of the PPAs provide for bonus payments in the event that the Company is able to exceed certain target levels and potential payments by the Company if it fails to meet minimum target levels. One PPA gives the power purchaser or its designee the right of first refusal to acquire the geothermal power plants at fair market value. Upon satisfaction of certain conditions specified in this PPA, and subject to receipt of requisite approvals and negotiations between the parties, the Company has the right to demand that the power purchaser acquire the power plant at fair market value. The Company's subsidiaries in Nicaragua and Guatemala sell power at an agreed upon price subject to terms of a take or pay PPA.

Pursuant to the terms of certain of the PPAs, the Company may be required to make payments to the relevant power purchaser under certain conditions, such as shortfall on delivery of renewable energy and energy credits, and not meeting certain performance threshold requirements, as defined in the relevant PPA. The amount of payment required is dependent upon the level of shortfall on delivery or performance requirements and is recorded in the period the shortfall occurs. In addition, if the Company does not meet certain minimum performance requirements, the capacity of the power plant may be permanently reduced.

As discussed in Note 1, the Company assessed all PPAs agreed to, modified or acquired in business combinations on or after July 1, 2003, and evaluated whether such PPAs contained a lease element requiring lease accounting. Future minimum lease revenues under PPAs which contain a lease element as of December 31, 2011 were as follows:

	(Dollars in thousands)	
<b>Year ending December 31:</b>		
2012	\$	54,677
2013		54,354
2014		54,301
2015		49,683
2016		47,177
Thereafter		467,928
Total	\$	728,120

The total minimum future lease revenues does not include contingent lease revenues that may be received under such PPAs that were concluded to contain a lease element. Such contingent lease revenue is based on the amount of time that the power plants are available to generate electricity in excess of stipulated minimums and the amount of electrical energy delivered at a designated delivery point.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****NOTE 17 DISCONTINUED OPERATIONS**

In January 2010, a former shareholder of Geothermal Development Limited ( GDL ) who is the owner of an 8 MW power plant in New Zealand exercised a call option to purchase from the Company its shares in GDL for approximately \$2.8 million. In addition, the Company received \$17.7 million to repay the loan a subsidiary of the Company provided to GDL to build the plant. The Company did not exercise its right of first refusal and, therefore, the Company transferred its shares in GDL to the former shareholder after the former shareholder paid all of GDL's obligations to the Company. As a result, the Company recorded a pre-tax gain of approximately \$6.3 million in the year ended December 31, 2010 (\$4.3 million after-tax).

The net assets of GDL on January 1, 2010 were as follows:

	<b>(Dollars in thousands)</b>
Cash and cash equivalents	\$ 871
Accounts receivables	434
Prepaid expenses and other	184
Property, plant and equipment	16,293
Accounts payables and accrued liabilities	(164)
Other comprehensive income translation adjustments	(156)
<b>Net assets</b>	<b>\$ 17,462</b>

The operations and gain on the sale of GDL have been included in discontinued operations in the consolidated statements of operations and comprehensive income for all periods prior to the sale of GDL in January 2010. Electricity revenues related to GDL were \$3.2 million in the year ended December 31, 2009 (none in the year ended December 31, 2010). Basic and diluted earnings per share related to the \$4.3 million after-tax gain on sale of GDL was \$0.10 in the year ended December 31, 2010. Basic and diluted earnings per share related to income from discontinued operations was \$0.08 in the year ended December 31, 2009 (none in the year ended December 31, 2010).

**NOTE 18 INTEREST EXPENSE, NET**

The components of interest expense are as follows:

	<b>Year Ended December 31,</b>		
	<b>2011</b>	<b>2010</b>	<b>2009</b>
	<b>(Dollars in thousands)</b>		
Parent	\$	\$ 310	\$ 1,121
Interest related to sale of tax benefits	7,837	5,429	7,568
Loss on interest rate lock transactions*	16,380		
Other	56,951	44,227	34,947
Less amount capitalized	(11,709)	(9,493)	(27,395)
	<b>\$ 69,459</b>	<b>\$ 40,473</b>	<b>\$ 16,241</b>

\* The interest rate lock transactions are related to the OFC 2 Secured Notes and were not accounted for as hedge (see Note 11).



**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****NOTE 19 INCOME TAXES**

Income from continuing operations, before income taxes and equity in income (losses) of investees consisted of:

	Year Ended December 31,		
	2011	2010	2009
	(Dollars in thousands)		
U.S.	\$ (32,797)	\$ (3,715)	\$ 38,371
Non-U.S. (foreign)	39,567	\$ 34,497	\$ 39,989
	\$ 6,770	\$ 30,782	\$ 78,360

The components of income tax provision (benefit) are as follows:

	Year Ended December 31,		
	2011	2010	2009
	(Dollars in thousands)		
Current:			
State	\$ 135	\$ 115	\$ 885
Foreign	10,339	10,926	12,082
	\$ 10,474	\$ 11,041	\$ 12,967
Deferred:			
Federal	38,566	(15,863)	2,114
State	(2,099)	1,062	1,359
Foreign	1,594	2,662	(1,010)
	38,061	(12,139)	2,463
	\$ 48,535	\$ (1,098)	\$ 15,430

The significant components of the deferred income tax expense (benefit) are as follows:

	Year Ended December 31,		
	2011	2010	2009
	(Dollars in thousands)		
Deferred tax expense (exclusive of the effect of other components listed below)	\$ 4,045	\$ 16,047	\$ (6,082)
Benefit of operating loss carryforwards US	(35,575)	(45,540)	(23,036)
Change in valuation allowance	61,500	433	
Change in foreign income tax	5,041	9,008	9,134
Change in lease transaction	1,027	769	3,919
Change in tax monetization transaction	(4,975)	8,690	7,858

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Change in intangible drilling costs	18,592	12,497	21,659
Benefit of production tax credits	(11,594)	(14,043)	(10,989)
Total	\$ 38,061	\$ (12,139)	\$ 2,463

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The difference between the U.S. federal statutory tax rate and the Company's effective tax rate are as follows:

	Year Ended December 31,		
	2011	2010	2009
U.S. federal statutory tax rate	35.0%	35.0%	35.0%
Valuation allowance	908.5		
State income tax, net of federal benefit	(22.9)	3.2	2.6
Effect of foreign income tax, net	(28.3)	4.5	(3.8)
Production tax credits	(171.3)	(45.7)	(13.2)
Depletion	(12.0)		
Other, net	7.9	(0.7)	(0.3)
Effective tax rate	716.9%	(3.7)%	20.3%

The net deferred tax assets and liabilities consist of the following:

	December 31,	
	2011	2010
	(Dollars in thousands)	
Deferred tax assets (liabilities):		
Net foreign deferred taxes, primarily depreciation	\$ (35,274)	\$ (30,233)
Depreciation	(82,847)	(80,318)
Intangible drilling costs	(52,748)	(34,156)
Net operating loss carryforward U.S.	131,111	95,536
Tax monetization transaction	(21,117)	(26,092)
Lease transaction	4,582	5,609
Investment tax credits	1,971	1,971
Production tax credits	59,849	48,255
Stock options amortization	2,934	2,276
Accrued liabilities and other	649	5,468
	9,110	(11,684)
Less valuation allowance	(61,933)	(433)
Total	\$ (52,823)	\$ (12,117)

The following table presents a reconciliation of the beginning and ending valuation allowance:

	Year Ended December 31,		
	2011	2010	2009
	(Dollars in thousands)		
Balance at the beginning of the year	\$ 433	\$	\$
Additions to deferred income tax expense	61,500	433	

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Balance at the end of the year	\$ 61,933	\$ 433	\$
--------------------------------	-----------	--------	----

At December 31, 2011, the Company had U.S. federal net operating loss ( NOL ) carryforwards of approximately \$349.5 million and state NOL carryforwards of approximately \$159.0 million, net of valuation

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

allowance of \$61.9 million, available to reduce future taxable income, which expire between 2021 and 2031 for federal NOLs and between 2015 and 2031 for state NOLs. The investment tax credits in the amount of \$2.0 million at December 31, 2011 are available for a 20-year period and expire between 2022 and 2024. The production tax credits in the amount of \$59.9 million at December 31, 2011 are available for a 20-year period and expire between 2026 and 2031.

Realization of the deferred tax assets and tax credits is dependent on generating sufficient taxable income in appropriate jurisdictions prior to expiration of the NOL carryforwards and tax credits. The scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies were considered in determining the amount of valuation allowance. A valuation allowance in the amount of \$61.5 million was recorded against the U.S. deferred tax assets as of December 31, 2011 as, at this point in time, it is more likely than not that the deferred tax assets will not be realized. If sufficient evidence of the Company's ability to generate taxable income is established in the future, the Company may be required to reduce this valuation allowance, resulting in income tax benefits in its consolidated statement of operations.

The total amount of undistributed earnings of foreign subsidiaries for income tax purposes was approximately \$247.3 million at December 31, 2011. It is the Company's intention to reinvest undistributed earnings of its foreign subsidiaries and thereby indefinitely postpone their remittance. Accordingly, no provision has been made for foreign withholding taxes or U.S. income taxes which may become payable if undistributed earnings of foreign subsidiaries were paid as dividends to the Company. The additional taxes on that portion of undistributed earnings which is available for dividends are not practicably determinable.

***Uncertain tax positions***

The liability for unrecognized tax benefits of \$5.9 million and \$5.4 million at December 31, 2011 and 2010, respectively, would impact the Company's effective tax rate, if recognized. Interest and penalties assessed by taxing authorities on an underpayment of income taxes are included as a component of income tax provision in the consolidated statements of operations and comprehensive income.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows:

	Year Ended December 31,		
	2011	2010	2009
	(Dollars in thousands)		
Balance at beginning of year	\$ 5,431	\$ 4,931	\$ 3,425
Additions based on tax positions taken in prior years	1,207	823	964
Additions based on tax positions taken in the current year	612	260	1,282
Reduction based on tax positions taken in prior years	(1,375)	(583)	
Decrease for settlements with taxing authorities			(740)
Balance at end of year	\$ 5,875	\$ 5,431	\$ 4,931

The Company and its U.S. subsidiaries file consolidated income tax returns for federal and state purposes. As of December 31, 2011, the Company has not been subject to U.S. federal or state income tax examinations. The Company remains open to examination by the Internal Revenue Service for the years 2000-2011 and by local state jurisdictions for the years 2002-2011.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The Company's foreign subsidiaries remain open to examination by the local income tax authorities in the following countries for the years indicated:

Israel	2009	2011
Nicaragua	2008	2011
Kenya	2000	2011
Guatemala	2007	2011
Philippines	2008	2011
New Zealand	2007	2011

Management believes that the liability for unrecognized tax benefits is adequate for all open tax years based on its assessment of many factors, including among others, past experience and interpretations of local income tax regulations. This assessment relies on estimates and assumptions and may involve a series of complex judgments about future events. As a result, it is possible that federal, state and foreign tax examinations will result in assessments in future periods. To the extent any such assessments occur, the Company will adjust its liability for unrecognized tax benefits.

***Tax benefits in the U.S.***

The U.S. government encourages production of electricity from geothermal resources through certain tax subsidies under the ARRA. The Company is permitted to claim 30% of the cost of each new geothermal power plant in the United States, which is placed in service before January 1, 2014 as an investment tax credit ( ITC ) against its federal income taxes. After this date, the ITC is reduced to 10%. Alternatively, the Company is permitted to claim a production tax credit ( PTC ), which in 2011 was 2.2 cents per kWh and which may be adjusted annually for inflation. The PTC may be claimed for ten years on the electricity output of new geothermal power plants put into service by December 31, 2013. The owner of the power plant must choose between the PTC and the 30% ITC credit described above. In either case, under current tax rules, any unused tax credit has a 1-year carry back and a 20-year carry forward. Whether the Company claims the PTC or the ITC, it is also permitted to depreciate most of the plant for tax purposes over five years on an accelerated basis, meaning that more of the cost may be deducted in the first few years than during the remainder of the depreciation period. If the Company claims the ITC, the Company's tax base in the plant that it can recover through depreciation must be reduced by half of the ITC. If the Company claims the PTC, there is no reduction in the tax basis for depreciation. Companies that place qualifying renewable energy facilities in service, during 2009, 2010 or 2011, or that begin construction of qualifying renewable energy facilities during 2009, 2010 or 2011 and place them in service by December 31, 2013, may choose to apply for a cash grant from the U.S. Department of the Treasury ( U.S. Treasury ) in an amount equal to the ITC. Likewise, the tax base for depreciation will be reduced by 50% of the cash grant received. Under the ARRA, the U.S. Treasury is instructed to pay the cash grant within 60 governmental business days of the application or the date on which the qualifying facility is placed in service.

On June 7, 2007 and April 17, 2008, a wholly-owned subsidiary, Ormat Nevada, concluded transactions to monetize PTCs and other favorable tax attributes (see Note 13).

***Income taxes related to foreign operations***

*Guatemala* The enacted tax rate is 31%. Orzunil, a wholly owned subsidiary, was granted a benefit under a law which promotes development of renewable power sources. The law allows Orzunil to reduce the investment made in its geothermal power plant from income tax payable, which reduces the effective tax rate to zero. Ortilan, another wholly owned subsidiary, was granted a tax exemption for a period of ten years ending

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

August 2017. The effect of the tax exemption in the years ended December 31, 2011, 2010, and 2009 is \$4.4 million, \$3.2 million, and \$3.8 million, respectively (\$0.10, \$0.07, and \$0.08 per share of common stock, respectively).

*Israel* The Company's operations in Israel through its wholly owned Israeli subsidiary, Ormat Systems Ltd. (Ormat Systems), are taxed at the regular corporate tax rate of 26% in 2009, 25% in 2010, 24% in 2011, and 25% in 2012 and thereafter (see also below). Ormat Systems is entitled to Benefited Enterprise status under Israel's Law for Encouragement of Capital Investments, 1959 (the Investment Law), with respect to two of its investment programs. As a Benefited Enterprise, Ormat Systems was exempt from Israeli income taxes with respect to income derived from the first benefited investment for a period of two years that started in 2004, and thereafter such income was subject to reduced Israeli income tax rates which will not exceed 25% for an additional five years until 2010. Ormat Systems was also exempt from Israeli income taxes with respect to income derived from the second benefited investment for a period of two years that started in 2007, and thereafter such income is subject to reduced Israeli income tax rates which will not exceed 25% for an additional five years. These benefits are subject to certain conditions, including among other things, that all transactions between Ormat Systems and its affiliates are at arm's length, and that the management and control of Ormat Systems will be from Israel during the whole period of the tax benefits. A change in control should be reported to the Israel Tax Authority in order to maintain the tax benefits. In January 2011, new legislation amending the Investment Law was enacted. Under the new legislation, a uniform rate of corporate tax would apply to all qualified income of certain industrial companies, as opposed to the current law's incentives that are limited to income from a Benefited Enterprise during their benefits period. According to the amendment, the uniform tax rate applicable to the zone where the production facilities of Ormat Systems are located would be 15% in 2011 and 2012, 12.5% in 2013 and 2014, and 12% in 2015 and thereafter. Under the transitory provisions of the new legislation, Ormat Systems had the option either to irrevocably comply with the new law while waiving benefits provided under the previous law or to continue to comply with the previous law during a transition period with the option to move from the previous law to the new law at any stage. Ormat Systems decided to irrevocably comply with the new law starting in 2011.

*Other significant foreign countries* The Company's operations in Nicaragua and Kenya are taxed at the rates of 25% and 37.5%, respectively. The Company's operations in New Zealand are taxed at the rate of 30% in 2009, 30% in 2010, and 28% in 2011.

**NOTE 20 BUSINESS SEGMENTS**

The Company has two reporting segments: Electricity and Product Segments. Such segments are managed and reported separately as each offers different products and serves different markets. The Electricity Segment is engaged in the sale of electricity from the Company's power plants pursuant to PPAs. The Product Segment is engaged in the manufacture, including design and development, of turbines and power units for the supply of electrical energy and in the associated construction of power plants utilizing the power units manufactured by the Company to supply energy from geothermal fields and other alternative energy sources. Transfer prices between the operating segments were determined on current market values or cost plus markup of the seller's business segment.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Summarized financial information concerning the Company's reportable segments is shown in the following tables:

	Electricity	Product (Dollars in thousands)	Consolidated
<b>Year Ended December 31, 2011:</b>			
Net revenues from external customers	\$ 323,849	\$ 113,160	\$ 437,009
Intersegment revenues		80,712	80,712
Depreciation and amortization expense	93,328	3,070	96,398
Operating income (loss)	45,138	18,869	64,007
Segment assets at period end*	2,222,836	91,882	2,314,718
Expenditures for long-lived assets	266,258	3,419	269,677
* Including unconsolidated investments	2,215	1,542	3,757
<b>Year Ended December 31, 2010:</b>			
Net revenues from external customers	\$ 291,820	\$ 81,410	\$ 373,230
Intersegment revenues		70,275	70,275
Depreciation and amortization expense	84,276	2,485	86,761
Operating income (loss)	12,782	10,786	23,568
Segment assets at period end*	1,954,778	88,550	2,043,328
Expenditures for long-lived assets	280,228	3,223	283,451
* Including unconsolidated investments	2,244	2,000	4,244
<b>Year Ended December 31, 2009:</b>			
Net revenues from external customers	\$ 252,621	\$ 159,389	\$ 412,010
Intersegment revenues		33,751	33,751
Depreciation and amortization expense	62,283	2,093	64,376
Operating income (loss)	45,335	21,259	66,594
Segment assets at period end*	1,766,519	97,674	1,864,193
Expenditures for long-lived assets	265,252	5,371	270,623
* Including unconsolidated investments	35,188		35,188

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Reconciling information between reportable segments and the Company's consolidated totals is shown in the following table:

	Year Ended December 31,		
	2011	2010	2009
(Dollars in thousands)			
<b>Revenues:</b>			
Total segment revenues	\$ 437,009	\$ 373,230	\$ 412,010
Intersegment revenues	80,712	70,275	33,751
Elimination of intersegment revenues	(80,712)	(70,275)	(33,751)
<b>Total consolidated revenues</b>	<b>\$ 437,009</b>	<b>\$ 373,230</b>	<b>\$ 412,010</b>
<b>Operating income:</b>			
Operating income	\$ 64,007	\$ 23,568	\$ 66,594
Interest income	1,427	343	639
Interest expense, net	(69,459)	(40,473)	(16,241)
Foreign currency translation and transaction gains (losses)	(1,350)	1,557	(1,695)
Income attributable to sale of equity interest	11,474	8,729	15,515
Gain from extinguishment of liability			13,348
Gain on acquisition of controlling interest		36,928	
Other non-operating income (expense), net	671	130	200
<b>Total consolidated income before income taxes and equity in income of investees</b>	<b>\$ 6,770</b>	<b>\$ 30,782</b>	<b>\$ 78,360</b>

The Company sells electricity and products for power plants and others, mainly to the geographical areas according to location of the customers, as detailed below. The following tables present certain data by geographic area:

	Year Ended December 31,		
	2011	2010	2009
(Dollars in thousands)			
<b>Revenues from external customers attributable to:<sup>(1)</sup></b>			
North America	\$ 254,265	\$ 241,732	\$ 248,357
Pacific Rim	32,174	6,878	28,924
Latin America	38,930	57,853	79,683
Africa	36,307	35,225	34,857
Far East	13,363	1,964	3,850
Europe	61,970	29,578	16,339
<b>Consolidated total</b>	<b>\$ 437,009</b>	<b>\$ 373,230</b>	<b>\$ 412,010</b>

<sup>(1)</sup> Revenues as reported in the geographic area in which they originate.



**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

	Year Ended December 31,		
	2011	2010	2009
	(Dollars in thousands)		
Long-lived assets (primarily power plants and related assets) located in:			
North America	\$ 1,686,088	\$ 1,536,583	\$ 1,341,863
Latin America	81,472	89,980	80,687
Africa	174,854	115,245	131,997
Europe	13,932	13,584	12,846
Pacific Rim and Far East			12,816
Consolidated total	\$ 1,956,346	\$ 1,755,392	\$ 1,580,209

The following table presents revenues from major customers:

	Year Ended December 31,					
	2011		2010		2009	
	Revenues	%	Revenues	%	Revenues	%
	(Dollars		(Dollars		(Dollars	
	in		in		in	
	thousands)		thousands)		thousands)	
SCE: <sup>(1)</sup>	\$ 121,049	27.7	\$ 108,481	29.1	\$ 87,017	21.1
Hawaii Electric Light Company <sup>(1)</sup>	46,432	10.6	32,194	8.6	25,979	6.3
Sierra Pacific Power Company and Nevada Power Company <sup>(1)(2)</sup>	56,778	13.0	55,877	15.0	53,658	13.0
NGP Blue Mountain I LLC <sup>(3)</sup>					46,893	11.4
Central American Bank for Economic Integration (Las Pailas Project) <sup>(3)</sup>			21,365	5.7	44,073	10.7

<sup>(1)</sup> Revenues reported in Electricity Segment.

<sup>(2)</sup> Subsidiaries of NV Energy, Inc.

<sup>(3)</sup> Revenues reported in Products Segment.

**NOTE 21 TRANSACTIONS WITH RELATED ENTITIES**

Transactions between the Company and related entities, other than those disclosed elsewhere in these financial statements, are summarized below:

Year Ended December 31,  
2011                      2010                      2009

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

	(Dollars in thousands)		
Property rental fee expense paid to the Parent	\$ 1,718	\$ 1,680	\$ 1,380
Interest expense on note payable to the Parent	\$	\$ 310	\$ 1,125
Corporate financial, administrative, executive services, and research and development services provided to the Parent	\$ 143	\$ 139	\$ 170
Services rendered by an indirect shareholder of the Parent	\$ 54	\$ 116	\$ 91

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The current asset due from the Parent at December 31, 2011 and 2010 in the amount of \$260,000 and \$272,000, respectively, represents the net obligation resulting from ongoing operations and transactions with the Parent and is payable from available cash flow. Interest is computed on balances greater than 60 days at LIBOR plus 1% (but not less than the change in the Israeli Consumer Price Index plus 4%) compounded quarterly, and is accrued and paid to the Parent annually.

***Corporate and administrative services agreement with the Parent***

Ormat Systems and the Parent have agreements whereby Ormat Systems will provide to the Parent, for a monthly fee of \$10,000 (adjusted annually, in part based on changes in the Israeli Consumer Price Index), certain corporate administrative services, including the services of executive officers. In addition, Ormat Systems agreed to provide the Parent with services of certain skilled engineers and other research and development employees at Ormat Systems' cost plus 10%.

***Lease agreements with the Parent***

Ormat Systems has a rental agreement with the Parent entered into in July 2004 for the sublease of office and manufacturing facilities in Yavne, Israel, for a monthly rent of \$52,000, adjusted annually for changes in the Israeli Consumer Price Index, plus taxes and other costs to maintain the properties. The term of the rental agreement is for a period ending the earlier of: (i) 25 years from July 1, 2004; or (ii) the remaining periods of the underlying lease agreements between the Parent and the Israel Land Administration (which terminate between 2018 and 2047).

Effective April 1, 2009, Ormat Systems entered into an additional rental agreement with the Parent for the sublease of additional manufacturing facilities adjacent to the current manufacturing facilities in Yavne, Israel. The term of the additional rent agreement will expire on the same day as the abovementioned lease agreement entered into in July 2004. Pursuant to the additional lease agreement, Ormat Systems pays a monthly rent of \$77,000, adjusted annually for changes in the Israeli Consumer Price Index, plus tax and other costs to maintain the properties.

***Registration rights agreement***

Prior to the closing of the Company's initial public offering in November 2004, the Company and the Parent entered into a registration rights agreement pursuant to which the Parent may require the Company to register its common stock for sale on Form S-1 or Form S-3. The Company also agreed to pay all expenses that result from the registration of the Company's common stock under the registration rights agreement, other than underwriting commissions for such shares and taxes. The Company has also agreed to indemnify the parent, its directors, officers and employees against liability that may result from their sale of the Company's common stock, including Securities Act liabilities.

**NOTE 22 EMPLOYEE BENEFIT PLAN**

***401(k) Plan***

The Company has a 401(k) Plan (the "Plan") for the benefit of its U.S. employees. Employees of the Company and its U.S. subsidiaries who have completed one year of service or who had one year of service upon establishment of the Plan are eligible to participate in the Plan. Contributions are made by employees through pretax deductions up to 60% of their annual salary. Contributions made by the Company are matched up to a maximum of 2% of the employee's annual salary. The Company's contributions to the Plan were \$483,000, \$451,000, and \$364,000 for the years ended December 31, 2011, 2010, and 2009, respectively.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)*****Severance plan***

The Company, through Ormat Systems, provides limited non-pension benefits to all current employees in Israel who are entitled to benefits in the event of termination or retirement in accordance with the Israeli Government sponsored programs. These plans generally obligate the Company to pay one month's salary per year of service to employees in the event of involuntary termination. There is no limit on the number of years of service in the calculation of the benefit obligation. The liabilities for these plans are accounted for using what is commonly referred to as the "shut down" method, where a company records the undiscounted obligation as if it were payable at each balance sheet date. Such liabilities have been presented in the consolidated balance sheets as liabilities for severance pay. The Company has an obligation to partially fund the liabilities through regular deposits in pension funds and severance pay funds. The amounts funded amounted to \$18,693,000 and \$18,562,000 at December 31, 2011 and 2010, respectively, and have been presented in the consolidated balance sheets as part of "deposits and other". The severance pay liability covered by the pension funds is not reflected in the financial statements as the severance pay risks have been irrevocably transferred to the pension funds. Under the Israeli severance pay law, restricted funds may not be withdrawn or pledged until the respective severance pay obligations have been met. As allowed under the program, earnings from the investment are used to offset severance pay costs. Severance pay expenses for the years ended December 31, 2011, 2010, and 2009 were \$2,323,000, \$1,676,000, and \$1,148,000, respectively, which are net of income (including loss) amounting to \$(522,000), \$1,889,000, and \$1,613,000, respectively, generated from the regular deposits and amounts accrued in severance funds.

The Company expects the severance pay contributions in 2012 to be approximately \$1.8 million.

The Company expects to pay the following future benefits to its employees upon their reaching normal retirement age:

	<b>(Dollars in thousands)</b>	
<b>Year ending December 31:</b>		
2012	\$	3,992
2013		663
2014		715
2015		689
2016		391
2017-2021		10,147
	\$	16,597

The above amounts were determined based on the employees' current salary rates and the number of years' service that will have been accumulated at their retirement date. These amounts do not include amounts that might be paid to employees that will cease working with the Company before reaching their normal retirement age.

**NOTE 23 COMMITMENTS AND CONTINGENCIES*****Geothermal resources***

The Company, through its project subsidiaries in the United States, controls certain rights to geothermal fluids through certain leases with the Bureau of Land Management (BLM) or through private leases. Royalties on the utilization of the geothermal resources are computed and paid to the lessors as defined in the respective agreements. Royalty expense under the geothermal resource agreements were \$10,138,000, \$8,690,000, and \$6,611,000 for the years ended December 31, 2011, 2010, and 2009, respectively.



---

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

***Letters of credit***

In the ordinary course of business with customers, vendors, and lenders, the Company is contingently liable for performance under letters of credit totaling \$79.5 million and \$67.0 million at December 31, 2011 and 2010, respectively. Management does not expect any material losses to result from these letters of credit because performance is not expected to be required, and, therefore, is of the opinion that the fair value of these instruments is zero.

***Purchase commitments***

The Company purchases raw materials for inventories, construction-in-process and services from a variety of vendors. During the normal course of business, in order to manage manufacturing lead times and help assure adequate supply, the Company enters into agreements with contract manufacturers and suppliers that either allow them to procure goods and services based upon specifications defined by the Company, or that establish parameters defining the Company's requirements.

At December 31, 2011, total obligations related to such supplier agreements were approximately \$103.7 million (out of which approximately \$54.9 million relate to construction-in-process). All such obligations are payable in 2012.

***Grants and royalties***

The Company, through Ormat Systems, had historically, through December 31, 2003, requested and received grants for research and development from the Office of the Chief Scientist of the Israeli Government. Ormat Systems is required to pay royalties to the Israeli Government at a rate of 3.5% to 5.0% of the revenues derived from products and services developed using these grants. No royalties were paid for the years ended December 31, 2011, 2010, and 2009. The Company is not liable for royalties if the Company does not sell such products and services. Such royalties are capped at the amount of the grants received plus interest at LIBOR. The cap at December 31, 2011 and 2010, amounted to \$1,402,000 and \$1,343,000, respectively, of which approximately \$461,000 and \$402,000 of the cap, respectively, increases based on the LIBOR rate, as defined above.

***Contingencies***

***Securities Class Actions***

Following the Company's public announcement that it would restate certain of its financial results due to a change in the Company's accounting treatment for certain exploration and development costs, three securities class action lawsuits were filed in the United States District Court for the District of Nevada on March 9, 2010, March 18, 2010 and April 7, 2010. These complaints assert claims against the Company and certain officers and directors for alleged violation of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 (the Exchange Act). One complaint also asserts claims for alleged violations of Sections 11, 12(a)(2) and 15 of the Securities Act. All three complaints allege claims on behalf of a putative class of purchasers of Company common stock between May 6, 2008 or May 7, 2008 and February 23, 2010 or February 24, 2010. These three lawsuits were consolidated by the Court in an order issued on June 3, 2010 and the Court appointed three of the Company's stockholders to serve as lead plaintiffs.

Lead plaintiffs filed a consolidated amended class action complaint (CAC) on July 9, 2010 that asserts claims under Sections 10(b) and 20(a) of the Exchange Act on behalf of a putative class of purchasers of Company common stock between May 7, 2008 and February 24, 2010. The CAC alleges that certain of the

---

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Company's public statements were false and misleading for failing to account properly for the Company's exploration and development costs based on the Company's announcement on February 24, 2010 that it was going to restate certain of its financial results to change its method of accounting for exploration and development costs in certain respects. The CAC also alleges that certain of the Company's statements concerning the North Brawley project were false and misleading. The CAC seeks compensatory damages, expenses, and such further relief as the Court may deem proper.

Defendants filed a motion to dismiss the CAC on August 13, 2010. On March 3, 2011, the court granted in part and denied in part defendants motion to dismiss. The court dismissed plaintiffs' allegations that the Company's statements regarding the North Brawley project were false or misleading, but did not dismiss plaintiffs' allegations regarding the 2008 restatement. Defendants answered the remaining allegations in the CAC regarding the restatement on April 8, 2011 and the case has now entered the discovery phase. On July 22, 2011, plaintiffs filed a motion to certify the case as a class action on behalf of a class of purchasers of Company common stock between February 25, 2009 and February 24, 2010, and defendants filed an opposition to the motion for class certification on October 4, 2011.

Subsequently, the parties participated in a mediation where they reached an agreement in principle to settle the securities class action lawsuits. Under the proposed class action settlement, the claims against the Company and its officers and directors will be dismissed with prejudice and release in exchange for a cash payment of \$3.1 million to be funded by the Company's insurers. The proposed settlement remains subject to the satisfaction of various conditions, including negotiation and execution of a final stipulation of settlement, and approval by the U.S. District Court for the District of Nevada following notice to members of the class.

The Company and the individual defendants have steadfastly maintained that the claim raised in the securities class action lawsuits were without merit, and have vigorously contested those claims. As part of the settlement, the Company and the individual defendants continue to deny any liability or wrongdoing under the securities laws or otherwise.

*Stockholder Derivative Cases*

Four stockholder derivative lawsuits have also been filed in connection with the Company's public announcement that it would restate certain of its financial results due to a change in the Company's accounting treatment for certain exploration and development costs. Two cases were filed in the Second Judicial District Court of the State of Nevada in and for the County of Washoe on March 16, 2010 and April 21, 2010 and two cases were filed in the United States District Court for the District of Nevada on March 29, 2010 and June 7, 2010. All four lawsuits assert claims brought derivatively on behalf of the Company against certain of its officers and directors for alleged breach of fiduciary duty and other claims, including waste of corporate assets and unjust enrichment.

The two stockholder derivative cases filed in the Second Judicial District Court of the State of Nevada in and for the County of Washoe were consolidated by the Court in an order dated May 27, 2010 and the plaintiffs filed a consolidated derivative complaint on September 7, 2010. In accordance with a stipulation between the parties, defendants filed a motion to dismiss on November 16, 2010. On April 18, 2011, the court stayed the state derivative case pending the resolution of the securities class action. The Company cannot make an estimate of the reasonably possible loss or range of reasonably possible loss on the state derivative cases.

The two stockholders derivative cases filed in the United States District Court for the District of Nevada were consolidated by the Court in an order dated August 31, 2010, and plaintiffs filed a consolidated derivative

---

**Table of Contents**

**ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

complaint on October 28, 2010. The Company filed a motion to dismiss on December 13, 2010. On March 7, 2011, the Court transferred the federal derivative case to the Court presiding over the securities class action, and on August 29, 2011, the Court stayed the federal derivative case pending the resolution of the securities class action. The Company cannot make an estimate of the reasonably possible loss or range of reasonably possible loss on the state derivative cases.

The Company believes the allegations in these purported derivative actions are without merit and is defending the actions vigorously.

*Other*

On May 19, 2011, the Federal Energy Regulatory Commission ( FERC ) issued an order which denied the Company s exemptions for requirements relating to Sections 205 and 206 of the Federal Power Act and directed the Company s REG facilities to make refunds to their customers, equaling the time value of the revenues collected during the periods of non-compliance with the qualifying facilities , in an amount of approximately \$1.6 million. On June 17, 2011, the Company requested a rehearing to obtain relief on this mandated refund payment. On July 18, 2011, FERC issued an Order Granting Rehearing for Further Consideration in order to afford additional time for consideration of the matters raised. In February 2012, FERC reached its ruling that a settlement amount was due from the Company which had an immaterial impact to the December 31, 2011 financial statements.

On January 4, 2012, the California Unions for Reliable Energy ( CURE ) filed a petition in Alameda Superior Court, naming the California Energy Commission ( CEC ) and the Company as defendant and real party in interest, respectively. The petition asks the court to order the CEC to vacate its decision which denied, with prejudice, the complaint filed by CURE against the Company with the CEC. The CURE complaint alleged that the Company s North Brawley Project and East Brawley Project both exceed the CEC s 50 MW jurisdictional threshold and therefore are subject to CEC licensing authority rather than Imperial County. In addition, the CURE petition asks the court to investigate and halt any ongoing violation of the Warren Alquist Act by the Company, and to award CURE attorney s fees and costs. As to North Brawley, CURE alleges that the CEC decision violated the Warren Alquist Act because it failed to consider provisions of the County permit for North Brawley, which CURE contends authorizes the Company to build a generating facility with a number of Ormat Energy Converters capable of generating more than 50 MW. As to East Brawley, CURE alleges that the CEC decision violated the Warren Alquist Act because it failed to consider the conditional use permit application for East Brawley, which CURE contends shows that the Company requested authorization to build a facility with a number of Ormat Energy Converters capable of generating more than 50 MW.

The Company believes that the petition is without merit and intends to respond and take necessary legal action to dismiss the proceedings. The Company has thirty days in which to respond to CURE s petition. Filing of the petition in and of itself does not have any immediate adverse implications for the North Brawley or East Brawley projects and the Company continues to operate the North Brawley project in the ordinary course and continues with its development work on the East Brawley project.

From time to time, the Company is named as a party in various lawsuits, claims and other legal and regulatory proceedings that arise in the ordinary course of its business. These actions typically seek, among other things, compensation for alleged personal injury, breach of contract, property damage, punitive damages, civil penalties or other losses, or injunctive or declaratory relief. With respect to such lawsuits, claims and proceedings, the Company accrues reserves when a loss is probable and the amount of such loss can be reasonably estimated. It is the opinion of the Company s management that the outcome of these proceedings, individually and collectively, will not be material to the financial statements as a whole.

**Table of Contents****ORMAT TECHNOLOGIES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****NOTE 24 QUARTERLY FINANCIAL INFORMATION (UNAUDITED)**

	Three Months Ended							
	Mar. 31, 2010	June 30, 2010 <sup>(1)</sup>	Sept. 30, 2010	Dec. 31, 2010 <sup>(1)</sup>	Mar. 31, 2011	June 30, 2011 <sup>(2)</sup>	Sept. 30, 2011	Dec. 31, 2011
(Dollars in thousands, except per share amounts)								
<b>Revenues:</b>								
Electricity	\$ 66,105	\$ 68,807	\$ 83,357	\$ 73,551	\$ 78,268	\$ 81,190	\$ 86,815	\$ 77,576
Product	16,549	27,459	18,120	19,282	19,552	23,424	24,026	46,158
Total revenues	82,654	96,266	101,477	92,833	97,820	104,614	110,841	123,734
<b>Cost of revenues:</b>								
Electricity	54,523	63,498	61,530	62,775	65,937	62,212	57,941	57,947
Product	12,437	14,115	14,764	11,961	16,890	9,249	17,137	32,796
Total cost of revenues	66,960	77,613	76,294	74,736	82,827	71,461	75,078	90,743
Gross margin	15,694	18,653	25,183	18,097	14,993	33,153	35,763	32,991
<b>Operating expenses:</b>								
Research and development expenses	3,267	3,614	1,252	1,987	2,207	2,575	2,346	1,673
Selling and marketing expenses	3,202	2,686	3,333	4,226	2,660	3,725	2,940	6,882
General and administrative expenses	7,020	6,996	5,780	7,646	7,007	7,479	6,269	7,130
Write-off of unsuccessful exploration activities		3,050						
Operating income	2,205	2,307	14,818	4,238	3,119	19,374	24,208	17,306
<b>Other income (expense):</b>								
Interest income	197	95	140	(89)	135	716	438	138
Interest expense, net	(9,714)	(9,426)	(10,961)	(10,372)	(13,080)	(17,442)	(23,909)	(15,028)
Foreign currency translation and transaction gains (losses)	434	(1,033)	1,074	1,082	517	596	(2,659)	196
Impairment of auction rate securities				(137)				
Income attributable to sale of tax benefits	2,139	2,070	2,183	2,337	2,139	3,141	2,344	3,850
Gain on acquisition of controlling interest			36,928					
Gain from extinguishment of liability								
Other non-operating income (expense), net	(359)	79	233	314	(797)	915	347	206
Income (loss) from continuing operations, before income taxes and equity in income (losses) of investees	(5,098)	(5,908)	44,415	(2,627)	(7,967)	7,300	769	6,668
Income tax benefit (provision)	2,557	3,365	(11,931)	7,107	(586)	1,007	305	(49,261)
Equity in income (losses) of investees	546	479	(83)	56	(412)	(69)	(71)	(407)
Income (loss) from continuing operations	(1,995)	(2,064)	32,401	4,536	(8,965)	8,238	1,003	(43,000)
<b>Discontinued operations:</b>								
Income from discontinued operations, net of related tax	14							
Gain on sale of a subsidiary in New Zealand, net of tax	3,766	570						
Net Income (loss)	1,785	(1,494)	32,401	4,536	(8,965)	8,238	1,003	(43,000)

Edgar Filing: ORMAT TECHNOLOGIES, INC. - Form 10-K

Net loss (income) attributable to noncontrolling interest	53	57	58	(78)	(10)	(105)	(137)	(80)
Net income (loss) attributable to the Company's stockholders	\$ 1,838	\$ (1,437)	\$ 32,459	\$ 4,458	\$ (8,975)	\$ 8,133	\$ 866	\$ (43,080)
Earnings (loss) per share attributable to the Company's stockholders:								
Basic:								
Income (loss) from continuing operations	\$ (0.04)	\$ (0.05)	\$ 0.71	\$ 0.10	\$ (0.20)	\$ 0.18	\$ 0.02	\$ (0.95)
Discontinued operations	0.08	0.02						
Net income (loss)	\$ 0.04	\$ (0.03)	\$ 0.71	\$ 0.10	\$ (0.20)	\$ 0.18	\$ 0.02	\$ (0.95)
Diluted:								
Income (loss) from continuing operations	\$ (0.04)	\$ (0.05)	\$ 0.71	\$ 0.10	\$ (0.20)	\$ 0.18	\$ 0.02	\$ (0.95)
Discontinued operations	0.08	0.02						
Net income (loss)	\$ 0.04	\$ (0.03)	\$ 0.71	\$ 0.10	\$ (0.20)	\$ 0.18	\$ 0.02	\$ (0.95)
Weighted average number of shares used in computation of earnings (loss) per share attributable to the Company's stockholders:								
Basic								
	45,431	45,431	45,431	45,431	45,431	45,431	45,431	45,431
Diluted								
	45,457	45,431	45,450	45,450	45,431	45,443	45,440	45,431

<sup>(1)</sup> Included in income from discontinued operations for the three months ended December 30, 2010 is an out-of-period adjustment of \$570,000 that increased the after-tax gain on the sale of GDL. Such adjustment relates to an error in income taxes associated with the gain on sale of GDL in the three months ended March 31, 2010 (see Note 6).

**Table of Contents**

**ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None.

**ITEM 9A. CONTROLS AND PROCEDURES**

**Disclosure Controls and Procedures**

The Company's management, including its Chief Executive Officer and Chief Financial Officer, have conducted an evaluation of the effectiveness of disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of the end of the period covered by this Annual Report on Form 10-K. Based on that evaluation, the Company's management, including the Chief Executive Officer and Chief Financial Officer, concluded as of December 31, 2011, that the disclosure controls and procedures were effective in ensuring that all material information required to be filed in reports that the Company files or submits under the Exchange Act has been recorded, processed, summarized and reported when required and the information is accumulated and communicated to the Company's management, including the Chief Executive Officer and the Chief Financial Officer, to allow timely decisions regarding required disclosure.

**Management's Report on Internal Control over Financial Reporting**

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting, as defined under Rule 13a-15(f) under the Exchange Act. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures may deteriorate.

Management, under the supervision and participation of the Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's internal control over financial reporting as of December 31, 2011 using criteria established in Internal Control - Integrated Framework issued by the COSO and concluded that the Company maintained effective internal control over financial reporting as of December 31, 2011.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2011 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

**Changes in Internal Control over Financial Reporting**

No changes in the Company's internal control over financial reporting, as defined in Rule 13a-15(f) under the Exchange Act, have been identified during the Company's fourth fiscal quarter that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

**ITEM 9B. OTHER INFORMATION**

None.

**Table of Contents****PART III****ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT**

Information required by this Item in addition to that below is incorporated by reference herein from the Company's definitive 2011 Proxy Statement.

**Directors and Executive Officers Information**

The following table sets forth the name, age and positions of our directors, executive officers and persons who are executive officers of certain of our subsidiaries who perform policy making functions for us:

<b>Name</b>	<b>Age</b>	<b>Position</b>
Lucien Y. Bronicki	77	Chairman of the Board of Directors; Chief Technology Officer <sup>(3)</sup>
Yehudit Dita Bronicki	70	Chief Executive Officer; Director <sup>(2)</sup>
Yoram Bronicki	45	President; Chief Operating Officer; Director <sup>(1)</sup>
Joseph Tenne	56	Chief Financial Officer*
Nadav Amir	61	Executive Vice President Operations*
Zvi Reiss	61	Executive Vice President Project Management*
Joseph Shiloah	66	Executive Vice President Business Development Special Projects, Rest of the World*
Zvi Krieger	56	Executive Vice President Geothermal Resource*
Shimon Hatzir	50	Senior Vice President Engineering*
Ety Rosner	56	Senior Vice President Contract Management; Corporate Secretary*
Nir Wolf	46	Vice President Business Development Marketing and Sales, Rest of the World*
Dan Falk	67	Independent Director <sup>(3)</sup>
Roger W. Gale	61	Independent Director <sup>(1)</sup>
Robert F. Clarke	69	Independent Director <sup>(2)</sup>
David Wagener	57	Independent Director <sup>(2)</sup>

\* Performs the functions described in the table, but is employed by Ormat Systems

<sup>(1)</sup> Denotes Class I Director Term expiring at 2014 Annual Shareholders Meeting

<sup>(2)</sup> Denotes Class II Director Term expiring at 2012 Annual Shareholders Meeting

<sup>(3)</sup> Denotes Class III Director Term expiring at 2013 Annual Shareholders Meeting

*Lucien Y. Bronicki.* Lucien Y. Bronicki is the Chairman of our Board of Directors, a position he has held since our inception in 1994, and has also been our Chief Technology Officer since July 1, 2004. Mr. Bronicki co-founded Ormat Turbines Ltd. in 1965 and is a Director of Ormat Industries Ltd., the publicly-traded successor to Ormat Turbines Ltd., and various of its subsidiaries. From 1992 to May 2006, Mr. Bronicki was the Chairman of the Board of Directors of Bet Shemesh Engines, a manufacturer of jet engines, and from 1997 to May 2006, Mr. Bronicki was the Chairman of the Board of Directors of Bet Shemesh Holdings. Mr. Bronicki was also the Chairman of the Board of Directors of Orad Hi-Tec Systems Ltd., a manufacturer of image processing systems, until the end of 2005, and was the Co-Chairman of Orbotech Ltd., a NASDAQ-listed manufacturer of equipment for inspecting and imaging circuit boards and display panels. Mr. Bronicki worked in the Nuclear Research



**Table of Contents**

Center in Saclay (France) designing equipment for elementary particle research at CERN. He went on to join the National Physical Laboratory of Israel and develop solar-powered turbines, which evolved into geothermal power plants. Mr. Bronicki has worked in the power industry since 1958. He is a member of the Executive Council of the Weizmann Institute of Science and was the Chairman of the Israeli Committee of the World Energy Council. Mr. Bronicki was also a member of the Studies Committee Energy for Tomorrows World Commission of the World's Energy council. Yehudit Bronicki and Lucien Bronicki are married and are the parents of Yoram Bronicki. Mr. Bronicki obtained a postgraduate degree in Nuclear Engineering from Conservatoire National des Arts et Métiers, a Master of Science in Physics from Université de Paris and a Master of Science in Mechanical Engineering from École Nationale Supérieure d'Ingenieurs Arts et Métiers. He received a Ph.D. Honoris Causa in 2005 from the Ben-Gurion University, in 2006 from the Weizmann Institute of Science, and in 2007 from the Technion Israel Institute of Technology. Mr. Bronicki received the Pioneers Award from the Geothermal Resources Council and the Italian Geothermal Union Centenary Award.

*Yehudit Dita Bronicki.* Yehudit Bronicki has been our Chief Executive Officer since July 1, 2004, and is also a member of our Board of Directors. From July 1, 2004 to September 20, 2007, Mrs. Bronicki also served as our President. Mrs. Bronicki was a co-founder of Ormat Turbines Ltd. and is a member of the Board of Directors and the General Manager (a CEO-equivalent position) of Ormat Industries Ltd., the publicly traded successor to Ormat Turbines Ltd., and several of its subsidiaries. From 1992 to June 2005, Mrs. Bronicki was a director of Bet Shemesh Engines, a manufacturer of jet engines. In addition, since 2000, Mrs. Bronicki she has been a member of the Board of Orbotech Ltd., a NASDAQ-listed manufacturer of equipment for inspecting and imaging circuit boards and display panels. From 1994 to 2001, Mrs. Bronicki was on the Advisory Board of the Bank of Israel. Mrs. Bronicki has worked in the power industry since 1965. Yehudit Bronicki and Lucien Bronicki are married and are the parents of Yoram Bronicki. Mrs. Bronicki obtained a Bachelor of Arts in Social Sciences from Hebrew University in 1965. In 2007, she received a Ph.D. Honoris Causa from the Technion Israel Institute of Technology.

*Yoram Bronicki.* Yoram Bronicki has been a member of our Board of Directors since November 12, 2004, and has been our President and Chief Operating Officer since September 20, 2007. From July 1, 2004 to September 20, 2007, Mr. Bronicki was our Chief Operating Officer, North America. Mr. Bronicki is also a member of the Board of Directors of Ormat Industries Ltd., a position he has held since 2001. From 1999 to 2001, Mr. Bronicki was Project Manager of Ormat Industries Ltd. and Ormat International Inc.; from 1996 to 1999, he was Project Manager of Ormat Industries Ltd.; and from 1995 to 1996, he was Project Engineer of Ormat Industries Ltd. Mr. Bronicki is the son of Lucien and Yehudit Bronicki. Mr. Bronicki obtained a Bachelor of Science in Mechanical Engineering from Tel Aviv University in 1989 and a Certificate from the Technion Institute of Management Senior Executives Program.

*Joseph Tenne.* Joseph Tenne has served as our Chief Financial Officer since March 9, 2005. From 2003 to 2004, Mr. Tenne was the Chief Financial Officer of Treofan Germany GmbH & Co. KG, a German company. From 1997 until 2003, Mr. Tenne was a partner in Kesselman & Kesselman, Certified Public Accountants in Israel (a member firm of PricewaterhouseCoopers International Limited). Since January 8, 2006, Mr. Tenne has also been the Chief Financial Officer of Ormat Industries Ltd. Mr. Tenne is a member of the board of directors of AudioCodes Ltd., a NASDAQ-listed company. Mr. Tenne obtained a Master of Business Administration from Tel Aviv University in 1987 and a Bachelor of Arts in Accounting and Economics from Tel Aviv University in 1981. Mr. Tenne is also a Certified Public Accountant in Israel.

*Nadav Amir.* Nadav Amir has served as our Executive Vice President of Operations since November 4, 2009. From July 1, 2004 to November 3, 2009, Mr. Amir was our Executive Vice President of Engineering; from 2001 to June 30, 2004, he was Executive Vice President of Engineering of Ormat Industries; from 1993 to 2001, he was Vice President of Engineering of Ormat Industries Ltd.; from 1988 to 1993, he was Manager of Engineering of Ormat Industries Ltd.; from 1984 to 1988, he was Manager of Product Engineering of Ormat Industries Ltd.; and from 1983 to 1984, he was Manager of Research and Development of Ormat Industries. Mr. Amir obtained a Bachelor of Science in Aeronautical Engineering from Technion Haifa in 1972.

## Table of Contents

*Zvi Reiss.* Zvi Reiss has served as our Executive Vice President of Project Management since July 1, 2004. From 2001 to June 30, 2004, Mr. Reiss was the Executive Vice President of Project Management of Ormat Industries Ltd.; from 1995 to 2000, he was Vice President of Project Management of Ormat Industries Ltd. and, from 1993 to 1994, he was Director of Projects of Ormat Industries Ltd. Mr. Reiss obtained a Bachelor of Science in Mechanical Engineering from Ben Gurion University in 1975.

*Joseph Shiloah.* Joseph Shiloah has served as our Executive Vice President for Business Development – Special Project, Rest of the World since January 1, 2010. From July 1, 2004 to December 31, 2009, Mr. Shiloah served as our Executive Vice President of Marketing and Sales, Rest of the World; from 2001 to June 30, 2004, he was the Executive Vice President of Marketing and Sales of Ormat Industries Ltd.; from 1989 to 2000, he was Vice President of Marketing and Sales of Ormat Industries Ltd.; from 1983 to 1989, he was Vice President of Special Projects of Ormat Turbines Ltd.; from 1984 to 1989, he was Operating Manager of the Solar Pond project of Solmat Systems Ltd., a subsidiary of Ormat Turbines Ltd.; and from 1981 to 1983, he was Project Administrator of the Solar Pond power plant project of Ormat Turbines Ltd. and Solmat Systems Ltd. Mr. Shiloah obtained a Bachelor of Arts in Economics from Hebrew University in Jerusalem in 1972.

*Zvi Krieger.* Zvi Krieger has served as our Executive Vice President of Geothermal Resource since November 4, 2009; from September 20, 2007 to November 3, 2009, Mr. Krieger was our Senior Vice President of Geothermal Engineering; from July 1, 2004 to September 20, 2007, he was our Vice President of Geothermal Engineering; and from 2001 to June 30, 2004, he was the Vice President of Geothermal Engineering of Ormat Industries Ltd. Mr. Krieger has been with Ormat Industries Ltd. since 1981 and served as Application Engineer, Manager of System Engineering, Director of New Technologies Business Development and Vice President of Geothermal Engineering. Mr. Krieger obtained a Bachelor of Science in Mechanical Engineering from the Technion, Israel Institute of Technology in 1980.

*Shimon Hatzir.* Shimon Hatzir has served as our Senior Vice President of Engineering since November 4, 2009. From September 20, 2007 to November 3, 2009, Mr. Hatzir was our Senior Vice President of Electrical and Conceptual Engineering; from July 1, 2004 to September 20, 2007, he was our Vice President of Electrical and Conceptual Engineering; from 2002 to June 30, 2004, he was the Vice President of Electrical and Conceptual Engineering of Ormat Industries Ltd; from 1996 to 2001, he was Manager of Electrical and Conceptual Engineering of Ormat Industries Ltd.; and from 1989 to 1995, he was a Project Engineer in the Engineering Division. Mr. Hatzir obtained a Bachelor of Science in Mechanical Engineering from Tel Aviv University in 1988 and a Certificate of the Technology Institute of Management, Senior Executive Program.

*Etty Rosner.* Etty Rosner has served as our Corporate Secretary since October 21, 2004. Ms. Rosner is also the Corporate Secretary of Ormat Industries Ltd., a position she has held since 1991. Ms. Rosner is also our Senior Vice President of Contract Management since September 20, 2007; from July 1, 2004 to September 20, 2007, Ms. Rosner was our Vice President of Contract Management; from 1999 to June 30, 2004, she was the Vice President of Contract Management of Ormat Industries Ltd; from 1991 to 1999, she was Contract Administration Manager and Corporate Secretary of Ormat Industries; and from 1981 to 1991, she was the Manager of the Export Department and Office Administrative Manager of Ormat Industries. Ms. Rosner obtained a Diploma in General Management from Tel Aviv University in 1990.

*Nir Wolf.* Nir Wolf has served as our Vice President for Business Development – Marketing and Sales, Rest of the World since January 1, 2010. From December 2005 to December 31, 2009, Mr. Wolf served as our Vice President, Distributed Power responsible for the marketing, sales, engineering and after sales activities of the remote power units. From December 1999 to December 2005, Mr. Wolf had a leading position as Business Development Manager in the Marketing and Sales Department. Starting January 14, 1994, when Mr. Wolf joined us, he was positioned in the Project Management Department as a Budget and Schedule Controller and later on as a Project Manager. Mr. Wolf obtained a Bachelor of Science in Industrial Engineering, cum laude from the Technion – Israel Institute of Technology in 1991. In 1995, Mr. Wolf obtained a Master of Business Administration from the Bar Ilan University. Mr. Wolf participated in the Technion Institute of Management Senior Executive Program.

**Table of Contents**

*Dan Falk.* Dan Falk has been a member of our Board of Directors since November 12, 2004. Mr. Falk also serves as the Chairman of the Board of Directors of Orad Hi-Tech Systems Ltd., a public non-U.S. company. He is also a member of the Board of Directors of Orbotech Ltd., Nice Systems Ltd., Attunity Ltd., and Nova Measuring Instruments Ltd., all NASDAQ publicly traded companies. In addition, Mr. Falk serves as a member of the Board of Directors of the following public non-US companies: Amiad Water Systems Ltd., Plastopol Ltd., and Oridion Medical Ltd. During the past five years, Mr. Falk served as a member of the Board of Directors of the following public companies, for which he no longer serves as a Director: AVT Ltd., Clicksoftware Technologies Ltd., Dmatek Ltd., Jacada Ltd., Poalim Ventures I Ltd., Medcon Ltd., and Ramdor Ltd. From 2001 to 2004, Mr. Falk was a business consultant to several public and private companies. From 1999 to 2000, Mr. Falk was Chief Operating Officer and Chief Executive Officer of Sapiens International N.V. From 1995 to 1999, Mr. Falk was an Executive Vice President of Orbotech Ltd. From 1985 to 1995, Mr. Falk was Vice President of Finance and Chief Financial Officer of Orbot Systems Ltd. and Orbotech Ltd. Mr. Falk obtained a Masters of Business Administration from Hebrew University in 1972 and a Bachelor of Arts in Economics and Political Science from Hebrew University in 1968. Mr. Falk is the Chair of our Audit Committee.

*Roger W. Gale, Ph.D.* Roger W. Gale has been a member of our Board of Directors since October 26, 2005. Between 1988 and 2000, Dr. Gale was the CEO of Washington International Energy Group, which was sold to PHB Hagler Bailly (PHB) in 1999. In 2000, as PHB was sold to PA Consulting, Dr. Gale held several positions at PA Consulting until 2001, at which time he joined GF Energy LLC as President and CEO, a position he still holds. In addition, Dr. Gale serves as a member of the Board of Directors of the US Energy Association, a not-for-profit organization. On December 1, 2005, he became a member of the Boards of Directors of The Adams Express Company and Petroleum & Resources Corporation (closed-end investment companies). He served on the Audit Committee of Constellation Holdings and on the Board of Directors of the parent, Constellation Energy Group, from 1996 to 2005. Dr. Gale has a Ph.D. in political science from the University of California, Berkeley.

*Robert F. Clarke.* Robert F. Clarke has been a member of our Board of Directors since February 27, 2007. Mr. Clarke was Chairman (since September 1998) and President and Chief Executive Officer (since January 1991) of Hawaiian Electric Industries, Inc. (HEI), from which he retired effective May 2006. Since June 1, 2006, Mr. Clarke has been Executive in Residence at the Shidler College of Business at the University of Hawaii. In addition, Mr. Clarke serves as an advisory director to Oceanic Cable Hawaii, and as a member of the advisory boards of the Shidler College of Business at the University of Hawaii, Sennet Capital, and Aina Koa Pono, a Hawaii based privately held company exploring renewable energy projects in converting biomass into fuels. Mr. Clarke joined HEI in February 1987 as Vice President of Strategic Planning and was in charge of implementing the Company's diversification strategy. Mr. Clarke was named HEI Group Vice President - Diversified Companies in May 1988. He was made a director of HEI in 1989. Prior to joining HEI, Mr. Clarke served as Senior Vice President and Chief Financial Officer of Alexander & Baldwin and as Controller of Dillingham Corporation. Prior to that, he worked for the Ford Motor Company and for the Singer Company. He received his Bachelor's degree in economics in 1965 and his Master's degree in finance in 1966 from the University of California at Berkeley. Honors include Phi Beta Kappa in 1965.

*David Wagener.* David Wagener has been a member of our Board of Directors since April 1, 2010. Since June 1995, Mr. Wagener has been the Managing Partner of Wagener Capital Management, an investment and advisory firm serving utility and private equity companies. From 1990 to 1995, Mr. Wagener served as Director of the Public Utility & Telecommunications Group in the Investment Banking Division of Salomon Brothers, and from 1980 to 1990, he was Vice President of the Public Utility Group and Co-Head of the Independent Power Group in the Investment Banking Division of Goldman Sachs & Co. Mr. Wagener serves on the Board of Directors of Suncor Development Company, a subsidiary of Pinnacle West Capital Corporation, a utility holding company, and Mojave Holdings, an independent power producer. He received his Bachelor's degree in 1976 from Harvard College and his Master's degree in Business Administration in 1980 from the University of Chicago.

**Table of Contents**

**Audit Committee**

We are a listed issuer, as defined in Sec. 240.10A-3 of Regulation S-K, and have a separately designated audit committee established in accordance with Section 3(a)(58)(A) of the Exchange Act, composed of independent directors as required by Section 303A.07 of the NYSE Listed Company Manual. The members of such committee are Dan Falk (Chair), Roger W. Gale, and Robert Clarke who are also independent directors of our company, as defined in Section 303A.02 of the NYSE Listed Company Manual. Our Board of Directors has determined that Mr. Falk qualifies as an Audit Committee financial expert under Section 407 of the Sarbanes-Oxley Act of 2002 and Item 407(d)(5) of Regulation S-K, and is independent as that term is used in Item 407(d)(5)(i)(B) of Regulation S-K under the Securities Exchange Act of 1934.

**ITEM 11. EXECUTIVE COMPENSATION**

The information required under this item is incorporated by reference herein from the Company's definitive 2012 Proxy Statement.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

The information required under this item is incorporated by reference herein from the Company's definitive 2012 Proxy Statement.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

The information required under this item is incorporated by reference herein from the Company's definitive 2012 Proxy Statement.

**ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The information required under this item is incorporated by reference herein from the Company's definitive 2012 Proxy Statement.

**PART IV**

**ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES**

*(a) (1) List of Financial Statements*

Index to Financial Statements in Part II, Item 8 of this annual report.

*(2) List of Financial Statement Schedules*

All applicable schedule information is included in our Financial Statements in Part II, Item 8 of this annual report.

**Table of Contents**

## (b) EXHIBIT INDEX

<b>Exhibit No.</b>	<b>Document</b>
3.1	Second Amended and Restated Certificate of Incorporation, incorporated by reference to Exhibit 3.1 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
3.2	Third Amended and Restated By-laws, incorporated by reference to Exhibit 3.2 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on February 26, 2009.
3.3	Amended and Restated Limited Liability Company Agreement of OPC LLC dated June 7, 2007, by and among Ormat Nevada Inc., Morgan Stanley Geothermal LLC, and Lehman-OPC LLC, incorporated by reference to Exhibit 3.1 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on June 13, 2007.
4.1	Form of Common Share Stock Certificate, incorporated by reference to Exhibit 4.1 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
4.2	Form of Preferred Share Stock Certificate, incorporated by reference to Exhibit 4.2 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
4.3	Form of Rights Agreement by and between Ormat Technologies, Inc. and American Stock Transfer & Trust Company, incorporated by reference to Exhibit 4.3 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 22, 2004.
4.4	Indenture for Senior Debt Securities, dated as of January 16, 2006, between Ormat Technologies, Inc. and Union Bank of California, incorporated by reference to Exhibit 4.2 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-3 (File No. 333-131064) to the Securities and Exchange Commission on January 26, 2006.
4.5	Indenture for Subordinated Debt Securities, dated as of January 16, 2006, between Ormat Technologies, Inc. and Union Bank of California, incorporated by reference to Exhibit 4.3 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-3 (File No. 333-131064) to the Securities and Exchange Commission on January 26, 2006.
4.6	Deed of Trust, dated as of August 3, 2010, between Ormat Technologies, Inc. and Ziv Haft Trust Company Ltd., as trustee, incorporated by reference to Exhibit 4.1 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on February 2, 2011.
4.7	Addendum, dated as of January 27, 2011, to the Deed of Trust, dated as of August 3, 2010, between Ormat Technologies, Inc. and Ziv Haft Trust Company Ltd., as trustee, incorporated by reference to Exhibit 4.2 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on February 2, 2011.
4.8	Form of Bond issued pursuant to the Deed of Trust, dated as of August 3, 2010 (as amended or supplemented), between Ormat Technologies, Inc. and Ziv Haft Trust Company Ltd., as trustee, incorporated by reference to Exhibit 4.3 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on February 2, 2011.
4.9	Second Addendum, dated as of February 11, 2011, to the Deed of Trust, dated as of August 3, 2010 (as amended or supplemented), between Ormat Technologies, Inc. and Ziv Haft Trust Company Ltd., incorporated by reference to Exhibit 4.7 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on May 6, 2011.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
4.10	Indenture of Trust and Security Agreement, dated September 23, 2011, among OFC 2 LLC, ORNI 15 LLC, ORNI 39 LLC, ORNI 42 LLC, HSS II, LLC, and Wilmington Trust Company, as Trustee and Depository, incorporated by reference to Exhibit 4.8 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on November 4, 2011.
4.11	Third Addendum, dated as of December 1, 2011, to a Deed of Trust, dated as of August 3, 2010 as amended on January 31, 2011 (effective as of January 27, 2011) and on February 13, 2011, between Ormat Technologies, Inc. and Mishmeret Trusts Services Company Ltd. (formerly Ziv Haft Trust Company Ltd.), as trustee, incorporated by reference to Exhibit 4.1 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on December 1, 2011.
10.1.1	Indenture, dated February 13, 2004, among Ormat Funding Corp., Brady Power Partners, Steamboat Development Corp., Steamboat Geothermal LLC, OrMammoth Inc., ORNI 1 LLC, ORNI 2 LLC, ORNI 7 LLC, Ormesa LLC and Union Bank of California, incorporated by reference to Exhibit 10.1.7 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.2	First Supplemental Indenture, dated May 14, 2004, among Ormat Funding Corp., Brady Power Partners, Steamboat Development Corp., Steamboat Geothermal LLC, OrMammoth Inc., ORNI 1 LLC, ORNI 2 LLC, ORNI 7 LLC, Ormesa LLC and Union Bank of California, incorporated by reference to Exhibit 10.1.8 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.3	Fifth Supplemental Indenture, dated April 26, 2006, among Ormat Funding Corp. and Union Bank of California, N.A., incorporated by reference to Exhibit 10.1.6 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q (File No 001-32347) to the Securities and Exchange Commission on August 7, 2006.
10.1.4	Loan Agreement, dated October 1, 2003, by and between Ormat Technologies, Inc. and Ormat Industries Ltd., incorporated by reference to Exhibit 10.1.9 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.5	Amendment No. 1 to Loan Agreement, dated September 20, 2004, by and between Ormat Technologies, Inc. and Ormat Industries Ltd., incorporated by reference to Exhibit 10.1.10 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.6	Guarantee Fee Agreement, dated January 1, 1999, by and between Ormat Technologies, Inc. and Ormat Industries Ltd., incorporated by reference to Exhibit 10.1.13 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.7	Reimbursement Agreement, dated July 15, 2004, by and between Ormat Technologies, Inc. and Ormat Industries Ltd., incorporated by reference to Exhibit 10.1.14 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.8	Services Agreement, dated July 15, 2004, by and between Ormat Industries Ltd. and Ormat Systems Ltd., incorporated by reference to Exhibit 10.1.15 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.9	Agreement for Purchase of Membership Interests in OPC LLC dated June 7, 2007, by and among Ormat Nevada Inc., Morgan Stanley Geothermal LLC and Lehman-OPC LLC, incorporated by reference to Exhibit 10.1 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on June 13, 2007.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.1.10	First Amendment to Agreement for Purchase of Membership Interests in OPC LLC, dated as of April 17, 2008, by and among Ormat Nevada Inc., Morgan Stanley Geothermal LLC, and Lehman-OPC LLC, incorporated by reference to Exhibit 10.1.18 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on May 7, 2008.
10.1.11	Membership Interest Purchase Agreement, dated as of October 30, 2009, by and among Lehman-OPC LLC, Ormat Nevada Inc. and OPC LLC, incorporated by reference to Exhibit 10.1.13 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on November 3, 2009.
10.2.1	Power Purchase Contract, dated July 18, 1984, between Southern California Edison Company and Republic Geothermal, Inc., incorporated by reference to Exhibit 10.3.1 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.2	Amendment No. 1, to the Power Purchase Contract, dated December 23, 1988, between Southern California Edison Company and Ormesa Geothermal, incorporated by reference to Exhibit 10.3.2 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.3	Power Purchase Contract, dated June 13, 1984, between Southern California Edison Company and Ormat Systems, Inc., incorporated by reference to Exhibit 10.3.3 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.4	Power Purchase and Sales Agreement, dated as of August 26, 1983, between Chevron U.S.A. Inc. and Southern California Edison Company, incorporated by reference to Exhibit 10.3.4 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.5	Amendment No. 1, to Power Purchase and Sale Agreement, dated as of December 11, 1984, between Chevron U.S.A. Inc., HGC and Southern California Edison Company, incorporated by reference to Exhibit 10.3.5 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.6	Settlement Agreement and Amendment No. 2, to Power Purchase Contract, dated August 7, 1995, between HGC and Southern California Edison Company, incorporated by reference to Exhibit 10.3.6 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.7	Power Purchase Contract dated, April 16, 1985, between Southern California Edison Company and Second Imperial Geothermal Company, incorporated by reference to Exhibit 10.3.7 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.8	Amendment No. 1, dated as of October 23, 1987, between Southern California Edison Company and Second Imperial Geothermal Company, incorporated by reference to Exhibit 10.3.8 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.9	Amendment No. 2, dated as of July 27, 1990, between Southern California Edison Company and Second Imperial Geothermal Company, incorporated by reference to Exhibit 10.3.9 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.10	Amendment No. 3, dated as of November 24, 1992, between Southern California Edison Company and Second Imperial Geothermal Company, incorporated by reference to Exhibit 10.3.10 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.2.11	Amended and Restated Power Purchase and Sales Agreement, dated December 2, 1986, between Mammoth Pacific and Southern California Edison Company, incorporated by reference to Exhibit 10.3.11 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.12	Amendment No. 1, to Amended and Restated Power Purchase and Sale Agreement, dated May 18, 1990, between Mammoth Pacific and Southern California Edison Company, incorporated by reference to Exhibit 10.3.12 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.13	Power Purchase Contract, dated April 15, 1985, between Mammoth Pacific and Southern California Edison Company, incorporated by reference to Exhibit 10.3.13 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.14	Amendment No. 1, dated as of October 27, 1989, between Mammoth Pacific and Southern California Edison Company, incorporated by reference to Exhibit 10.3.14 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.15	Amendment No. 2, dated as of December 20, 1989, between Mammoth Pacific and Southern California Edison Company, incorporated by reference to Exhibit 10.3.15 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.16	Power Purchase Contract, dated April 16, 1985, between Southern California Edison Company and Santa Fe Geothermal, Inc., incorporated by reference to Exhibit 10.3.16 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.17	Amendment No. 1, to Power Purchase Contract, dated October 25, 1985, between Southern California Edison Company and Mammoth Pacific, incorporated by reference to Exhibit 10.3.17 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.18	Amendment No. 2, to Power Purchase Contract, dated December 20, 1989, between Southern California Edison Company and Pacific Lighting Energy Systems, incorporated by reference to Exhibit 10.3.18 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.19	Interconnection Facilities Agreement, dated October 20, 1989, by and between Southern California Edison Company and Mammoth Pacific, incorporated by reference to Exhibit 10.3.19 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.20	Interconnection Facilities Agreement, dated October 13, 1985, by and between Southern California Edison Company and Mammoth Pacific (II), incorporated by reference to Exhibit 10.3.20 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.21	Interconnection Facilities Agreement, dated October 20, 1989, by and between Southern California Edison Company and Pacific Lighting Energy Systems, incorporated by reference to Exhibit 10.3.21 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.22	Interconnection Agreement, dated August 12, 1985, by and between Southern California Edison Company and Heber Geothermal Company incorporated by reference to Exhibit 10.3.22 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.2.23	Plant Connection Agreement for the Heber Geothermal Plant No. 1, dated, July 31, 1985, by and between Imperial Irrigation District and Heber Geothermal Company incorporated by reference to Exhibit 10.3.23 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.24	Plant Connection Agreement for the Second Imperial Geothermal Company Power Plant No. 1, dated, October 27, 1992, by and between Imperial Irrigation District and Second Imperial Geothermal Company incorporated by reference to Exhibit 10.3.24 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.25	IID-SIGC Transmission Service Agreement for Alternative Resources, dated, October 27, 1992, by and between Imperial Irrigation District and Second Imperial Geothermal Company incorporated by reference to Exhibit 10.3.25 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.26	Plant Connection Agreement for the Ormesa Geothermal Plant, dated October 1, 1985, by and between Imperial Irrigation District and Ormesa Geothermal incorporated by reference to Exhibit 10.3.26 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.27	Plant Connection Agreement for the Ormesa IE Geothermal Plant, dated, October 21, 1988, by and between Imperial Irrigation District and Ormesa IE incorporated by reference to Exhibit 10.3.27 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.28	Plant Connection Agreement for the Ormesa IH Geothermal Plant, dated, October 3, 1989, by and between Imperial Irrigation District and Ormesa IH incorporated by reference to Exhibit 10.3.28 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.29	Plant Connection Agreement for the Geo East Mesa Limited Partnership Unit No. 2, dated, March 21, 1989, by and between Imperial Irrigation District and Geo East Mesa Limited Partnership incorporated by reference to Exhibit 10.3.29 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.30	Plant Connection Agreement for the Geo East Mesa Limited Partnership Unit No. 3, dated, March 21, 1989, by and between Imperial Irrigation District and Geo East Mesa Limited Partnership incorporated by reference to Exhibit 10.3.30 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.31	Transmission Service Agreement for the Ormesa I, Ormesa IE and Ormesa IH Geothermal Power Plants, dated, October 3, 1989, between Imperial Irrigation District and Ormesa Geothermal incorporated by reference to Exhibit 10.3.31 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.32	Transmission Service Agreement for the Geo East Mesa Limited Partnership Unit No. 2, dated, March 21, 1989, by and between Imperial Irrigation District and Geo East Mesa Limited Partnership incorporated by reference to Exhibit 10.3.32 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.2.33	Transmission Service Agreement for the Geo East Mesa Limited Partnership Unit No. 3, dated, March 21, 1989, by and between Imperial Irrigation District and Geo East Mesa Limited Partnership incorporated by reference to Exhibit 10.3.33 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.34	IID-Edison Transmission Service Agreement for Alternative Resources, dated, September 26, 1985, by and between Imperial Irrigation District and Southern California Edison Company incorporated by reference to Exhibit 10.3.34 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.35	Plant Amendment No. 1, to IID-Edison Transmission Service Agreement for Alternative Resources, dated, August 25, 1987, by and between Imperial Irrigation District and Southern California Edison Company incorporated by reference to Exhibit 10.3.35 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.36	Agreement Addressing Renewable Energy Pricing and Payment Issues, dated June 15, 2001, by and between Second Imperial Geothermal Company QFID No. 3021 and Southern California Edison Company incorporated by reference to Exhibit 10.3.39 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.37	Amendment No. 1 to Agreement Addressing Renewable Energy Pricing and Payment Issues, dated November 30, 2001, by and between Second Imperial Geothermal Company QFID No. 3021 and Southern California Edison Company incorporated by reference to Exhibit 10.3.40 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.38	Agreement Addressing Renewable Energy Pricing and Payment Issues, dated June 15, 2001, by and between Heber Geothermal Company QFID No. 3001 and Southern California Edison Company incorporated by reference to Exhibit 10.3.41 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.39	Amendment No. 1 to Agreement Addressing Renewable Energy Pricing and Payment Issues, dated November 30, 2001, by and between Heber Geothermal Company QFID No. 3001 and Southern California Edison Company incorporated by reference to Exhibit 10.3.42 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.40	Energy Services Agreement, dated February 2003, by and between Imperial Irrigation District and ORMESA, LLC incorporated by reference to Exhibit 10.3.43 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.41	Purchase Power Contract, dated March 24, 1986, by and between Hawaii Electric Light Company and Thermal Power Company incorporated by reference to Exhibit 10.3.44 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.42	Firm Capacity Amendment to Purchase Power Contract, dated July 28, 1989, by and between Hawaii Electric Light Company and Puma Geothermal Venture incorporated by reference to Exhibit 10.3.45 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.2.43	Amendment to Purchase Power Contract, dated October 19, 1993, by and between Hawaii Electric Light Company and Puna Geothermal Venture incorporated by reference to Exhibit 10.3.46 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.44	Third Amendment to the Purchase Power Contract, dated March 7, 1995, by and between Hawaii Electric Light Company and Puna Geothermal Venture incorporated by reference to Exhibit 10.3.47 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.45	Performance Agreement and Fourth Amendment to the Purchase Power Contract, dated February 12, 1996, by and between Hawaii Electric Light Company and Puna Geothermal Venture incorporated by reference to Exhibit 10.3.48 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.46	Agreement to Design 69 KV Transmission Lines, a Substation at Pohoiki, Modifications to Substations at Puna and Kaumana, and a Temporary 34.5 Facility to Interconnect PGV's Geothermal Electric Plant with HELCO's System Grid (Phase II and III), dated June 7, 1990, by and between Hawaii Electric Light Company and Puna Geothermal Venture incorporated by reference to Exhibit 10.3.49 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.1	Ormesa BLM Geothermal Resources Lease CA 966 incorporated by reference to Exhibit 10.4.1 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.2	Ormesa BLM License for Electric Power Plant Site CA 24678 incorporated by reference to Exhibit 10.4.2 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.3	Geothermal Resources Mining Lease, dated February 20, 1981, by and between the State of Hawaii, as Lessor, and Kapoho Land Partnership, as Lessee incorporated by reference to Exhibit 10.4.3 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.4	Geothermal Lease Agreement, dated October 20, 1975, by and between Ruth Walker Cox and Betty M. Smith, as Lessor, and Gulf Oil Corporation, as Lessee incorporated by reference to Exhibit 10.4.4 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.5	Geothermal Lease Agreement, dated August 1, 1976, by and between Southern Pacific Land Company, as Lessor, and Phillips Petroleum Company, as Lessee incorporated by reference to Exhibit 10.4.5 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.6	Geothermal Resources Lease, dated November 18, 1983, by and between Sierra Pacific Power Company, as Lessor, and Geothermal Development Associates, as Lessee incorporated by reference to Exhibit 10.4.6 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.7	Lease Agreement, dated November 1, 1969, by and between Chrisman B. Jackson and Sharon Jackson, husband and wife, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.7 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.3.8	Lease Agreement, dated September 22, 1976, by and between El Toro Land & Cattle Co., as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.8 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.9	Lease Agreement, dated February 17, 1977, by and between Joseph L. Holtz, as Lessor, and Chevron U.S.A. Inc., as Lessee incorporated by reference to Exhibit 10.4.9 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.10	Lease Agreement, dated March 11, 1964, by and between John D. Jackson and Frances Jones Jackson, also known as Frances J. Jackson, husband and wife, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.10 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.11	Lease Agreement, dated February 16, 1964, by and between John D. Jackson, conservator for the estate of Aphia Jackson Wallan, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.11 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.12	Lease Agreement, dated March 17, 1964, by and between Helen S. Fugate, a widow, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.12 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.13	Lease Agreement, dated February 16, 1964, by and between John D. Jackson and Frances J. Jackson, husband and wife, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.13 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.14	Lease Agreement, dated February 20, 1964, by and between John A. Straub and Edith D. Straub, also known as John A. Straub and Edythe D. Straub, husband and wife, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.14 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.15	Lease Agreement, dated July 1, 1971, by and between Marie L. Gisler and Harry R. Gisler, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.15 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.16	Lease Agreement, dated February 28, 1964, by and between Gus Kurupas and Guadalupe Kurupas, husband and wife, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.16 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.17	Lease Agreement, dated April 7, 1972, by and between Nowlin Partnership, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.17 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.18	Geothermal Lease Agreement, dated July 18, 1979, by and between Charles K. Corfman, an unmarried man as his sole and separate property, and Lessor, and Union Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.18 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.3.19	Lease Agreement, dated January 1, 1972, by and between Holly Oberly Thomson, also known as Holly F. Oberly Thomson, also known as Holly Felicia Thomson, as Lessor, and Union Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.19 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.20	Lease Agreement, dated June 14, 1971, by and between Fitzhugh Lee Brewer, Jr., a married man as his separate property, Donna Hawk, a married woman as her separate property, and Ted Draper and Helen Draper, husband and wife, as Lessor, and Union Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.20 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.21	Lease Agreement, dated May 13, 1971, by and between Mathew J. La Brucherie and Jane E. La Brucherie, husband and wife, and Robert T. O. Dell and Phyllis M. O. Dell, husband and wife, as Lessor, and Union Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.21 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.22	Lease Agreement, dated June 2, 1971, by and between Dorothy Gisler, a widow, Joan C. Hill, and Jean C. Browning, as Lessor, and Union Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.22 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.23	Geothermal Lease Agreement, dated February 15, 1977, by and between Walter J. Holtz, as Lessor, and Magma Energy Inc., as Lessee incorporated by reference to Exhibit 10.4.23 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.24	Geothermal Lease, dated August 31, 1983, by and between Magma Energy Inc., as Lessor, and Holt Geothermal Company, as Lessee incorporated by reference to Exhibit 10.4.24 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.25	Unprotected Lease Agreement, dated July 15, 2004, by and between Ormat Industries Ltd. and Ormat Systems Ltd. incorporated by reference to Exhibit 10.4.25 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.26	Geothermal Resources Lease, dated June 27, 1988, by and between Bernice Guisti, Judith Harvey and Karen Thompson, Trustees and Beneficiaries of the Guisti Trust, as Lessor, and Far West Capital, Inc., as Lessee incorporated by reference to Exhibit 10.4.26 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.27	Amendment to Geothermal Resources Lease, dated January, 1992, by and between Bernice Guisti, Judith Harvey and Karen Thompson, Trustees and Beneficiaries of the Guisti Trust, as Lessor, and Far West Capital, Inc., as Lessee incorporated by reference to Exhibit 10.4.27 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.28	Second Amendment to Geothermal Resources Lease, dated June 25, 1993, by and between Bernice Guisti, Judith Harvey and Karen Thompson, Trustees and Beneficiaries of the Guisti Trust, as Lessor, and Far West Capital, Inc. and its Assignee, Steamboat Development Corp., as Lessee incorporated by reference to Exhibit 10.4.28 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.3.29	Geothermal Resources Sublease, dated May 31, 1991, by and between Fleetwood Corporation, as Lessor, and Far West Capital, Inc., as Lessee incorporated by reference to Exhibit 10.4.29 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.30	KLP Lease and Agreement, dated March 1, 1981, by and between Kapoho Land Partnership, as Lessor, and Thermal Power Company, as Lessee incorporated by reference to Exhibit 10.4.30 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.31	Amendment to KLP Lease and Agreement, dated July 9, 1990, by and between Kapoho Land Partnership, as Lessor, and Puna Geothermal Venture, as Lessee incorporated by reference to Exhibit 10.4.31 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.32	Second Amendment to KLP Lease and Agreement, dated December 31, 1996, by and between Kapoho Land Partnership, as Lessor, and Puna Geothermal Venture, as Lessee incorporated by reference to Exhibit 10.4.32 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.33	Participation Agreement, dated May 18, 2005, by and among Puna Geothermal Venture, SE Puna, L.L.C., Wilmington Trust Company, S.E. Puna Lease, L.L.C., AIG Annuity Insurance Company, American General Life Insurance Company, Allstate Life Insurance Company and Union Bank of California, incorporated by reference to Exhibit 10.4.33 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q/A to the Securities and Exchange Commission on December 22, 2005.
10.3.34	Project Lease Agreement, dated May 18, 2005, by and between SE Puna, L.L.C. and Puna Geothermal Venture, incorporated by reference to Exhibit 10.4.34 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q/A to the Securities and Exchange Commission on December 22, 2005.
10.4.1	Patent License Agreement, dated July 15, 2004, by and between Ormat Industries Ltd. and Ormat Systems Ltd. incorporated by reference to Exhibit 10.5.4 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.4.2	Form of Registration Rights Agreement by and between Ormat Technologies, Inc. and Ormat Industries Ltd. incorporated by reference to Exhibit 10.5.5 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 22, 2004.
10.5.1	Ormat Technologies, Inc. 2004 Incentive Compensation Plan incorporated by reference to Exhibit 10.6.1 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 22, 2004.
10.5.2	Form of Incentive Stock Option Agreement incorporated by reference to Exhibit 10.6.2 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 22, 2004.
10.5.3	Form of Nonqualified Stock Option Agreement incorporated by reference to Exhibit 10.6.3 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 22, 2004.
10.6	Form of Executive Employment Agreement of Lucien Bronicki incorporated by reference to Exhibit 10.7 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.7.1	Form of Executive Employment Agreement of Yehudit Bronicki incorporated by reference to Exhibit 10.8 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.7.2	Amendment to Employment Agreement of Yehudit Bronicki, dated March 28, 2008, by and between Ormat Technologies, Inc. and Yehudit Bronicki, incorporated by reference to Exhibit 10.8.1 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on May 7, 2008.
10.8.1	Form of Executive Employment Agreement of Yoram Bronicki incorporated by reference to Exhibit 10.9 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.8.2	Amendment to Employment Agreement of Yoram Bronicki, dated March 28, 2008, by and between Ormat Technologies, Inc. and Yoram Bronicki, incorporated by reference to Exhibit 10.8.1 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on May 7, 2008.
10.8.3	Amendment to Employment Agreement of Yoram Bronicki, dated November 4, 2009, by and between Ormat Technologies, Inc. and Yoram Bronicki, incorporated by reference to Exhibit 10.8.3 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on November 9, 2009.
10.9	Form of Indemnification Agreement incorporated by reference to Exhibit 10.11 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 20, 2004.
10.10	Note Purchase Agreement, dated December 2, 2005, among Lehman Brothers Inc., OrCal Geothermal Inc., OrHeber 1 Inc., OrHeber 2 Inc., Second Imperial Geothermal Company, Heber Field Company and Heber Geothermal Company, incorporated by reference to Exhibit 10.12 to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 28, 2006.
10.11.1	Indenture dated as of December 8, 2005 among OrCal Geothermal Inc., OrHeber 1 Inc., OrHeber 2 Inc., Second Imperial Geothermal Company, Heber Field Company and Heber Geothermal Company and Union Bank of California, incorporated by reference to Exhibit 10.13 to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 28, 2006.
10.11.2	First Supplemental Indenture dated as of June 14, 2006 amending the Indenture dated as of December 8, 2005 among OrCal Geothermal Inc., OrHeber 1 Inc., OrHeber 2 Inc., Second Imperial Geothermal Company, Heber Field Company and Heber Geothermal Company and Union Bank of California, incorporated by reference to Exhibit 10.13.2 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q (File No 001-32347) to the Securities and Exchange Commission on August 7, 2006.
10.12	Guarantee dated as of December 8, 2005 among OrCal Geothermal Inc., OrHeber 1 Inc., OrHeber 2 Inc., Second Imperial Geothermal Company, Heber Field Company and Heber Geothermal Company, incorporated by reference to Exhibit 10.14 to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 28, 2006.
10.13	Note Purchase Agreement, dated February 6, 2004, among Lehman Brothers Inc., Ormat Funding Corp., Brady Power Partners, Steamboat Geothermal LLC, OrMammoth Inc., ORNI 1 LLC, ORNI 2 LLC and ORNI 7 LLC, incorporated by reference to Exhibit 10.15 to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 28, 2006.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.14	Agreement No. 2 Addressing Renewable Energy Pricing Issues, dated May 10, 2006, between Ormesa LLC and Southern California Edison Company, incorporated by reference to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on May 16, 2006.
10.15	Agreement No. 2 Addressing Renewable Energy Pricing Issues, dated May 10, 2006, between Ormesa LLC and Southern California Edison Company, incorporated by reference to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on May 16, 2006.
10.16	Agreement No. 2 Addressing Renewable Energy Pricing Issues, dated May 10, 2006, between Heber Geothermal Company and Southern California Edison Company, incorporated by reference to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on May 16, 2006.
10.17	Agreement No. 2 Addressing Renewable Energy Pricing Issues, dated May 10, 2006, between Second Imperial Geothermal Company and Southern California Edison Company, incorporated by reference to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on May 16, 2006.
10.18.1	Amended and Restated Power Purchase Agreement for Olkaria III Geothermal Plant, dated January 19, 2007, between OrPower 4 Inc. and The Kenya Power and Lighting Company Limited, incorporated by reference to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 12, 2007.
10.18.2	Olkaria III Project Security Agreement, dated January 19, 2007, between OrPower 4 Inc. and The Kenya Power and Lighting Company Limited, incorporated by reference to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 12, 2007.
10.18.3	Common Terms Agreement, dated January 5, 2009, between OrPower 4, Inc. and DEG Deutsche Investitions-Und Entwicklungsgesellschaft MBH, Societe de Promotion et de Participation pour la Cooperation Economique, and BNY Corporate Trustee Services Limited, incorporated by reference to Exhibit 10.18.3 to Ormat Technologies, Inc. Annual Report on Form 10-K for the year ended December 31, 2008 to the Securities and Exchange Commission on March 2, 2009.
10.18.4	DEG A Facility Loan Agreement, dated January 5, 2009, between OrPower 4, Inc. and DEG Deutsche Investitions-Und Entwicklungsgesellschaft MBH and Societe de Promotion et de Participation pour la Cooperation Economique, incorporated by reference to Exhibit 10.18.4 to Ormat Technologies, Inc. Annual Report on Form 10-K for the year ended December 31, 2008 to the Securities and Exchange Commission on March 2, 2009.
10.18.5	DEG B Facility Loan Agreement, dated January 5, 2009, between OrPower 4, Inc. and DEG Deutsche Investitions-Und Entwicklungsgesellschaft MBH and Societe de Promotion et de Participation pour la Cooperation Economique, incorporated by reference to Exhibit 10.18.5 to Ormat Technologies, Inc. Annual Report on Form 10-K for the year ended December 31, 2008 to the Securities and Exchange Commission on March 2, 2009.
10.18.6	DEG C Facility Loan Agreement, dated January 5, 2009, between OrPower 4, Inc. and DEG Deutsche Investitions-Und Entwicklungsgesellschaft MBH and Societe de Promotion et de Participation pour la Cooperation Economique, incorporated by reference to Exhibit 10.18.6 to Ormat Technologies, Inc. Annual Report on Form 10-K for the year ended December 31, 2008 to the Securities and Exchange Commission on March 2, 2009.
10.18.7	Proparco A Facility Loan Agreement, dated January 5, 2009, between OrPower 4, Inc. and DEG Deutsche Investitions-Und Entwicklungsgesellschaft MBH and Societe de Promotion et de Participation pour la Cooperation Economique, incorporated by reference to Exhibit 10.18.7 to Ormat Technologies, Inc. Annual Report on Form 10-K for the year ended December 31, 2008 to the Securities and Exchange Commission on March 2, 2009.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.19	Amendment No. 2 to the Power Purchase Contract between Ormesa LLC and Ormat Technologies, Inc., and Southern California Edison Company (RAP ID 3012) dated April 23, 2006, incorporated by reference to Exhibit 10.21.2 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on August 8, 2007.
10.20	Joint Ownership Agreement for the Carson Lake Project, dated as of March 12, 2008, by and between Nevada Power Company and ORNI 16 LLC, incorporated by reference to Exhibit 10.24 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on May 7, 2008.
10.21	Note Purchase Agreement, dated as of May 18, 2009, among Ortitlan, Limitada and TCW Global Project Fund II, Ltd., incorporated by reference to Exhibit 10.23 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on May 21, 2009.
10.22	Sale and Purchase Agreement dated August 2, 2010, between ORNI 44 LLC and CD Mammoth Lakes I, Inc. and CD Mammoth Lakes II, Inc., incorporated by reference to Exhibit 10.1 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on November 4, 2010.
10.23	Note Purchase Agreement, dated September 23, 2011, among OFC 2 LLC, ORNI 15 LLC, ORNI 39 LLC, ORNI 42 LLC, and HSS II, LLC, as Issuers, OFC 2 Noteholder Trust, as Purchaser, John Hancock Life Insurance Company (U.S.A.), as Administrative Agent, and the United States Department of Energy (DOE), as Guarantor, incorporated by reference to Exhibit 10.1 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on November 4, 2011.
10.24.1	Credit Agreement, dated as of November 21, 2011, between Lightning Dock Geothermal HI-01, LLC, and Ormat Nevada Inc., filed herewith.
10.24.2	Subordination Agreement, dated as of January 11, 2012, among CYRQ ENERGY, Inc., Lightning Dock Geothermal HI-01, LLC, and Ormat Nevada Inc., filed herewith.
10.24.3	Accounts Agreement, dated as of January 25, 2012, among Lightning Dock Geothermal HI-01, LLC, Ormat Nevada Inc., and Wells Fargo Bank, National Association, as Depositary, filed herewith.
10.25.1	Credit Agreement, dated December 19, 2011, between Thermo NO. 1 BE-01, LLC, and Ormat Nevada Inc., filed herewith.
10.25.2	Subordination Agreement, dated as of January 11, 2012, among CYRQ ENERGY, INC., Thermo NO. 1 BE-01, LLC, and Ormat Nevada Inc., filed herewith.
10.25.3	Accounts Agreement, dated as of January 25, 2012 among Thermo NO. 1 BE-01, LLC, Ormat Nevada Inc., and Wells Fargo Bank, National Association, as Depositary, filed herewith.
21.1	Subsidiaries of Ormat Technologies, Inc., incorporated by reference to Exhibit 21.1 to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 28, 2006.
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm, filed herewith.
31.1	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.
31.2	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.
32.1	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, filed herewith.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
32.2	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, filed herewith.
99.1	Material terms with respect to BLM geothermal resources leases incorporated by reference to Exhibit 99.1 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 20, 2004.
99.2	Material terms with respect to BLM site leases incorporated by reference to Exhibit 99.2 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
99.3	Material terms with respect to agreements addressing renewable energy pricing and payment issues incorporated by reference to Exhibit 99.3 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.

**Table of Contents**

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ORMAT TECHNOLOGIES, INC.

By: /s/ YEHUDIT BRONICKI  
 Name: Yehudit Bronicki  
 Title: Chief Executive Officer and Director

Date: February 29, 2012

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities indicated, on February 29, 2012.

Signature	Capacity
/s/ YEHUDIT BRONICKI  Yehudit Bronicki	Chief Executive Officer and Director  (Principal Executive Officer)
/s/ JOSEPH TENNE  Joseph Tenne	Chief Financial Officer  (Principal Financial and Accounting Officer)
/s/ LUCIEN Y. BRONICKI  Lucien Y. Bronicki	Chairman of the Board of Directors and  Chief Technology Officer
/s/ YORAM BRONICKI  Yoram Bronicki	President, Chief Operating Officer and  Director
/s/ DAN FALK  Dan Falk	Director

**Table of Contents**

## (C) EXHIBIT INDEX

<b>Exhibit No.</b>	<b>Document</b>
3.1	Second Amended and Restated Certificate of Incorporation, incorporated by reference to Exhibit 3.1 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
3.2	Third Amended and Restated By-laws, incorporated by reference to Exhibit 3.2 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on February 26, 2009.
3.3	Amended and Restated Limited Liability Company Agreement of OPC LLC dated June 7, 2007, by and among Ormat Nevada Inc., Morgan Stanley Geothermal LLC, and Lehman-OPC LLC, incorporated by reference to Exhibit 3.1 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on June 13, 2007.
4.1	Form of Common Share Stock Certificate, incorporated by reference to Exhibit 4.1 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
4.2	Form of Preferred Share Stock Certificate, incorporated by reference to Exhibit 4.2 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
4.3	Form of Rights Agreement by and between Ormat Technologies, Inc. and American Stock Transfer & Trust Company, incorporated by reference to Exhibit 4.3 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 22, 2004.
4.4	Indenture for Senior Debt Securities, dated as of January 16, 2006, between Ormat Technologies, Inc. and Union Bank of California, incorporated by reference to Exhibit 4.2 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-3 (File No. 333-131064) to the Securities and Exchange Commission on January 26, 2006.
4.5	Indenture for Subordinated Debt Securities, dated as of January 16, 2006, between Ormat Technologies, Inc. and Union Bank of California, incorporated by reference to Exhibit 4.3 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-3 (File No. 333-131064) to the Securities and Exchange Commission on January 26, 2006.
4.6	Deed of Trust, dated as of August 3, 2010, between Ormat Technologies, Inc. and Ziv Haft Trust Company Ltd., as trustee, incorporated by reference to Exhibit 4.1 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on February 2, 2011.
4.7	Addendum, dated as of January 27, 2011, to the Deed of Trust, dated as of August 3, 2010, between Ormat Technologies, Inc. and Ziv Haft Trust Company Ltd., as trustee, incorporated by reference to Exhibit 4.2 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on February 2, 2011.
4.8	Form of Bond issued pursuant to the Deed of Trust, dated as of August 3, 2010 (as amended or supplemented), between Ormat Technologies, Inc. and Ziv Haft Trust Company Ltd., as trustee, incorporated by reference to Exhibit 4.3 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on February 2, 2011.
4.9	Second Addendum, dated as of February 11, 2011, to the Deed of Trust, dated as of August 3, 2010 (as amended or supplemented), between Ormat Technologies, Inc. and Ziv Haft Trust Company Ltd., incorporated by reference to Exhibit 4.7 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on May 6, 2011.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
4.10	Indenture of Trust and Security Agreement, dated September 23, 2011, among OFC 2 LLC, ORNI 15 LLC, ORNI 39 LLC, ORNI 42 LLC, HSS II, LLC, and Wilmington Trust Company, as Trustee and Depository, incorporated by reference to Exhibit 4.8 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on November 4, 2011.
4.11	Third Addendum, dated as of December 1, 2011, to a Deed of Trust, dated as of August 3, 2010 as amended on January 31, 2011 (effective as of January 27, 2011) and on February 13, 2011, between Ormat Technologies, Inc. and Mishmeret Trusts Services Company Ltd. (formerly Ziv Haft Trust Company Ltd.), as trustee, incorporated by reference to Exhibit 4.1 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on December 1, 2011.
10.1.1	Indenture, dated February 13, 2004, among Ormat Funding Corp., Brady Power Partners, Steamboat Development Corp., Steamboat Geothermal LLC, OrMammoth Inc., ORNI 1 LLC, ORNI 2 LLC, ORNI 7 LLC, Ormesa LLC and Union Bank of California, incorporated by reference to Exhibit 10.1.7 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.2	First Supplemental Indenture, dated May 14, 2004, among Ormat Funding Corp., Brady Power Partners, Steamboat Development Corp., Steamboat Geothermal LLC, OrMammoth Inc., ORNI 1 LLC, ORNI 2 LLC, ORNI 7 LLC, Ormesa LLC and Union Bank of California, incorporated by reference to Exhibit 10.1.8 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.3	Fifth Supplemental Indenture, dated April 26, 2006, among Ormat Funding Corp. and Union Bank of California, N.A., incorporated by reference to Exhibit 10.1.6 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q (File No 001-32347) to the Securities and Exchange Commission on August 7, 2006.
10.1.4	Loan Agreement, dated October 1, 2003, by and between Ormat Technologies, Inc. and Ormat Industries Ltd., incorporated by reference to Exhibit 10.1.9 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.5	Amendment No. 1 to Loan Agreement, dated September 20, 2004, by and between Ormat Technologies, Inc. and Ormat Industries Ltd., incorporated by reference to Exhibit 10.1.10 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.6	Guarantee Fee Agreement, dated January 1, 1999, by and between Ormat Technologies, Inc. and Ormat Industries Ltd., incorporated by reference to Exhibit 10.1.13 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.7	Reimbursement Agreement, dated July 15, 2004, by and between Ormat Technologies, Inc. and Ormat Industries Ltd., incorporated by reference to Exhibit 10.1.14 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.8	Services Agreement, dated July 15, 2004, by and between Ormat Industries Ltd. and Ormat Systems Ltd., incorporated by reference to Exhibit 10.1.15 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.1.9	Agreement for Purchase of Membership Interests in OPC LLC dated June 7, 2007, by and among Ormat Nevada Inc., Morgan Stanley Geothermal LLC and Lehman-OPC LLC, incorporated by reference to Exhibit 10.1 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on June 13, 2007.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.1.10	First Amendment to Agreement for Purchase of Membership Interests in OPC LLC, dated as of April 17, 2008, by and among Ormat Nevada Inc., Morgan Stanley Geothermal LLC, and Lehman-OPC LLC, incorporated by reference to Exhibit 10.1.18 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on May 7, 2008.
10.1.11	Membership Interest Purchase Agreement, dated as of October 30, 2009, by and among Lehman-OPC LLC, Ormat Nevada Inc. and OPC LLC, incorporated by reference to Exhibit 10.1.13 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on November 3, 2009.
10.2.1	Power Purchase Contract, dated July 18, 1984, between Southern California Edison Company and Republic Geothermal, Inc., incorporated by reference to Exhibit 10.3.1 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.2	Amendment No. 1, to the Power Purchase Contract, dated December 23, 1988, between Southern California Edison Company and Ormesa Geothermal, incorporated by reference to Exhibit 10.3.2 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.3	Power Purchase Contract, dated June 13, 1984, between Southern California Edison Company and Ormat Systems, Inc., incorporated by reference to Exhibit 10.3.3 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.4	Power Purchase and Sales Agreement, dated as of August 26, 1983, between Chevron U.S.A. Inc. and Southern California Edison Company, incorporated by reference to Exhibit 10.3.4 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.5	Amendment No. 1, to Power Purchase and Sale Agreement, dated as of December 11, 1984, between Chevron U.S.A. Inc., HGC and Southern California Edison Company, incorporated by reference to Exhibit 10.3.5 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.6	Settlement Agreement and Amendment No. 2, to Power Purchase Contract, dated August 7, 1995, between HGC and Southern California Edison Company, incorporated by reference to Exhibit 10.3.6 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.7	Power Purchase Contract dated, April 16, 1985, between Southern California Edison Company and Second Imperial Geothermal Company, incorporated by reference to Exhibit 10.3.7 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.8	Amendment No. 1, dated as of October 23, 1987, between Southern California Edison Company and Second Imperial Geothermal Company, incorporated by reference to Exhibit 10.3.8 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.9	Amendment No. 2, dated as of July 27, 1990, between Southern California Edison Company and Second Imperial Geothermal Company, incorporated by reference to Exhibit 10.3.9 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.2.10	Amendment No. 3, dated as of November 24, 1992, between Southern California Edison Company and Second Imperial Geothermal Company, incorporated by reference to Exhibit 10.3.10 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.11	Amended and Restated Power Purchase and Sales Agreement, dated December 2, 1986, between Mammoth Pacific and Southern California Edison Company, incorporated by reference to Exhibit 10.3.11 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.12	Amendment No. 1, to Amended and Restated Power Purchase and Sale Agreement, dated May 18, 1990, between Mammoth Pacific and Southern California Edison Company, incorporated by reference to Exhibit 10.3.12 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.13	Power Purchase Contract, dated April 15, 1985, between Mammoth Pacific and Southern California Edison Company, incorporated by reference to Exhibit 10.3.13 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.14	Amendment No. 1, dated as of October 27, 1989, between Mammoth Pacific and Southern California Edison Company, incorporated by reference to Exhibit 10.3.14 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.15	Amendment No. 2, dated as of December 20, 1989, between Mammoth Pacific and Southern California Edison Company, incorporated by reference to Exhibit 10.3.15 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.16	Power Purchase Contract, dated April 16, 1985, between Southern California Edison Company and Santa Fe Geothermal, Inc., incorporated by reference to Exhibit 10.3.16 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.17	Amendment No. 1, to Power Purchase Contract, dated October 25, 1985, between Southern California Edison Company and Mammoth Pacific, incorporated by reference to Exhibit 10.3.17 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.18	Amendment No. 2, to Power Purchase Contract, dated December 20, 1989, between Southern California Edison Company and Pacific Lighting Energy Systems, incorporated by reference to Exhibit 10.3.18 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.19	Interconnection Facilities Agreement, dated October 20, 1989, by and between Southern California Edison Company and Mammoth Pacific, incorporated by reference to Exhibit 10.3.19 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.20	Interconnection Facilities Agreement, dated October 13, 1985, by and between Southern California Edison Company and Mammoth Pacific (II), incorporated by reference to Exhibit 10.3.20 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.2.21	Interconnection Facilities Agreement, dated October 20, 1989, by and between Southern California Edison Company and Pacific Lighting Energy Systems, incorporated by reference to Exhibit 10.3.21 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.22	Interconnection Agreement, dated August 12, 1985, by and between Southern California Edison Company and Heber Geothermal Company incorporated by reference to Exhibit 10.3.22 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.23	Plant Connection Agreement for the Heber Geothermal Plant No. 1, dated, July 31, 1985, by and between Imperial Irrigation District and Heber Geothermal Company incorporated by reference to Exhibit 10.3.23 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.24	Plant Connection Agreement for the Second Imperial Geothermal Company Power Plant No. 1, dated, October 27, 1992, by and between Imperial Irrigation District and Second Imperial Geothermal Company incorporated by reference to Exhibit 10.3.24 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.25	IID-SIGC Transmission Service Agreement for Alternative Resources, dated, October 27, 1992, by and between Imperial Irrigation District and Second Imperial Geothermal Company incorporated by reference to Exhibit 10.3.25 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.2.26	Plant Connection Agreement for the Ormesa Geothermal Plant, dated October 1, 1985, by and between Imperial Irrigation District and Ormesa Geothermal incorporated by reference to Exhibit 10.3.26 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.27	Plant Connection Agreement for the Ormesa IE Geothermal Plant, dated, October 21, 1988, by and between Imperial Irrigation District and Ormesa IE incorporated by reference to Exhibit 10.3.27 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.28	Plant Connection Agreement for the Ormesa IH Geothermal Plant, dated, October 3, 1989, by and between Imperial Irrigation District and Ormesa IH incorporated by reference to Exhibit 10.3.28 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.29	Plant Connection Agreement for the Geo East Mesa Limited Partnership Unit No. 2, dated, March 21, 1989, by and between Imperial Irrigation District and Geo East Mesa Limited Partnership incorporated by reference to Exhibit 10.3.29 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.30	Plant Connection Agreement for the Geo East Mesa Limited Partnership Unit No. 3, dated, March 21, 1989, by and between Imperial Irrigation District and Geo East Mesa Limited Partnership incorporated by reference to Exhibit 10.3.30 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.31	Transmission Service Agreement for the Ormesa I, Ormesa IE and Ormesa IH Geothermal Power Plants, dated, October 3, 1989, between Imperial Irrigation District and Ormesa Geothermal incorporated by reference to Exhibit 10.3.31 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.2.32	Transmission Service Agreement for the Geo East Mesa Limited Partnership Unit No. 2, dated, March 21, 1989, by and between Imperial Irrigation District and Geo East Mesa Limited Partnership incorporated by reference to Exhibit 10.3.32 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.33	Transmission Service Agreement for the Geo East Mesa Limited Partnership Unit No. 3, dated, March 21, 1989, by and between Imperial Irrigation District and Geo East Mesa Limited Partnership incorporated by reference to Exhibit 10.3.33 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.34	IID-Edison Transmission Service Agreement for Alternative Resources, dated, September 26, 1985, by and between Imperial Irrigation District and Southern California Edison Company incorporated by reference to Exhibit 10.3.34 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.35	Plant Amendment No. 1, to IID-Edison Transmission Service Agreement for Alternative Resources, dated, August 25, 1987, by and between Imperial Irrigation District and Southern California Edison Company incorporated by reference to Exhibit 10.3.35 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.36	Agreement Addressing Renewable Energy Pricing and Payment Issues, dated June 15, 2001, by and between Second Imperial Geothermal Company QFID No. 3021 and Southern California Edison Company incorporated by reference to Exhibit 10.3.39 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.37	Amendment No. 1 to Agreement Addressing Renewable Energy Pricing and Payment Issues, dated November 30, 2001, by and between Second Imperial Geothermal Company QFID No. 3021 and Southern California Edison Company incorporated by reference to Exhibit 10.3.40 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.38	Agreement Addressing Renewable Energy Pricing and Payment Issues, dated June 15, 2001, by and between Heber Geothermal Company QFID No. 3001 and Southern California Edison Company incorporated by reference to Exhibit 10.3.41 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.39	Amendment No. 1 to Agreement Addressing Renewable Energy Pricing and Payment Issues, dated November 30, 2001, by and between Heber Geothermal Company QFID No. 3001 and Southern California Edison Company incorporated by reference to Exhibit 10.3.42 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.40	Energy Services Agreement, dated February 2003, by and between Imperial Irrigation District and ORMESA, LLC incorporated by reference to Exhibit 10.3.43 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.41	Purchase Power Contract, dated March 24, 1986, by and between Hawaii Electric Light Company and Thermal Power Company incorporated by reference to Exhibit 10.3.44 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.2.42	Firm Capacity Amendment to Purchase Power Contract, dated July 28, 1989, by and between Hawaii Electric Light Company and Puna Geothermal Venture incorporated by reference to Exhibit 10.3.45 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.43	Amendment to Purchase Power Contract, dated October 19, 1993, by and between Hawaii Electric Light Company and Puna Geothermal Venture incorporated by reference to Exhibit 10.3.46 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.44	Third Amendment to the Purchase Power Contract, dated March 7, 1995, by and between Hawaii Electric Light Company and Puna Geothermal Venture incorporated by reference to Exhibit 10.3.47 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.45	Performance Agreement and Fourth Amendment to the Purchase Power Contract, dated February 12, 1996, by and between Hawaii Electric Light Company and Puna Geothermal Venture incorporated by reference to Exhibit 10.3.48 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.2.46	Agreement to Design 69 KV Transmission Lines, a Substation at Pohoiki, Modifications to Substations at Puna and Kaumana, and a Temporary 34.5 Facility to Interconnect PGV s Geothermal Electric Plant with HELCO s System Grid (Phase II and III), dated June 7, 1990, by and between Hawaii Electric Light Company and Puna Geothermal Venture incorporated by reference to Exhibit 10.3.49 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.1	Ormesa BLM Geothermal Resources Lease CA 966 incorporated by reference to Exhibit 10.4.1 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.2	Ormesa BLM License for Electric Power Plant Site CA 24678 incorporated by reference to Exhibit 10.4.2 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.3	Geothermal Resources Mining Lease, dated February 20, 1981, by and between the State of Hawaii, as Lessor, and Kapoho Land Partnership, as Lessee incorporated by reference to Exhibit 10.4.3 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.4	Geothermal Lease Agreement, dated October 20, 1975, by and between Ruth Walker Cox and Betty M. Smith, as Lessor, and Gulf Oil Corporation, as Lessee incorporated by reference to Exhibit 10.4.4 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.5	Geothermal Lease Agreement, dated August 1, 1976, by and between Southern Pacific Land Company, as Lessor, and Phillips Petroleum Company, as Lessee incorporated by reference to Exhibit 10.4.5 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333- 117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.6	Geothermal Resources Lease, dated November 18, 1983, by and between Sierra Pacific Power Company, as Lessor, and Geothermal Development Associates, as Lessee incorporated by reference to Exhibit 10.4.6 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.3.7	Lease Agreement, dated November 1, 1969, by and between Chrisman B. Jackson and Sharon Jackson, husband and wife, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.7 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.8	Lease Agreement, dated September 22, 1976, by and between El Toro Land & Cattle Co., as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.8 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.9	Lease Agreement, dated February 17, 1977, by and between Joseph L. Holtz, as Lessor, and Chevron U.S.A. Inc., as Lessee incorporated by reference to Exhibit 10.4.9 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.10	Lease Agreement, dated March 11, 1964, by and between John D. Jackson and Frances Jones Jackson, also known as Frances J. Jackson, husband and wife, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.10 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.11	Lease Agreement, dated February 16, 1964, by and between John D. Jackson, conservator for the estate of Aphia Jackson Wallan, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.11 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.12	Lease Agreement, dated March 17, 1964, by and between Helen S. Fugate, a widow, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.12 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.13	Lease Agreement, dated February 16, 1964, by and between John D. Jackson and Frances J. Jackson, husband and wife, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.13 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.14	Lease Agreement, dated February 20, 1964, by and between John A. Straub and Edith D. Straub, also known as John A. Straub and Edythe D. Straub, husband and wife, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.14 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.15	Lease Agreement, dated July 1, 1971, by and between Marie L. Gisler and Harry R. Gisler, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.15 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.16	Lease Agreement, dated February 28, 1964, by and between Gus Kurupas and Guadalupe Kurupas, husband and wife, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.16 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.17	Lease Agreement, dated April 7, 1972, by and between Nowlin Partnership, as Lessor, and Standard Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.17 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.3.18	Geothermal Lease Agreement, dated July 18, 1979, by and between Charles K. Corfman, an unmarried man as his sole and separate property, and Lessor, and Union Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.18 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.19	Lease Agreement, dated January 1, 1972, by and between Holly Oberly Thomson, also known as Holly F. Oberly Thomson, also known as Holly Felicia Thomson, as Lessor, and Union Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.19 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.20	Lease Agreement, dated June 14, 1971, by and between Fitzhugh Lee Brewer, Jr., a married man as his separate property, Donna Hawk, a married woman as her separate property, and Ted Draper and Helen Draper, husband and wife, as Lessor, and Union Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.20 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.21	Lease Agreement, dated May 13, 1971, by and between Mathew J. La Brucherie and Jane E. La Brucherie, husband and wife, and Robert T. O Dell and Phyllis M. O Dell, husband and wife, as Lessor, and Union Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.21 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.22	Lease Agreement, dated June 2, 1971, by and between Dorothy Gisler, a widow, Joan C. Hill, and Jean C. Browning, as Lessor, and Union Oil Company of California, as Lessee incorporated by reference to Exhibit 10.4.22 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.23	Geothermal Lease Agreement, dated February 15, 1977, by and between Walter J. Holtz, as Lessor, and Magma Energy Inc., as Lessee incorporated by reference to Exhibit 10.4.23 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.24	Geothermal Lease, dated August 31, 1983, by and between Magma Energy Inc., as Lessor, and Holt Geothermal Company, as Lessee incorporated by reference to Exhibit 10.4.24 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.25	Unprotected Lease Agreement, dated July 15, 2004, by and between Ormat Industries Ltd. and Ormat Systems Ltd. incorporated by reference to Exhibit 10.4.25 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
10.3.26	Geothermal Resources Lease, dated June 27, 1988, by and between Bernice Guisti, Judith Harvey and Karen Thompson, Trustees and Beneficiaries of the Guisti Trust, as Lessor, and Far West Capital, Inc., as Lessee incorporated by reference to Exhibit 10.4.26 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.27	Amendment to Geothermal Resources Lease, dated January, 1992, by and between Bernice Guisti, Judith Harvey and Karen Thompson, Trustees and Beneficiaries of the Guisti Trust, as Lessor, and Far West Capital, Inc., as Lessee incorporated by reference to Exhibit 10.4.27 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.3.28	Second Amendment to Geothermal Resources Lease, dated June 25, 1993, by and between Bernice Guisti, Judith Harvey and Karen Thompson, Trustees and Beneficiaries of the Guisti Trust, as Lessor, and Far West Capital, Inc. and its Assignee, Steamboat Development Corp., as Lessee incorporated by reference to Exhibit 10.4.28 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.29	Geothermal Resources Sublease, dated May 31, 1991, by and between Fleetwood Corporation, as Lessor, and Far West Capital, Inc., as Lessee incorporated by reference to Exhibit 10.4.29 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.30	KLP Lease and Agreement, dated March 1, 1981, by and between Kapoho Land Partnership, as Lessor, and Thermal Power Company, as Lessee incorporated by reference to Exhibit 10.4.30 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.31	Amendment to KLP Lease and Agreement, dated July 9, 1990, by and between Kapoho Land Partnership, as Lessor, and Puna Geothermal Venture, as Lessee incorporated by reference to Exhibit 10.4.31 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.32	Second Amendment to KLP Lease and Agreement, dated December 31, 1996, by and between Kapoho Land Partnership, as Lessor, and Puna Geothermal Venture, as Lessee incorporated by reference to Exhibit 10.4.32 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.3.33	Participation Agreement, dated May 18, 2005, by and among Puna Geothermal Venture, SE Puna, L.L.C., Wilmington Trust Company, S.E. Puna Lease, L.L.C., AIG Annuity Insurance Company, American General Life Insurance Company, Allstate Life Insurance Company and Union Bank of California, incorporated by reference to Exhibit 10.4.33 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q/A to the Securities and Exchange Commission on December 22, 2005.
10.3.34	Project Lease Agreement, dated May 18, 2005, by and between SE Puna, L.L.C. and Puna Geothermal Venture, incorporated by reference to Exhibit 10.4.34 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q/A to the Securities and Exchange Commission on December 22, 2005.
10.4.1	Patent License Agreement, dated July 15, 2004, by and between Ormat Industries Ltd. and Ormat Systems Ltd. incorporated by reference to Exhibit 10.5.4 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.4.2	Form of Registration Rights Agreement by and between Ormat Technologies, Inc. and Ormat Industries Ltd. incorporated by reference to Exhibit 10.5.5 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 22, 2004.
10.5.1	Ormat Technologies, Inc. 2004 Incentive Compensation Plan incorporated by reference to Exhibit 10.6.1 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 22, 2004.
10.5.2	Form of Incentive Stock Option Agreement incorporated by reference to Exhibit 10.6.2 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 22, 2004.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.5.3	Form of Nonqualified Stock Option Agreement incorporated by reference to Exhibit 10.6.3 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 22, 2004.
10.6	Form of Executive Employment Agreement of Lucien Bronicki incorporated by reference to Exhibit 10.7 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004
10.7.1	Form of Executive Employment Agreement of Yehudit Bronicki incorporated by reference to Exhibit 10.8 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.7.2	Amendment to Employment Agreement of Yehudit Bronicki, dated March 28, 2008, by and between Ormat Technologies, Inc. and Yehudit Bronicki, incorporated by reference to Exhibit 10.8.1 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on May 7, 2008.
10.8.1	Form of Executive Employment Agreement of Yoram Bronicki incorporated by reference to Exhibit 10.9 to Ormat Technologies, Inc. Registration Statement Amendment No. 1 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on September 28, 2004.
10.8.2	Amendment to Employment Agreement of Yoram Bronicki, dated March 28, 2008, by and between Ormat Technologies, Inc. and Yoram Bronicki, incorporated by reference to Exhibit 10.8.1 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on May 7, 2008.
10.8.3	Amendment to Employment Agreement of Yoram Bronicki, dated November 4, 2009, by and between Ormat Technologies, Inc. and Yoram Bronicki, incorporated by reference to Exhibit 10.8.3 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on November 9, 2009.
10.9	Form of Indemnification Agreement incorporated by reference to Exhibit 10.11 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 20, 2004.
10.10	Note Purchase Agreement, dated December 2, 2005, among Lehman Brothers Inc., OrCal Geothermal Inc., OrHeber 1 Inc., OrHeber 2 Inc., Second Imperial Geothermal Company, Heber Field Company and Heber Geothermal Company, incorporated by reference to Exhibit 10.12 to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 28, 2006.
10.11.1	Indenture dated as of December 8, 2005 among OrCal Geothermal Inc., OrHeber 1 Inc., OrHeber 2 Inc., Second Imperial Geothermal Company, Heber Field Company and Heber Geothermal Company and Union Bank of California, incorporated by reference to Exhibit 10.13 to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 28, 2006.
10.11.2	First Supplemental Indenture dated as of June 14, 2006 amending the Indenture dated as of December 8, 2005 among OrCal Geothermal Inc., OrHeber 1 Inc., OrHeber 2 Inc., Second Imperial Geothermal Company, Heber Field Company and Heber Geothermal Company and Union Bank of California, incorporated by reference to Exhibit 10.13.2 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q (File No 001-32347) to the Securities and Exchange Commission on August 7, 2006.
10.12	Guarantee dated as of December 8, 2005 among OrCal Geothermal Inc., OrHeber 1 Inc., OrHeber 2 Inc., Second Imperial Geothermal Company, Heber Field Company and Heber Geothermal Company, incorporated by reference to Exhibit 10.14 to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 28, 2006.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.13	Note Purchase Agreement, dated February 6, 2004, among Lehman Brothers Inc., Ormat Funding Corp., Brady Power Partners, Steamboat Geothermal LLC, OrMammoth Inc., ORNI 1 LLC, ORNI 2 LLC and ORNI 7 LLC, incorporated by reference to Exhibit 10.15 to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 28, 2006.
10.14	Agreement No. 2 Addressing Renewable Energy Pricing Issues, dated May 10, 2006, between Ormesa LLC and Southern California Edison Company, incorporated by reference to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on May 16, 2006.
10.15	Agreement No. 2 Addressing Renewable Energy Pricing Issues, dated May 10, 2006, between Ormesa LLC and Southern California Edison Company, incorporated by reference to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on May 16, 2006.
10.16	Agreement No. 2 Addressing Renewable Energy Pricing Issues, dated May 10, 2006, between Heber Geothermal Company and Southern California Edison Company, incorporated by reference to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on May 16, 2006.
10.17	Agreement No. 2 Addressing Renewable Energy Pricing Issues, dated May 10, 2006, between Second Imperial Geothermal Company and Southern California Edison Company, incorporated by reference to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on May 16, 2006.
10.18.1	Amended and Restated Power Purchase Agreement for Olkaria III Geothermal Plant, dated January 19, 2007, between OrPower 4 Inc. and The Kenya Power and Lighting Company Limited, incorporated by reference to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 12, 2007.
10.18.2	Olkaria III Project Security Agreement, dated January 19, 2007, between OrPower 4 Inc. and The Kenya Power and Lighting Company Limited, incorporated by reference to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 12, 2007.
10.18.3	Common Terms Agreement, dated January 5, 2009, between OrPower 4, Inc. and DEG Deutsche Investitions-Und Entwicklungsgesellschaft MBH, Societe de Promotion et de Participation pour la Cooperation Economique, and BNY Corporate Trustee Services Limited, incorporated by reference to Exhibit 10.18.3 to Ormat Technologies, Inc. Annual Report on Form 10-K for the year ended December 31, 2008 to the Securities and Exchange Commission on March 2, 2009.
10.18.4	DEG A Facility Loan Agreement, dated January 5, 2009, between OrPower 4, Inc. and DEG Deutsche Investitions-Und Entwicklungsgesellschaft MBH and Societe de Promotion et de Participation pour la Cooperation Economique, incorporated by reference to Exhibit 10.18.4 to Ormat Technologies, Inc. Annual Report on Form 10-K for the year ended December 31, 2008 to the Securities and Exchange Commission on March 2, 2009.
10.18.5	DEG B Facility Loan Agreement, dated January 5, 2009, between OrPower 4, Inc. and DEG Deutsche Investitions-Und Entwicklungsgesellschaft MBH and Societe de Promotion et de Participation pour la Cooperation Economique, incorporated by reference to Exhibit 10.18.5 to Ormat Technologies, Inc. Annual Report on Form 10-K for the year ended December 31, 2008 to the Securities and Exchange Commission on March 2, 2009.
10.18.6	DEG C Facility Loan Agreement, dated January 5, 2009, between OrPower 4, Inc. and DEG Deutsche Investitions-Und Entwicklungsgesellschaft MBH and Societe de Promotion et de Participation pour la Cooperation Economique, incorporated by reference to Exhibit 10.18.6 to Ormat Technologies, Inc. Annual Report on Form 10-K for the year ended December 31, 2008 to the Securities and Exchange Commission on March 2, 2009.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
10.18.7	Proparco A Facility Loan Agreement, dated January 5, 2009, between OrPower 4, Inc. and DEG Deutsche Investitions-Und Entwicklungsgesellschaft MBH and Societe de Promotion et de Participation pour la Cooperation Economique, incorporated by reference to Exhibit 10.18.7 to Ormat Technologies, Inc. Annual Report on Form 10-K for the year ended December 31, 2008 to the Securities and Exchange Commission on March 2, 2009.
10.19	Amendment No. 2 to the Power Purchase Contract between Ormesa LLC and Ormat Technologies, Inc., and Southern California Edison Company (RAP ID 3012) dated April 23, 2006, incorporated by reference to Exhibit 10.21.2 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on August 8, 2007.
10.20	Joint Ownership Agreement for the Carson Lake Project, dated as of March 12, 2008, by and between Nevada Power Company and ORNI 16 LLC, incorporated by reference to Exhibit 10.24 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on May 7, 2008.
10.21	Note Purchase Agreement, dated as of May 18, 2009, among Ortitlan, Limitada and TCW Global Project Fund II, Ltd., incorporated by reference to Exhibit 10.23 to Ormat Technologies, Inc. Current Report on Form 8-K to the Securities and Exchange Commission on May 21, 2009.
10.22	Sale and Purchase Agreement dated August 2, 2010, between ORNI 44 LLC and CD Mammoth Lakes I, Inc. and CD Mammoth Lakes II, Inc., incorporated by reference to Exhibit 10.1 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on November 4, 2010.
10.23	Note Purchase Agreement, dated September 23, 2011, among OFC 2 LLC, ORNI 15 LLC, ORNI 39 LLC, ORNI 42 LLC, and HSS II, LLC, as Issuers, OFC 2 Noteholder Trust, as Purchaser, John Hancock Life Insurance Company (U.S.A.), as Administrative Agent, and the United States Department of Energy (DOE), as Guarantor, incorporated by reference to Exhibit 10.1 to Ormat Technologies, Inc. Quarterly Report on Form 10-Q to the Securities and Exchange Commission on November 4, 2011.
10.24.1	Credit Agreement, dated as of November 21, 2011, between Lightning Dock Geothermal HI-01, LLC, and Ormat Nevada Inc., filed herewith.
10.24.2	Subordination Agreement, dated as of January 11, 2012, among CYRQ ENERGY, Inc., Lightning Dock Geothermal HI-01, LLC, and Ormat Nevada Inc., filed herewith.
10.24.3	Accounts Agreement, dated as of January 25, 2012, among Lightning Dock Geothermal HI-01, LLC, Ormat Nevada Inc., and Wells Fargo Bank, National Association, as Depository, filed herewith.
10.25.1	Credit Agreement, dated December 19, 2011, between Thermo NO. 1 BE-01, LLC, and Ormat Nevada Inc., filed herewith.
10.25.2	Subordination Agreement, dated as of January 11, 2012, among CYRQ ENERGY, INC., Thermo NO. 1 BE-01, LLC, and Ormat Nevada Inc., filed herewith.
10.25.3	Accounts Agreement, dated as of January 25, 2012 among Thermo NO. 1 BE-01, LLC, Ormat Nevada Inc., and Wells Fargo Bank, National Association, as Depository, filed herewith.
21.1	Subsidiaries of Ormat Technologies, Inc., incorporated by reference to Exhibit 21.1 to Ormat Technologies, Inc. Annual Report on Form 10-K to the Securities and Exchange Commission on March 28, 2006.
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm, filed herewith.
31.1	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.

**Table of Contents**

<b>Exhibit No.</b>	<b>Document</b>
31.2	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.
32.1	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, filed herewith.
32.2	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, filed herewith.
99.1	Material terms with respect to BLM geothermal resources leases incorporated by reference to Exhibit 99.1 to Ormat Technologies, Inc. Registration Statement Amendment No. 2 on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on October 20, 2004.
99.2	Material terms with respect to BLM site leases incorporated by reference to Exhibit 99.2 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.
99.3	Material terms with respect to agreements addressing renewable energy pricing and payment issues incorporated by reference to Exhibit 99.3 to Ormat Technologies, Inc. Registration Statement on Form S-1 (File No. 333-117527) to the Securities and Exchange Commission on July 20, 2004.