CATERPILLAR INC
Form 11-K
June 29, 2017

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 11-K

(Mark One)

[X] ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2016

OR

[ ] TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____.

Commission File No. 1-768

SOLAR SAVINGS AND INVESTMENT PLAN
(Full title of the plan and the address of the plan, if different from that of the issuer named below)

CATERPILLAR INC.
100 NE Adams Street, Peoria, Illinois 61629
(Name of issuer of the securities held pursuant to the plan and the address of its principal executive office)

Solar Savings and Investment Plan
Financial Statements and Supplemental Schedule
December 31, 2016 and 2015

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of December 31, 2016 and 2015 and for the Year Ended December 31, 2016

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Note: Other

schedules required by 29 CFR 2520.103-10 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable.

Report of Independent Registered Public Accounting Firm
To the Administrator of the
Solar Savings and Investment Plan

In our opinion, the accompanying statements of net assets available for benefits and the related statement of changes in net assets available for benefits present fairly, in all material respects, the net assets available for benefits of Solar Savings and Investment Plan (the "Plan") as of December 31, 2016 and 2015, and the changes in net assets available for benefits for the year ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes 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. We believe that our audits provide a reasonable basis for our opinion.

The supplemental Schedule H, Line 4i Schedule of Assets (Held at End of Year) as of December 31, 2016 has been subjected to audit procedures performed in conjunction with the audit of the Plan's financial statements. The supplemental schedule is the responsibility of the Plan's management. Our audit procedures included determining whether the supplemental schedule reconciles to the financial statements or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the supplemental schedule. In forming our opinion on the supplemental schedule, we evaluated whether the supplemental schedule, including its form and content, is presented in conformity with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. In our opinion, the Schedule H, Line 4i Schedule of Assets (Held at End of Year) is fairly stated, in all material respects, in relation to the financial statements as a whole.

/s/ PricewaterhouseCoopers LLP

Peoria, Illinois
June 29, 2017

Solar Savings and Investment Plan
Statements of Net Assets Available for Benefits
December 31, 2016 and 2015

(in thousands of dollars)	2016	2015
Investments		
Interest in the Master Trust	$188,689	$161,157
Other investments – participant directed brokerage accounts	2,419	1,217
Total investments	191,108	162,374
Receivables		
Notes receivable from participants	6,760	6,903
Participant contributions receivable	—	93
Employer contributions receivable	160	25
Other contributions receivable	—	18
Receivables for securities sold – participant directed brokerage accounts	52	—
Total receivables	6,972	7,039
Cash	3	1
Total assets	198,083	169,414
Liabilities		
Payables for securities purchased – participant directed brokerage accounts	(63)	(9)
Net assets available for benefits	$198,020	$169,405

The accompanying notes are an integral part of these financial statements.

Solar Savings and Investment Plan
Statement of Changes in Net Assets Available for Benefits

Year Ended December 31, 2016

(in thousands of dollars)	2016
Investment income (loss)	
Plan interest in net investment income (loss) of the Master Trust	$30,648
Net appreciation (depreciation) in fair value of investments from participant directed brokerage accounts	48
Net investment income (loss)	30,696
Interest and dividend income	
Interest income on notes receivable from participants	259
Interest and dividend income from participant directed brokerage accounts	69
Total interest and dividend income	328
Contributions	
Participant	6,420
Employer	3,545
Total contributions	9,965
Deductions	
Participant withdrawals	(12,164)
Administrative expenses	(210)
Total deductions	(12,374)
Net increase (decrease) in net assets available for benefits	28,615
Net assets available for benefits	
Beginning of year	169,405
End of year	$198,020

The accompanying notes are an integral part of these financial statements.

Solar Savings and Investment Plan
Notes to Financial Statements

December 31, 2016 and 2015

1. Plan Description

The following description of the Solar Savings and Investment Plan (the “Plan”) provides only general information. Participants should refer to the Plan documents for more complete information regarding the Plan.

General

The Plan is a profit sharing plan that includes a cash or deferred arrangement under Section 401(k) of the Internal Revenue Code ("IRC") and is an "employee stock ownership plan", within the meaning of IRC Section 4975(e)(7). The Plan is maintained by Solar Turbines Incorporated (the "Company"), a 100 percent-owned subsidiary of Caterpillar Inc., and enables eligible employees to accumulate funds for retirement. The Plan is governed by the provisions of the Employee Retirement Income Security Act, as amended (“ERISA”).

Participation

Hourly employees of the Company who are covered under collective bargaining agreements to which the Plan is extended and who meet certain age, service and citizenship or residency requirements are eligible to participate in the Plan. Participating eligible employees (the “participants”) elect to defer a portion of their eligible compensation through pre-tax and after-tax contributions.

Contributions

Effective January 1, 2016, all Plan participants are eligible to make participant contributions through a pre-tax deferral arrangement and an after-tax Roth 401(k) arrangement as elected by each participant. Participants who are at least 50 years old by the end of the calendar year are allowed to make a catch-up contribution for that year. Contributions are subject to certain limitations set by the IRC. Effective January 1, 2016, all Plan participants also are eligible for employer matching contributions which are 100 percent of participant 401(k) contributions up to a maximum of 6 percent of eligible compensation.

In addition, effective January 1, 2016, participants are also eligible for an annual employer non-elective contribution. Eligibility for the non-elective contribution is based upon hire date and is summarized below:

- Employees hired prior to January 1, 2016: Eligible for the employer non-elective contribution for the Plan year beginning on January 1, 2019 and ending on December 31, 2019.
- Employees hired or rehired on or after January 1, 2016: Eligible for the employer non-elective contribution for the Plan years beginning on January 1, 2016 and ending on December 31, 2019.

The non-elective contribution is based on a point system calculated on the last day of the applicable Plan year which is the sum of the participant's age plus years of service. The non-elective contribution of 3, 4 or 5 percent of eligible compensation will be made after the close of the applicable Plan year. In order to receive the annual non-elective contribution, the participant must complete 1,000 hours of service and must be employed in the bargaining unit during the applicable Plan year. The non-elective contribution will be subject to a three-year cliff vesting schedule (i.e., after the employee completes three years of vesting service the contribution is 100 percent vested). The non-elective contribution is included as an Employer contributions receivable on the Statements of Net Assets Available for Benefits and was $2 thousand for the 2016 Plan year. The non-elective contribution was not effective for the Plan year 2015.

Participants direct the investment of their contributions, employer matching and employer non-elective contributions into various investment options offered by the Plan as discussed in Note 3. Participants generally may change their contribution elections and prospective investment elections on a daily basis and reallocate the investment of their existing account balance either daily or every seven business days (if subject to applicable trading restrictions) depending on the investment.

Newly eligible employees are subject to an automatic enrollment process. Unless electing otherwise, employees who become newly eligible will be enrolled with a default 6 percent deferral of their eligible base and incentive pay, and their default investment election is the Target Retirement Fund closest to the year in which the employee turns age 65. Employees that are automatically enrolled in the Plan on and after January 1, 2016 will have their default 6 percent deferral automatically increased by 1 percent each year until the employee is contributing 15 percent, unless the employee elects otherwise.

Prior to 2016, participant contributions were made through after-tax payroll deductions based on a percentage (2 to 6 percent) of total eligible compensation as elected by the employee. Participant contributions could also be made through a pre-tax deferral arrangement as elected by each participant. The Company matched contributions to the Plan equal to 50 percent, 66-1/3 percent or 80 percent of participant after-tax contributions (up to 6 percent of eligible compensation), based on the participant's years of service.

Participant Accounts
Accounts are separately maintained for each participant. The participant's account is credited with the participant's contributions, employer matching contributions, employer non-elective contributions, Plan earnings/losses and charged with administrative expenses. Participants are entitled to the benefit that can be provided from the participant's vested account.

Vesting and Distribution Provisions
Participants are fully vested in all participant contributions (pre-tax and after-tax) and earnings thereon. Participants also vest immediately in the employer matching contributions and the earnings thereon. Participants fully vest in the employer non-elective contributions and the earnings thereon after being credited with three years of benefit service. The Plan provides for 100 percent vesting of the employer non-elective contributions and the earnings thereon, upon a participant's death or becomes totally and permanently disabled while actively employed or a participant's death while performing qualified military service. Company contributions forfeited by terminated participants are used to reduce future Company contributions to the Plan. Upon termination of employment for any reason, including death or retirement, the balance in participants' accounts is distributable in a single lump sum cash payment unless the participant (or beneficiary) elects to receive periodic withdrawals. Participants also have the option to leave their vested account balance in the Plan, subject to certain limitations. A participant also may elect to receive a distribution of Caterpillar Inc. shares up to the amount of the participant's balance in the Caterpillar Stock Fund. The value of any full or fractional shares paid in cash will be based upon the average price per share the Trustee receives from sales of Caterpillar Inc. shares for the purpose of making the distribution.

Notes Receivable from Participants
The Plan provides for participant loans against eligible participant account balances. Eligible participants obtain loans by filing a loan application with the Plan's recordkeeper and receiving all requisite approvals. Loan amounts are generally limited to the lesser of $50,000 or 50 percent of the individual participant's vested account balance, with certain regulatory restrictions. Each loan specifies a repayment period that cannot extend beyond five years. However, the five-year limit shall not apply to any loan used to acquire any dwelling unit which within a reasonable time is to be used (determined at the time the loan is made) as the principal residence of the participant. Loans bear interest at the prime interest rate plus 1 percent, as determined at the time of loan origination. Loans that transferred to the Plan due to acquisitions are based upon the terms of the plan agreement in effect at the time of loan origination. Repayments, including interest, are made through payroll deductions and are credited to the individual participant's account balance. Participant loans are measured at their unpaid principal balance plus any accrued but unpaid interest.

Administration
The Plan is administered by the Company. Pursuant to procedures adopted by the Company, responsibility for the Plan's non-financial matters has been delegated to the U.S. Benefits Manager and responsibility for the Plan's financial

matters has been delegated to the Caterpillar Inc. Benefit Funds Committee. Caterpillar Inc. and the Benefit Funds Committee have entered into a trust agreement with The Northern Trust Company (the “Trustee”) to receive contributions, administer the assets of the Plan and distribute withdrawals pursuant to the Plan. The Company has retained Aon Hewitt to provide recordkeeping and administrative services as part of the administration of the Plan.

Plan Termination
The Company has the right under the Plan at any time to terminate the Plan, subject to provisions of ERISA and subject to the terms of any applicable collective bargaining agreement. In the event of Plan termination, participants will become fully vested in all benefits which have been accrued up to the date of termination and Plan assets will be distributed in accordance with the provisions of the Plan.

Plan Qualification
The Plan obtained its latest determination letter on September 23, 2015, in which the Internal Revenue Service ("IRS") stated that the Plan and related trust, as then designed, were in compliance with the applicable requirements of the IRC. Although the Plan has been amended subsequent to the period covered by the determination letter, the Plan Administrator and the Plan's counsel believe that the Plan is designed and is currently being operated in compliance with the applicable requirements of the IRC, and therefore, believe that the Plan is qualified and the related trust is tax-exempt.

Accounting principles generally accepted in the United States of America require management to evaluate tax positions taken by the Plan and recognize a tax liability if the Plan has taken an uncertain position that more likely than not would not be sustained upon examination by the IRS. The Company has analyzed the tax positions taken by the Plan and has concluded that, as of December 31, 2016 and 2015, there are no uncertain positions taken or expected to be taken that would require recognition of a liability or disclosure in the financial statements. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress. The Company believes the Plan is no longer subject to income tax examinations for years prior to 2007.

2. Summary of Significant Accounting Policies

New Accounting Guidance
Employee Benefit Plan Master Trust Reporting - In February 2017, the Financial Accounting Standards Board issued accounting guidance to improve the usefulness of information reported to users of employee benefit plan financial statements and to provide clarity to preparers and auditors. The guidance primarily relates to the reporting by a plan for its interest in a master trust and includes the following updates: requires that a plan’s interest in each master trust and changes in those interests be reported in separate line items in the statement of net assets available for benefits and statement of changes in net assets available for benefits, respectively, removes the requirement to disclose the percentage interest for plans with a divided interest in a master trust, requires all plans to disclose the dollar amount of their interest in each general investment type of the master trust, and requires plans to disclose the master trust’s other asset and liability balances and the dollar amount of the plan’s interest in each of those balances. In addition, the guidance also eliminates redundancy relating to 401(h) account asset disclosures which is not applicable to the Plan. This guidance is effective for the Plan year ending December 31, 2019, with retrospective application required. Early adoption is permitted. The Plan’s management is currently reviewing the impact of this guidance on the Plan’s financial statements and notes to financial statements.

Basis of Accounting
The financial statements of the Plan are prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America.

Investments
The Plan's interest in the Master Trust and investments included in the participant directed brokerage accounts are valued as described in Note 4. Interest on investments is recorded as earned. Dividends are recorded on the ex-dividend date. Purchases and sales of securities are recorded on a trade-date basis.

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Administrative Expenses
The Plan charges a $5 per month per participant fee, which is transferred monthly from the Caterpillar Investment Trust into a holding account to pay expenses as they come due. The amount accumulated in the holding account is used to pay certain administrative expenses that have been approved by the Benefit Funds Committee including recordkeeping fees, trustee fees, plan education and audit fees. The Company pays any administrative expenses, excluding applicable expenses paid directly from participant accounts described below, which exceed amounts collected from participants annually by the Plan. If amounts collected from participants exceed certain administrative expenses, the Company determines whether a corrective action is appropriate which could include a reallocation of funds back to participant accounts or a structural change to the participant fees.

In addition, certain administrative expenses are paid directly from participant accounts. These administrative expenses include quarterly fees for participants invested in the participant directed brokerage option, quarterly fees for participants that utilize managed account services and processing fees for qualified domestic relations orders.

Participant Withdrawals
Participant withdrawals are recorded when paid.

Use of Estimates in the 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 changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates. The Company believes the techniques and assumptions used in establishing these amounts are appropriate.

Risks and Uncertainties
The Plan invests in a combination of stocks, bonds, fixed income securities, common collective trusts, mutual funds and other investment securities. Investment securities are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities could occur in the near term and that such changes could materially affect participant account balances and the amounts reported in the Statements of Net Assets Available for Benefits.

3. Investment Programs
Investment options that are currently available to participants consist of three main categories: Target Retirement Funds, core investment options (including the Caterpillar Stock Fund) and a participant directed brokerage option.

The Target Retirement Funds are portfolios created primarily from the Plan’s core investment options. The goal of these funds is to give participants investment options that provide an age appropriate asset allocation. Each Target Retirement Fund contains a blend of stock and bond investments. The proportion of stocks and bonds in each fund is based on an anticipated retirement date and will change over time. These funds automatically change the asset allocation over time to maintain an appropriate level of risk for the retirement horizon. Below are the Target Retirement Funds for participants based upon their birth year with the assumption that participants will retire at the age of 65.

Target Retirement Funds	Birth Years	Asset Allocation
Target Retirement Income Fund	Before 1954	37% stocks, 53% bonds and 10% cash equivalents
Target Retirement 2020 Fund	1954-1958	51% stocks, 47% bonds and 2% cash equivalents
Target Retirement 2025 Fund	1959-1963	63% stocks and 37% bonds
Target Retirement 2030 Fund	1964-1968	73% stocks and 27% bonds
Target Retirement 2035 Fund	1969-1973	80% stocks and 20% bonds
Target Retirement 2040 Fund	1974-1978	85% stocks and 15% bonds

Target Retirement 2045 Fund	1979-1983	86% stocks and 14% bonds
Target Retirement 2050 Fund	1984-1988	86% stocks and 14% bonds
Target Retirement 2055 Fund	After 1988	86% stocks and 14% bonds

In addition to the Target Retirement Funds, the Plan also provides participants with core investment options which are made up of actively managed investment funds and index funds. The following table provides the current lineup of investment funds and index funds that are currently available to participants.

Menu of Core Investment Options	
U.S. Large Cap Equity Funds	Capital Preservation Funds
1 Caterpillar Stock Fund	8 Stable Principal Fund
2 U.S. Large Cap Equity Fund	9 Money Market Fund
3 U.S. Large Cap Equity Index Fund	
U.S. Small/Mid Cap Equity Funds	Fixed Income Fund
4 U.S. Small/Mid Cap Equity Fund	10 Bond Fund
5 U.S. Small/Mid Cap Index Fund	11 Bond Index Fund
International Equity Funds	
6 International Equity Fund	
7 International Equity Index Fund	

The Caterpillar Stock Fund consists of Caterpillar Inc. common stock and a small amount of cash and/or cash equivalents.

The participant directed brokerage option allows participants to invest outside of the standard Plan options. Hewitt Financial Services is the custodian for funds invested through this participant directed brokerage option. The types of investments offered through the participant directed brokerage option are individual company stocks (excluding Caterpillar Inc. common stock), exchange traded funds, registered investment companies and fixed income securities such as bonds.

Participants also have the option to enroll in professional account management through the Plan’s recordkeeper for additional, separately charged fees.

4. Master Trust

Substantially all of the Plan's investments are held in the Caterpillar Investment Trust, which was established for the investment of the Plan and other Caterpillar Inc. sponsored retirement plans. The Northern Trust Company is the Trustee of the Caterpillar Investment Trust and the custodian for funds invested through the core investments and the Target Retirement Funds (the funds invested through the core investments and the Target Retirement Funds are referred to as the “Master Trust” herein). The Plan and the other Caterpillar Inc. sponsored retirement plans pool their investments in the Master Trust in exchange for a percentage of participation in the Master Trust.

The percentage of the Plan's participation in the Master Trust was determined based on the December 31, 2016 and 2015 net asset values for the investment fund options chosen by participants of each plan. At December 31, 2016 and 2015, the Plan's interest in the net assets of the Master Trust was 2.11 percent and 1.99 percent, respectively.

The following table presents the net assets of the Master Trust as of December 31, 2016 and 2015.

(in thousands of dollars)	2016	2015
ASSETS		
Investments, at fair value		
Caterpillar Inc. common stock	$1,974,515	$1,792,897
Common stocks	1,483,469	2,003,873
Preferred stocks	12,290	10,973
Preferred corporate bonds and notes	17,645	15,958
Other corporate bonds and notes	530,559	517,205
U.S. government securities	492,975	444,729
Common collective trusts	3,633,576	2,690,638
Registered investment companies	2,862	825
Interest bearing cash	77,808	28,653
Other investments, net	118,242	106,204
	8,343,941	7,611,955
Investments, at contract value		
Fully benefit-responsive synthetic guaranteed investment contracts	626,007	502,144
Other assets		
Cash	674	1,073
Receivable for plan transfers [1]	4,987	—
Receivables for securities sold	60,017	66,531
Accrued income	12,695	13,339
	78,373	80,943
Total Master Trust assets	9,048,321	8,195,042
LIABILITIES		
Payables for securities purchased	(115,208)	(114,968)
Net Master Trust assets	$8,933,113	$8,080,074
Plan's interest in net Master Trust assets with fully benefit-responsive synthetic guaranteed investment contracts at contract value	$188,689	$161,157

[1] On December 31, 2016, the RDS Manufacturing, Inc. 401(k) Savings Plan merged with and into the Caterpillar 401(k) Savings Plan. Plan assets were not transferred into the Master Trust until January 2017.

As the Plan has a specific interest in the Master Trust, the below table provides the investment risk specific to the Plan based upon the investment programs available to participants as of December 31, 2016 and 2015.

Investment Program	2016	2015
Caterpillar Stock Fund	40.5%	39.9%
U.S. Large Cap Equity Funds	8.2%	8.7%
U.S. Small / Mid Cap Equity Funds	2.9%	2.4%
International Equity Funds	5.9%	6.0%
Capital Preservation Funds	11.3%	8.5%
Fixed Income Funds	8.8%	8.0%
Target Retirement Funds	22.4%	26.5%

The fully benefit-responsive synthetic guaranteed investment contracts are valued at contract value as described in the Investment Contracts section of Note 4. All other investments are stated at fair value and are valued as described below:

- Common and preferred stocks: Primarily valued at quoted market prices.
- Preferred and other corporate bonds and notes: Valued based on matrices or models from reputable pricing vendors and may be determined by factors which include, but are not limited to market quotations, yields, maturities, call features, ratings, institutional size trading in similar groups of securities and developments related to specific securities.
- U.S. government securities: Valued based on matrices or models from reputable pricing vendors.
- Common collective trusts: Primarily stated at net asset value using the practical expedient, which represents the fair value of the underlying investments.
- Registered investment companies: Valued at quoted market prices that represent the net asset value of shares held by the Master Trust.
- Interest bearing cash: Stated at cost which approximates fair value.
- Other investments, net: Primarily valued at quoted market prices, when available, or are valued based on matrices or models from reputable pricing vendors.

The preceding methods may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Company believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The following tables summarize investments measured at fair value based on net asset value per share using the practical expedient that have unfunded commitments or redemption restrictions as of December 31, 2016 and 2015.

(in thousands of dollars)					
December 31, 2016	Fair Value	Unfunded Commitments	Redemption Restrictions	Redemption Frequency (if currently eligible)	Redemption Notice Period
Common collective trusts:					
Stocks	$2,802,212	—	None	Daily	None
Short-term investments	$317,384	—	None	Daily	None
U.S. Government securities	$485,911	—	None	Daily	None
	$28,069	—	Yes 1	Monthly 1	Yes 1

Private placement -
Mortgages

[1] Redemptions allowed once per month and are restricted to available cash on hand as determined by the trustee of the fund. A notice of redemptions required five days prior to the last business day of the month.

(in thousands of dollars) December 31, 2015	Fair Value	Unfunded Commitments	Redemption Restrictions	Redemption Frequency (if currently eligible)	Redemption Notice Period
Common collective trusts:					
Stocks	$1,944,244	—	None	Daily	None
Short-term investments	$295,233	—	None	Daily	None
U.S. Government securities	$419,900	—	None	Daily	None
Private placement - Mortgages	$31,261	—	Yes [1]	Monthly [1]	Yes [1]

[1] Redemptions allowed once per month and are restricted to available cash on hand as determined by the trustee of the fund. A notice of redemptions required five days prior to the last business day of the month.

The following table presents the changes in net assets for the Master Trust for the year ended December 31, 2016.

(in thousands of dollars)	2016
Changes in Net Assets:	
Caterpillar Inc. common stock net appreciation (depreciation) in fair value of investments	$612,254
Net appreciation (depreciation) in fair value of investments	390,990
Interest	51,891
Caterpillar Inc. common stock dividends	77,383
Dividends	36,083
Other income	2,957
Net investment income (loss)	1,171,558
Transfers, net [1]	(306,922)
Administrative expenses not directly allocated to the plans and other expenses [2]	(11,597)
Increase (decrease) in net assets	853,039
Net assets	
Beginning of the year	8,080,074
End of the year	$8,933,113

[1] Represents items recorded at the plan level such as contributions, benefit payments, plan transfers and plan specific administrative expenses.
[2] Primarily related to fees and expenses paid to professional money managers who manage the investment funds.

Dividend income is recorded as of the ex-dividend date. Interest is recorded daily as earned. The Master Trust presents in Net investment income (loss), the net appreciation (depreciation) in the fair value of its investments which consists of the realized gains (losses) and the unrealized appreciation (depreciation) on those investments. Purchases and sales of securities are recorded on a trade-date basis.

Investment Contracts

The Master Trust holds fixed income fully benefit-responsive investment contracts, referred to as synthetic guaranteed investment contracts ("synthetic GICs"), in which an investment contract is issued by an insurance company or a financial services institution (Metropolitan Life Insurance Company, Transamerica Premier Life Insurance Company and State Street Bank and Trust Company). The Plan measures the synthetic GICs at contract value in the Plan's Interest in the Master Trust in the Statements of Net Assets Available for Benefits. The synthetic GICs, designed to help preserve principal and provide a stable crediting rate of interest, are fully benefit-responsive and provide that plan participant initiated withdrawals will be paid at contract value. The synthetic GICs are primarily backed by a portfolio of fixed income investments, which are effectively owned by the Plan. The assets underlying the synthetic GICs are maintained by a third party custodian, separate from the contract issuer's general assets. The synthetic GICs are obligated to provide an interest rate not less than zero. These contracts provide that realized and unrealized gains and losses of the underlying assets are not reflected immediately in the assets of the fund, but rather are amortized, usually over the duration of the underlying assets, through adjustments to the future interest crediting rate. The future interest crediting rate can be adjusted periodically and is primarily based on the current yield-to-maturity of the covered investment, plus or minus amortization of the difference between the market value and contract value of the covered investment over the duration of the covered investment at the time of computation. The issuers guarantee that all qualified participant withdrawals will occur at contract value. There are no reserves against contract value for credit risks of the contract issuers or otherwise.

Employer initiated events, if material, may affect the underlying economics of the investment contracts. These events include plant closings, layoffs, plan termination, bankruptcy or reorganization, merger, early retirement incentive programs, tax disqualification of a trust or other events. The occurrence of one or more employer initiated events could limit the Plan's ability to transact at contract value with the issuers. Except for the employer initiated events above, the synthetic GICs do not permit the issuers to terminate the agreement prior to the scheduled maturity date at an amount different from contract value. As of December 31, 2016, the Company does not believe that the occurrence of an event that would limit the ability of the Plan to transact at contract value with the issuers is probable.

Fair Value Measurements

The guidance on fair value measurements defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. This guidance also specifies a fair value hierarchy based upon the observability of inputs used in valuation techniques. Observable inputs (highest level) reflect market data obtained from independent sources, while unobservable inputs (lowest level) reflect internally-developed market assumptions. In accordance with this guidance, fair value measurements are classified under the following hierarchy:

- Level 1 - Quoted prices for identical instruments in active markets.
- Level 2 - Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs or significant value-drivers are observable in active markets.
- Level 3 - Model-derived valuations in which one or more significant inputs or significant value-drivers are unobservable.

When available, quoted market prices are used to determine fair value and such measurements are classified within Level 1. In some cases where market prices are not available, observable market based inputs are used to calculate fair value, in which case the measurements are classified within Level 2. If quoted or observable market prices are not available, fair value is based upon internally developed models that use, where possible, current market-based parameters such as interest rates, yield curves and currency rates. These measurements are classified within Level 3.

Fair value measurements are classified according to the lowest level input or value-driver that is significant to the valuation. A measurement may therefore be classified within Level 3 even though there may be significant inputs that are readily observable.

The availability of observable market data is monitored to assess the appropriate classification of financial instruments within the fair value hierarchy. Changes in economic conditions or model-based valuation techniques may require the transfer of financial instruments from one fair value level to another. In such instances, the transfer is reported at the end of the reporting period.

The significance of transfers between levels was evaluated based upon the nature of the financial instrument and size of the transfer relative to total net Master Trust assets. For the year ended December 31, 2016, there were no significant transfers into or out of Levels 1, 2 or 3.

Master Trust assets that are measured at fair value as of December 31, 2016 and 2015 are summarized below. Investments measured at net asset value per share using the practical expedient have not been classified in the fair value hierarchy, but are presented in order to permit reconciliation to the table that presents the net assets of the Master Trust.

	Fair Value Measurements as of December 31, 2016			
(in thousands of dollars)	Level 1	Level 2	Measured at NAV	Total
Stocks	$3,466,925	$3,349	$—	$3,470,274
Corporate bonds and notes	—	548,204	—	548,204
U.S. government securities	—	492,975	—	492,975
Common collective trusts	—	—	3,633,576	3,633,576
Registered investment companies	2,862	—	—	2,862
Interest bearing cash	77,808	—	—	77,808
Other investments, net	65,650	52,592	—	118,242
Total assets	$3,613,245	$1,097,120	$3,633,576	$8,343,941

	Fair Value Measurements as of December 31, 2015			
(in thousands of dollars)	Level 1	Level 2	Measured at NAV	Total
Stocks	$3,804,452	$3,291	$—	$3,807,743
Corporate bonds and notes	—	533,163	—	533,163
U.S. government securities	—	444,729	—	444,729
Common collective trusts	—	—	2,690,638	2,690,638
Registered investment companies	825	—	—	825
Interest bearing cash	28,653	—	—	28,653
Other investments, net	63,373	42,831	—	106,204
Total assets	$3,897,303	$1,024,014	$2,690,638	$7,611,955

The participant directed brokerage accounts Plan assets are not included in the Master Trust and are primarily related to investments in registered investment companies. The participant directed brokerage accounts assets that are measured at fair value as of December 31, 2016 and 2015 are summarized below:

Participant directed brokerage accounts	Fair Value Measurements as of December 31	
(in thousands of dollars)	2016	2015
Level 1	$2,212	$1,035
Level 2	207	182
Total assets	$2,419	$1,217

Derivatives

Within the Master Trust, certain investment managers may use derivative financial instruments to meet fund objectives and manage exposure to foreign currency, interest rate and market fluctuations. The following is a description of the types of derivative contracts the Master Trust may use:

- Credit contracts: Credit default swaps are used to manage exposure to credit risk. A credit default swap is a contract in which, for a fee, a protection seller agrees to pay a protection buyer an amount resulting from a credit event on a reference entity. If there is no credit default event or settlement trigger, as defined by the contract, then the protection seller makes no payment to the protection buyer and receives only the contractually specified fee. However, if a credit event occurs, the protection seller will be required to make a payment to the protection buyer.
- Equity contracts: Equity index futures contracts are used by investment managers to invest excess cash into equity benchmarks, such as the MSCI EAFE (developing countries) and S&P MidCap 400. These contracts are settled in cash daily. Investment managers may also invest in equity rights and warrants which gives the holder the right to purchase securities from the issuer at a specific price within a certain time frame.
- Foreign exchange contracts: Foreign currency exchange rate movements create a degree of risk by affecting the U.S. dollar value of instruments denominated in foreign currencies. Forward contracts are used by investment managers to manage foreign exchange rate risks associated with certain investments. These contracts are presented gross (buy side of the contract as a receivable and sell side of the contract as a payable) in the table that presents the net assets of the Master Trust.
- Interest rate contracts: Interest rate movements create a degree of risk by affecting the amount of interest payments and the value of debt instruments. Investment managers use interest rate swaps, total return swaps, futures contracts, options and swaptions to manage interest rate risk.

The fair value of these derivative contracts are included in Other investments, net, Receivables for securities sold and Payables for securities purchased in the Net Master Trust assets. The related appreciation (depreciation) is included in Net appreciation (depreciation) in fair value of investments in the Net investment income (loss) of the Master Trust. As of December 31, 2016 and 2015, the fair value of these derivative financial instruments was $2.1 million and $1.1 million, respectively. In 2016, the effect of these derivatives on Net investment income (loss) of the Master Trust was $7.1 million, which is primarily related to interest rate and foreign exchange contracts.

5. Related-Party and Parties in Interest

The Trustee is authorized, under contract provisions and by exemption under 29 CFR 408(b) of ERISA regulations, to invest in securities under its control and in securities of Caterpillar Inc.

The investment options available to the participants, as summarized in Note 3, include the Caterpillar Stock Fund (related-party and party in interest). The Master Trust also invests in the U.S. Large Cap Equity Index Fund, U.S. Small/Mid Cap Index Fund, International Equity Index Fund, Money Market Fund, and the Bond Index Fund, which are sponsored and managed by The Northern Trust Company, the Trustee for the Master Trust. The Northern Trust Company also invests excess cash in equitization accounts and manages liquidity pools for the actively managed investment funds. The custodian of the funds invested in the participant directed brokerage option is Hewitt Financial Services, a subsidiary of Aon Hewitt which currently provides third party administrative and other plan related services to the Plan. These transactions, and related fees, as well as participant loans, qualify as exempt party in interest transactions.

6. Reconciliation of Financial Statements to Form 5500

The following table reconciles the Net assets available for benefits per the audited financial statements to the Form 5500 Annual Report:

(in thousands of dollars)	2016	2015
Net assets available for benefits per financial statements	$198,020	$169,405
Certain deemed distributions of participant loans	(645)	(616)
Adjustment from contract value to fair value for fully benefit-responsive synthetic guaranteed investment contracts	(151)	(74)
Net assets per Form 5500	$197,224	$168,715

The following table reconciles the Plan's Net increase (decrease) in net assets available for benefits per the audited financial statements to the Form 5500 Annual Report:

(in thousands of dollars)	2016
Plan's Net increase (decrease) in net assets available for benefits per financial statements	$28,615
Change in certain deemed distributions of participant loans	(29)
Change in adjustment from contract value to fair value for fully benefit-responsive synthetic guaranteed investment contracts	(77)
Net income (loss) per Form 5500	$28,509

Supplemental Schedule

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Solar Savings and Investment Plan
EIN 95-3621514
Schedule H, Line 4i - Schedule of Assets (Held at End of Year)
December 31, 2016

(a)	(b)	(c)	(d)	(e)
	Identity of issue, borrower, lessor or similar party	Description of investment, including maturity date, rate of interest, collateral, par or maturity value	Cost	Current value
*	Plan's interest in the Caterpillar Investment Trust	Master Trust – at fair value	**	$188,538,630
*	Hewitt Financial Services	Participant directed brokerage accounts	**	2,418,486
*	Notes receivable from participants	Participant loans net of deemed distributions (various maturity dates through August 7, 2026, various interest rates ranging from 4.25% to 9.25%)	—	6,114,540
		Total Investments		$197,071,656

* Denotes party in interest.
** Cost information is not applicable for participant directed investments.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the employee benefit plan) have duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

SOLAR SAVINGS AND INVESTMENT PLAN

June 29, 2017 By: /s/Stephen G. Robertson

Name: Stephen G. Robertson

Title: Plan Administrator

EXHIBIT INDEX

Exhibit No.	Description
23.1	Consent of Independent Registered Public Accounting Firm

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