



2017 ANNUAL REPORT

Dear Fellow Shareholder,

As we reflect on 2017, we see a year headlined by a significant pivot in our international development efforts that has created a clear and exciting path to sustained growth. At the same time, we continue to optimize our North American operations while benefitting from improving market conditions, enhancing our reputation as a global leader in Energy from Waste (EfW). This combination provides the broadest set of growth opportunities the company has had in some time and we are optimistic as we look to 2018 and beyond.

Strategic Partnership with the Green Investment Group

To accelerate our European development efforts and enhance our long-term pipeline of growth projects, we announced a strategic partnership with the Green Investment Group (“GIG”) in December of 2017. As many of you know, GIG, part of Macquarie Capital Group, is a leading investor in green infrastructure initially created by the UK government to spur renewable energy development. Our partnership with GIG will execute on a combined pipeline of development projects, which currently includes approximately two million tonnes of annual EfW processing capacity. Four of these projects are well-advanced, with planning approvals in place, and we expect to begin construction on them over the next couple of years.

The decision to enter into this partnership was based on the significant opportunity we see in international markets, particularly in the UK, for a sophisticated EfW operator. This joint venture with GIG is an optimal channel for us to pursue that opportunity, and accelerate Covanta’s growth in a more capital-efficient manner. While the partnership’s primary focus is to address the UK market, the powerful combination of GIG/Macquarie’s global footprint coupled with Covanta’s deep development and operating capabilities is expected to result in opportunities in additional markets as well.

Covanta and Macquarie have built a solid relationship over years of working together on our landmark Dublin project. GIG’s investment in that project enables Covanta to recycle capital at attractive returns, effectively funding our foreseeable investment needs in the combined development pipeline. All in all, we have reduced our capital needs while retaining a significant equity stake in the joint venture and growing our business as an O&M service provider.

Successful Start Up in Dublin

Dublin was brought into service in the fourth quarter of 2017, in line with our plan set out over 3 years ago. The facility represents a world-class asset and the most efficient plant in our fleet. This project is the culmination of years of effort by our team and its success reflects our ability to effectively execute on our international development plans.

Domestic Operations

Underlying our goals for international growth is our 30-year track record in Covanta’s core business — owning and operating plants in North America. These plants provide significant cash flow and we see no shortage of opportunities to drive growth by optimizing these facilities and enhancing results through initiatives in areas such as environmental services, energy and metals recovery.

US Waste Markets and Growth in Environmental Services

Waste fundamentals are supportive of our business with the strong economy driving growth in waste production. At the same time environmental concerns continue to challenge the ability of industry participants to increase landfill capacity in the large urban markets where we participate, increasing the value of our irreplaceable infrastructure. This creates an attractive combination of increasing waste supply and dwindling disposal options and we look to capitalize on these trends through improved pricing.

Our ability to command higher pricing is also driven by our Covanta Environmental Solutions platform which enables us to source higher-value waste streams. Zero waste goals are at the forefront of many businesses' sustainability initiatives and have resulted in customers opting to pay a premium to process waste rather than utilize landfills for disposal. Our ability to offer this service is a sustainable competitive advantage that we have built over time, and our operating team continues to make great progress on initiatives to increase the number of our plants that accept these waste streams. For example, in the regulated medical waste market, we not only offer a comprehensive suite of services, but we also have more permitted EfW capacity for this material than any of our peers.

Another area of focus has been the addition of material processing facilities (or "MPFs") at Covanta Environmental Solutions. This complementary waste infrastructure broadens our waste processing capabilities and enables deeper customer relationships. Since our entrance into this business line in 2014 we have grown our MPF processing capability to over 150,000 tons of solids and almost 500,000 tons of liquids, making us a major provider of industrial and process waste solutions.

Metals and Ash Recovery Developments

We continue to advance our metals and ash recovery initiatives with the combined goal of reducing operating costs while enhancing revenue from recovered metals. Since 2012, by adding and upgrading metals recovery equipment at our facilities, we have grown our ferrous and non-ferrous collection by 26% and 166%, respectively. We expect to continue to invest in metals recovery, with incremental opportunities primarily on the non-ferrous side.

Last year, we discussed our efforts to improve the value of our recovered metals, and in April we commissioned our non-ferrous processing facility in Fairless Hills, Pennsylvania. This facility is now taking 90% of the non-ferrous recovered from our fleet and separating out the higher-value metal fractions, resulting in better net pricing. The tangible benefit was clear in the second half of 2017 as we nearly doubled our realized price per ton of non-ferrous. During 2018 we hope to send all of our recovered non-ferrous to this site and benefit from a full year of operations.

On the ash-processing system, which we discussed last year, we continue to pursue our first system and expect to break ground in 2018. The economic opportunity remains compelling as fleet-wide we spend nearly \$90 million annually to haul and dispose of ash. Once this first facility is operational, we hope to duplicate this initiative regionally across our fleet.

Power Markets

For the first time in several years, we saw power prices stabilize in 2017 and we are optimistic that prices have reached a bottom. Our business strategy is to mitigate the volatility around prices through actively hedging our power exposure. At the same time, we are working on multiple avenues to improve realized power pricing through both wholesale and retail market structures. This effort is being made on a plant-by-plant basis and will take time to materialize, but we see this as another path toward enhancing our profitability.

Capital Allocation

Our strategic partnership with GIG, including its equity investment in the Dublin project, goes a long way toward improving our balance sheet flexibility, through both immediate and long-term delevering, and a reduction in our future capital needs related to our ongoing development and growth plans. With the enhanced long-term cash flow that the partnership presents, we remain committed to our dividend. The combination of our domestic and international opportunities will enable us to double our free cash flow by the middle of the next decade, providing ample flexibility to support our capital allocation goals.

Conclusion

2017 was a year of progress and promise, and we look to build on these themes in 2018 and beyond as we strive to grow the business and further create shareholder value. Our ability to execute on these plans is rooted, above all, in our confidence in the tremendous talent and efforts of our employees.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Zell". The signature is fluid and cursive, with the first name being more prominent.

Samuel Zell
Chairman of the Board of Directors

A handwritten signature in black ink, appearing to read "Stephen J. Jones". The signature is very stylized and cursive, with a large initial "S" and a long horizontal stroke at the end.

Stephen J. Jones
President & Chief Executive Officer

CORPORATE INFORMATION

Board of Directors

Samuel Zell
Chairman of the Board
Covanta Holding Corporation
Founder and Chairman
Equity Group Investments

Linda J. Fisher
Former Vice President
and Chief Sustainability Officer
E.I. Du Pont de Nemours and
Company

Michael W. Ranger
Co-founder and
Senior Managing Director
Diamond Castle Holdings, LLC

David M. Barse
Founder and Chief Investment
Officer
DMB Holdings

Joseph M. Holsten
Chairman of the Board
LKQ Corporation

Robert S. Silberman
Executive Chairman of the Board
Strayer Education, Inc.
Managing Director
Equity Group Investments

Ronald J. Broglio
President
RJB Associates

Stephen J. Jones
President and Chief Executive
Officer
Covanta Holding Corporation

Jean Smith
Chief Executive Officer
West Knoll Collection, LLC

Peter C.B. Bynoe
Managing Director
Equity Group Investments

Danielle Pletka
Senior Vice President, Foreign
and Defense Policy
American Enterprise Institute

Executive Officers

Stephen J. Jones
President and Chief Executive
Officer

Timothy J. Simpson
Executive Vice President,
General Counsel and Secretary

Michael J. de Castro
Executive Vice President,
Supply Chain

Bradford J. Helgeson
Executive Vice President
and Chief Financial Officer

Matthew Mulcahy
Executive Vice President,
Head of Corporate Development

Paul Gilman, Ph.D.
Senior Vice President
and Chief Sustainability Officer

Derek W. Veenhof
Executive Vice President,
Asset Management

Paul Stauder
President,
Covanta Environmental Solutions

Manpreet S. Grewal
Vice President
and Chief Accounting Officer

Other Information

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Form 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2017

or

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

For the transition period from _____ **to** _____
Commission file number 1-06732

COVANTA HOLDING CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

*(State or Other Jurisdiction of
Incorporation or Organization)*

95-6021257

*(I.R.S. Employer
Identification Number)*

445 South Street, Morristown, NJ

(Address of Principal Executive Office)

07960

(Zip Code)

Registrant's telephone number, including area code: (862) 345-5000
Securities registered pursuant to Section 12(b) of the Act:

<u>Title of Each Class</u>	<u>Name of Each Exchange on Which Registered</u>
Common Stock, \$0.10 par value per share	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 Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T 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," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer

(Do not check if a smaller reporting company)

Smaller reporting company

Emerging growth 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, 2017, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was \$1.5 billion. The aggregate market value was computed by using the closing price of the common stock as of that date on the New York Stock Exchange. (For purposes of calculating this amount only, all directors and executive officers of the registrant have been treated as affiliates.)

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

<u>Class</u>	<u>Outstanding at February 16, 2018</u>
Common Stock, \$0.10 par value	130,992,568

Documents Incorporated By Reference:

Part of Form 10-K of Covanta Holding Corporation

Part III

Documents Incorporated by Reference

Portions of the Proxy Statement to be filed with the Securities and Exchange Commission in connection with the 2018 Annual Meeting of Stockholders.

TABLE OF CONTENTS

	Page
Cautionary Note Regarding Forward-Looking Statements	3
Availability of Information	4
PART I	
Item 1. Business	5
Markets, Competition And Business Conditions	12
Regulation Of Business	15
Employees	18
Executive Officers of the Registrant	19
Item 1A. Risk Factors	20
Item 1B. Unresolved Staff Comments	29
Item 2. Properties	29
Item 3. Legal Proceedings	29
Item 4. Mine Safety Disclosures	29
PART II	
Item 5. Market For Registrant’s Common Equity, Related Stockholder Matters And Issuer Purchases Of Equity Securities	30
Item 6. Selected Financial Data	32
Item 7. Management’s Discussion And Analysis Of Financial Condition And Results Of Operations	33
Overview	33
Results Of Operations	33
Year Ended December 31, 2017 vs. Year Ended December 31, 2016	34
Year Ended December 31, 2016 vs. Year Ended December 31, 2015	36
Adjusted EBITDA (Non-GAAP)	41
Adjusted EPS (Non-GAAP)	42
Liquidity And Capital Resources	44
Free Cash Flow (Non-GAAP)	45
Discussion Of Critical Accounting Policies And Estimates	51
Item 7A. Quantitative And Qualitative Disclosures About Market Risk	54
Item 8. Financial Statements And Supplementary Data	56
Item 9. Changes In And Disagreements With Accountants On Accounting And Financial Disclosure	101
Item 9A. Controls And Procedures	101
Item 9B. Other Information	104
PART III	
Item 10. Directors, Executive Officers And Corporate Governance	104
Item 11. Executive Compensation	104
Item 12. Security Ownership Of Certain Beneficial Owners And Management And Related Stockholder Matters	104
Item 13. Certain Relationships And Related Transactions, And Director Independence	104
Item 14. Principal Accountant Fees And Services	104
PART IV	
Item 15. Exhibits, Financial Statement Schedules	104
OTHER	
Signatures	109

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this Annual Report on Form 10-K may constitute “forward-looking” statements as defined in Section 27A of the Securities Act of 1933 (the “Securities Act”), Section 21E of the Securities Exchange Act of 1934 (the “Exchange Act”), the Private Securities Litigation Reform Act of 1995 (the “PSLRA”) or in releases made by the Securities and Exchange Commission (“SEC”), all as may be amended from time to time. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors that could cause the actual results, performance or achievements of Covanta Holding Corporation and its subsidiaries (“Covanta”) or industry results, to differ materially from any future results, performance or achievements expressed or implied by such forward-looking statements. Statements that are not historical fact are forward-looking statements. Forward-looking statements can be identified by, among other things, the use of forward-looking language, such as the words “plan,” “believe,” “expect,” “anticipate,” “intend,” “estimate,” “project,” “may,” “will,” “would,” “could,” “should,” “seeks,” or “scheduled to,” or other similar words, or the negative of these terms or other variations of these terms or comparable language, or by discussion of strategy or intentions. These cautionary statements are being made pursuant to the Securities Act, the Exchange Act and the PSLRA with the intention of obtaining the benefits of the “safe harbor” provisions of such laws. Covanta cautions investors that any forward-looking statements made by us are not guarantees or indicative of future performance. Important factors, risks and uncertainties that could cause actual results to differ materially from those forward-looking statements include, but are not limited to:

- seasonal or long-term fluctuations in the prices of energy, waste disposal, scrap metal and commodities;
- our ability to renew or replace expiring contracts at comparable prices and with other acceptable terms;
- adoption of new laws and regulations in the United States and abroad, including energy laws, environmental laws, tax laws, labor laws and healthcare laws;
- failure to maintain historical performance levels at our facilities and our ability to retain the rights to operate facilities we do not own;
- our ability to avoid adverse publicity or reputational damage relating to our business;
- advances in technology;
- difficulties in the operation of our facilities, including fuel supply and energy delivery interruptions, failure to obtain regulatory approvals, equipment failures, labor disputes and work stoppages, and weather interference and catastrophic events;
- difficulties in the financing, development and construction of new projects and expansions, including increased construction costs and delays;
- limits of insurance coverage;
- our ability to avoid defaults under our long-term contracts;
- performance of third parties under our contracts and such third parties' observance of laws and regulations;
- concentration of suppliers and customers;
- geographic concentration of facilities;
- increased competitiveness in the energy and waste industries;
- changes in foreign currency exchange rates;
- limitations imposed by our existing indebtedness and our ability to perform our financial obligations and guarantees and to refinance our existing indebtedness;
- exposure to counterparty credit risk and instability of financial institutions in connection with financing transactions;
- the scalability of our business;
- our ability to attract and retain talented people;
- failures of disclosure controls and procedures and internal controls over financial reporting;
- our ability to utilize net operating loss carryforwards;
- general economic conditions in the United States and abroad, including the availability of credit and debt financing;
- restrictions in our certificate of incorporation and debt documents regarding strategic alternatives; and
- other risks and uncertainties affecting our businesses described in *Item 1A. Risk Factors* of this Annual Report on Form 10-K and in other filings by Covanta with the SEC.

Although we believe that our plans, intentions and expectations reflected in or suggested by such forward-looking statements are reasonable, actual results could differ materially from a projection or assumption in any of our forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to change and inherent risks and uncertainties. The forward-looking statements contained in this Annual Report on Form 10-K are made only as of the date hereof and we do not have, or undertake, any obligation to update or revise any forward-looking statements whether as a result of new information, subsequent events or otherwise, unless otherwise required by law.

AVAILABILITY OF INFORMATION

You may read and copy any materials Covanta files with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Copies of such materials also can be obtained free of charge at the SEC's website, www.sec.gov, or by mail from the Public Reference Room of the SEC, at prescribed rates. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. Covanta's SEC filings are also available to the public, free of charge, on its corporate website, www.covanta.com as soon as reasonably practicable after Covanta electronically files such material with, or furnishes it to, the SEC. Covanta's common stock is traded on the New York Stock Exchange. Material filed by Covanta can be inspected at the offices of the New York Stock Exchange at 20 Broad Street, New York, N.Y. 10005.

PART I

Item 1. *BUSINESS*

The terms “we,” “our,” “ours,” “us,” “Covanta” and “Company” refer to Covanta Holding Corporation and its subsidiaries and the term “Covanta Energy” refers to our subsidiary Covanta Energy, LLC and its subsidiaries.

About Covanta Holding Corporation

We are organized as a holding company, which was incorporated in Delaware on April 16, 1992. We conduct all of our operations through subsidiaries, which are engaged predominantly in the businesses of waste and energy services. We have one reportable segment, North America, which is comprised of waste and energy services operations located primarily in the United States and Canada. Outside of North America, we currently operate an energy-from-waste facility in Dublin, Ireland. We hold interests in energy-from-waste facilities in Ireland and Italy. Additional information about our reportable segment and our operations by geographic area is contained in *Item 8. Financial Statements And Supplementary Data — Note 6. Financial Information by Business Segments*.

Our Energy-from-Waste Business

Our mission is to provide sustainable waste and energy solutions. We seek to do this through a variety of service offerings, including our core business of owning and operating infrastructure for the conversion of waste to energy (known as “energy-from-waste” or “EfW”).

Our EfW facilities earn revenue from both the disposal of waste and the generation of electricity, generally under long-term contracts, as well as from the sale of metals recovered during the EfW process. Our facilities process approximately 20 million tons of solid waste annually, equivalent to 8% of post-recycled municipal solid waste (“MSW”) generated in the United States. We operate and/or have ownership positions in 43 EfW facilities, which are primarily located in North America, and five additional energy generation facilities, including other renewable energy production facilities in North America (wood biomass and hydroelectric). In total, these assets produce approximately 10 million megawatt hours (“MWh”) of baseload electricity annually. We also operate waste management infrastructure, including 17 waste transfer stations, 19 material processing facilities, four landfills (primarily for ash disposal) and one metals processing facility, all of which are complementary to our core EfW business.

Energy-from-waste serves two key markets as both a sustainable waste management solution that is environmentally superior to landfilling and as a source of clean energy that reduces overall greenhouse gas emissions. Energy-from-waste is considered renewable under the laws of many states and under federal law. Our facilities are critical infrastructure assets that allow our customers, which are principally municipal entities, to provide an essential public service through sustainable practices.

Energy-from-waste facilities produce energy through the combustion of non-hazardous MSW in specially-designed power plants. Most of our facilities are “mass-burn” facilities, which combust the MSW on an as-received basis without any pre-processing such as shredding, sorting or sizing. The process reduces the waste to an inert ash while extracting ferrous and non-ferrous metals for recycling. In addition to our mass-burn facilities, we own and/or operate additional facilities that use other processes or technologies, such as refuse-derived fuel facilities which process waste prior to combustion and a gasification technology, in which waste is heated to create gases that are then combusted.

Environmental Benefits of Energy-from-Waste

We believe that EfW offers solutions to public sector leaders around the world for addressing two key issues: sustainable management of waste and renewable energy generation. We believe that the environmental benefits of EfW, as an alternative to landfilling, are clear and compelling: by processing municipal solid waste in EfW facilities, we reduce greenhouse gas (“GHG”) emissions, lower the risk of groundwater contamination, and conserve land. Increased use of EfW facilities can reduce GHG emissions, as the methane emitted by landfills is over 80 times more potent than carbon dioxide (“CO₂”) over a 20-year period. At the same time, EfW generates clean, reliable energy from a renewable fuel source, thus reducing dependence on fossil fuels, the combustion of which is itself a major contributor of GHG emissions. The United States Environmental Protection Agency (“EPA”), using lifecycle tools such as its own Municipal Solid Waste Decision Support Tool, has found that, on average, approximately one ton of CO₂-equivalent is reduced relative to landfilling for every ton of waste processed. Compared with fossil fuel based generation, each ton of waste processed eliminates the need to consume approximately one barrel of oil or one-quarter ton of coal, in order to generate the equivalent amount of electricity. We believe EfW is also an important component of business and community efforts to divert post-recycled waste from landfills as part of their greenhouse gas, zero-waste-to-landfill, circular economy, and other sustainability initiatives. As public planners and commercial and industrial companies address their needs for more environmentally sustainable waste management and energy generation in the years ahead, we believe that EfW will be an increasingly attractive alternative.

Other Environmental Services Offerings

In addition to our core EfW business, we offer a variety of sustainable waste management solutions in response to customer demand, including on site clean-up services, wastewater treatment, transportation and logistics, recycling and depackaging. Together with our processing of non-hazardous "profiled waste" for purposes of assured destruction or sustainability goals in our EfW facilities, we offer these services under our Covanta Environmental Solutions ("CES") brand. Through acquisitions and organic growth initiatives, we have expanded our network of facilities to enable us to provide a range of services to industrial customers for the treatment, recycling and/or disposal of their non-hazardous materials. These businesses are highly synergistic with our existing profiled waste business, offer us the opportunity to expand the geographical sourcing of our waste streams and expand our presence in the environmental services sector, allowing us to drive higher margin profiled waste volumes into our EfW facilities and access additional revenue growth opportunities.

STRATEGY

Each of our service offerings responds to customer demand for sustainable waste management services that are superior to landfilling according to the "waste hierarchy" and assists our customers in meeting their own zero-waste, zero-waste-to-landfill, circular economy, and other sustainability goals. As indicated above, each of our service offerings is focused on providing cost effective and sustainable solutions that leverage our extensive network of EfW facilities and transfer stations in North America.

We intend to pursue our mission through the following key strategies:

- *Preserve and grow the value of our existing portfolio.* We intend to maximize the long-term value of our existing portfolio of facilities by continuously improving safety, health and environmental performance, working to provide superior customer service, continuing to operate at our historic production levels, maintaining our facilities in optimal condition, extending waste and service contracts, and conducting our business more efficiently. We intend to achieve organic growth by expanding our customer base, service offerings and metal recovery, adding waste, service or energy contracts, investing in and enhancing the capabilities of our existing assets, and deploying new or improved technologies, systems, processes and controls, all targeted at increasing revenue or reducing costs.
- *Expand through project development and/or acquisitions in selected attractive markets.* We seek to grow our portfolio, primarily through development of new facilities or businesses, competitive bids for new contracts, and acquisitions, where we believe that market opportunities will enable us to utilize our skills and/or invest our capital at attractive risk-adjusted rates of return. We focus these efforts in markets where we currently have projects in operation or under construction, and in other markets with strong economic fundamentals and predictable legal and policy support. In addition to our focus on EfW and related waste sourcing activities, we are seeking to expand our environmental service offerings through both organic growth and acquisitions.

We believe that our approach to these opportunities is highly-disciplined, both with regard to our required rates of return on invested capital and the manner in which potential acquired businesses or new projects will be structured and financed.

- *Develop and commercialize new technology.* We believe that our efforts to protect and expand our business will be enhanced by the development of additional technologies in such fields as recycling, alternative waste treatment processes, gasification, combustion controls, emission controls and residue recovery, reuse or disposal. We have advanced our research and development efforts in some of these areas relevant to our EfW business, and have patents and patents pending for advances in controlling emissions.
- *Advocate for public policy favorable to EfW and other sustainable waste and materials management solutions.* We seek to educate policymakers and regulators about the environmental and economic benefits of EFW and advocate for policies and regulations that appropriately reflect these benefits. Our business is highly regulated, and as such we believe that it is critically important for us, as an industry leader, to play an active role in the debates surrounding potential policy developments that could impact our business.
- *Maintain a focus on sustainability.* Providing sustainable waste, materials, and energy services to our customers is the cornerstone of our business. Our corporate culture is focused on the triple bottom line of sustainability (people, planet, prosperity) in support of our mission. In addition to robust financial reporting, we are committed to transparently reporting our environmental, social and governance standards, policies, and performance, including through our corporate sustainability report. We seek to continuously improve our performance across these aspects to remain an industry leader.
- *Allocate capital efficiently for long-term shareholder value.* We plan to allocate capital to maximize shareholder value by: investing in our existing businesses to maintain and enhance assets; investing in new projects and strategic acquisitions that offer attractive returns on invested capital and further our strategic goals; maintaining a strong balance sheet; and consistently returning capital to our shareholders.

EXECUTION ON STRATEGY

Consistent with our strategy, we have executed on the following during 2017:

Capital Allocation

Our key capital allocation activities in 2017 included the following:

- \$132 million declared in dividends to stockholders; and
- \$171 million for growth investments, including \$117 million towards construction of the Dublin EfW facility (a majority of which was financed with non-recourse project subsidiary debt), \$17 million to acquire three environmental services businesses, and \$33 million for various organic growth investments, which included metals recovery projects and investments related to our profiled waste and environmental services businesses.

New Business Development

- In December 2017, we entered into a strategic partnership with Green Investment Group Limited (“GIG”), a subsidiary of Macquarie Group Limited, to develop, fund and own EfW projects in the U.K. and Ireland. This partnership is structured as a 50/50 joint venture (“JV”) between Covanta and GIG and creates a platform to develop waste infrastructure projects and pursue new opportunities for EfW project development or acquisitions. As an initial step, GIG invested in our Dublin EfW facility, which began commercial operations in October 2017, acquiring 50% ownership through the JV for €136 million, while we retained a 50% equity interest in the project and retained our role as operations and maintenance (“O&M”) service provider. GIG’s investment in the Dublin EfW project closed on February 12, 2018, and we used proceeds from the transaction to repay borrowings under our Revolving Credit Facility. As development projects in the the JV’s pipeline reach financial close and move into the construction phase, the JV will acquire the available ownership in each project, with a premium payable to the partner that originally developed and contributed the project to the JV. We will serve as the preferred O&M service provider for all JV projects on market competitive terms.
- During the year ended December 31, 2017, we acquired three environmental solutions businesses, in separate transactions, for a total of \$17 million. Also during 2017, we expanded our materials processing capabilities at our Milwaukee CES facility. These acquisitions and organic growth initiatives further expanded our CES capabilities, including client service offerings and geographic reach.
- In April 2017, we began utilizing our regional metals processing facility, located in Fairless Hills, Pennsylvania, to process non-ferrous metal recovered at our EfW facilities. The non-ferrous metals are cleaned and separated by size and type for purposes of improving product quality to create a higher-valued recycled metal product and expanding our potential end markets.

Contract Extensions

- In December 2017, we extended our service agreements with the Lancaster County Solid Waste Management Authority for the operation and maintenance of the Lancaster County and Harrisburg EfW facilities for an additional 15 years through 2032.
- In June 2017, we extended our agreement with the Delaware County Solid Waste Authority to process waste at our Delaware Valley EfW facility for an additional five years under terms similar to our existing contract.
- In February 2017, we extended our agreement with the Southeastern Connecticut Regional Resource Recovery Authority for waste disposal at our Southeast Connecticut EfW facility for an additional four years, restructuring the new contract as a tip fee arrangement.

Other Significant Events

- During September 2017, we settled a dispute with Hennepin County regarding extension provisions in our service contract to operate the Hennepin Energy Recovery Center. We received \$8 million in connection with the settlement and will continue to operate the facility through March 2018. During the year ended December 31, 2017, we recorded a gain on settlement of \$8 million as a reduction of “Other operating expense, net” in our consolidated statement of operations.
- In February 2017, our Fairfax County EfW facility experienced a fire in the front-end receiving portion of the facility. We resumed operations in December 2017. The cost of repair or replacement and business interruption losses are insured under the terms of applicable insurance policies, subject to the policy provisions and deductibles. We expect receipt of insurance recoveries for both property loss and business interruption to continue through 2018. For additional information, see *Item 1. Financial Statements - Note 13. Supplemental Information - Insurance Recoveries.*

Continuous Improvement

In 2017, we advanced our continuous improvement initiative utilizing Lean Six Sigma methodologies. The focus of this data-driven effort is on achieving stable operations at high performance levels, improved process efficiency and standardization across all of our facilities. We have established a team that includes external experts and internal top performers. This effort advances beyond previous efficiency initiatives, and enhances and complements the outage optimization efforts that we have undertaken over the past several years.

Sustainability Goals

In our Corporate Sustainability Report we outlined our performance to date against a series of sustainability goals aligned with our business goals and mission. Set in the areas of safety and health, environment, materials management, human resources, finance, governance, and community affairs, each goal has an assigned champion on our senior leadership team to ensure their full integration into our business. We believe attaining these goals help us respond to our customers' increasing interest in sustainability and the sustainable solutions we provide, mitigate certain risks, and gain a competitive advantage in business development opportunities.

NORTH AMERICA SEGMENT

Energy-from-Waste Projects

Our EfW projects generate revenue primarily from three sources: (1) fees charged for operating facilities or processing waste received; (2) the sale of electricity and/or steam; and (2) the sale of ferrous and non-ferrous metals that are recovered from the waste stream as part of the EfW process. We may also generate additional revenue from the construction, expansion or upgrade of a facility, when a public sector client owns the facility. Our customers for waste services or facility operations are principally public sector entities, though we also market disposal capacity at certain facilities to commercial customers. Our facilities primarily sell electricity, either to utilities at contracted rates or, in situations where a contract is not in place, at prevailing market rates in regional markets (primarily PJM, NEPOOL and NYISO in the Northeastern United States), and in some cases sell steam directly to industrial users.

We also operate and/or have ownership positions in environmental services businesses, transfer stations and landfills (primarily for ash disposal) that are ancillary and complementary to our EfW projects and generate additional revenue from disposal or service fees.

EfW Contract Structures

Most of our EfW projects were developed and structured contractually as part of competitive procurement processes conducted by public sector entities. As a result, many of these projects have common features. However, each contractual agreement is different, reflecting the specific needs and concerns of a client community, applicable regulatory requirements and/or other factors.

Our EfW projects can generally be divided into three categories, based on the applicable contract structure at a project as described in the table below. Notwithstanding distinctions among these general classifications in contract structures, in all cases we focus on a consistent set of performance indicators to optimize service to customers and operating results: (i) boiler availability; (ii) turbine availability; (iii) safety and environmental performance measures; (iv) tons processed; (v) steam sold; (vi) megawatt hours sold; and (vii) recycled metal tons sold.

The following summarizes the typical contractual and economic characteristics of the three project structures in the North America segment:

	Tip Fee	Service Fee (Covanta Owned)	Service Fee (Client Owned)
Number of facilities:	20	4	17
Client(s):	Host community and municipal and commercial waste customers	Host community, with limited merchant capacity in some cases	Dedicated to host community exclusively
Waste or service revenue:	Per ton "tipping fee"	Fixed fee, with performance incentives and inflation escalation	
Energy revenue:	Covanta retains 100%	Share with client (Covanta retains approximately 20% on average)	
Metals revenue:	Covanta retains 100%	Share with client (Covanta typically retains approximately 50%)	
Operating costs:	Covanta responsible for all operating costs	Pass through certain costs to client (e.g. ash disposal)	
Project debt service:	Covanta project subsidiary responsible	Paid by client explicitly as part of service fee	Client responsible for debt service
After service contract expiration:	N/A	Covanta owns the facility; clients have certain rights set forth in contracts; facility converts to Tip Fee or remains Service Fee with new terms	Client owns the facility; extend with Covanta or tender for new contract

We are principally responsible for capital costs in facilities that we own; however, client communities may have a contractual obligation to fund a portion of certain capital costs, particularly if required by a change in law. We also may be required to participate in capital improvements for non-owned facilities that we operate, which would be accounted for as operating expense. In contracts with our client communities, we agree to operate the facility and meet minimum performance standards. Typically, these include waste processing, energy efficiency standards, energy production and environmental standards. Unexcused failure to meet these requirements or satisfy the other material terms of our agreement, may result in damages charged to us or, if the breach is substantial, continuing and unremedied, termination of the applicable agreement. If one or more contracts were terminated for our default, these contractual damages may be material to our cash flow and financial condition. To date, we have not incurred material liabilities under such performance guarantees.

Contracted and Merchant Revenue

We generated 76% of our waste and service revenue in the North America segment in 2017 under contracts at set rates, while 24% was generated at prevailing market prices. Our waste disposal / service contracts expire at various times between 2018 and 2038. As of December 31, 2017, the volume weighted average contract life of our service fee contracts and tip fee contracts is 8.8 and 6.2 years, respectively. Our energy contracts expire at various times between 2018 and 2033. As our contracts expire, we become subject to greater market risk in maintaining and enhancing our revenue. To date, we have been successful in extending the majority of our existing contracts to operate EfW facilities owned by public sector clients. We project 2018 contracted waste and service revenue in North America segment to approximate 2017 levels.

As our waste service agreements at facilities that we own or lease expire, we intend to seek replacement or additional contracts, and because project debt on these facilities will be paid off at such time, we expect to be able to offer rates that will attract sufficient quantities of waste while providing acceptable revenue to us. The expiration of existing energy contracts at these facilities will require us to sell our output either into the local electricity grid at prevailing rates or pursuant to new contracts. We expect that multi-year contracts for waste supply at these facilities will continue to be available on acceptable terms in the marketplace, at least for a substantial portion of facility capacity, as municipalities continue to value long-term committed and sustainable waste disposal capacity. We also expect that an increasing portion of system capacity will be contracted on a shorter-term basis, and so we will have more frequent exposure to waste market risk. We expect that multi-year contracts for energy sales will generally be less available than in the past, thereby increasing our exposure to energy market prices upon expiration. As our existing contracts have expired and our exposure to market energy prices has increased, we entered into hedging arrangements in order to mitigate our exposure to near-term (one to three years) revenue fluctuations in energy markets, and we expect to continue to do so in the future. Our efforts in this regard will involve only mitigation of price volatility for the energy we produce in order to limit our energy revenue "at risk", and will not involve speculative energy trading.

See Item 1A. Risk Factors — Our results of operations may be adversely affected by market conditions existing at the time our contracts expire.

Over time, we will seek to renew, extend or sign new waste and service contracts and pursue opportunities with commercial customers and municipalities that are not necessarily stakeholders in our facilities in order to maintain a significant majority of our waste and service revenue (and EfW fuel supply) under multi-year contracts.

In addition, we are currently focused on expanding our environmental service offerings through both organic growth and acquisitions. The acquisitions will allow us to establish a presence in the environmental services sector, expand the geographical sourcing of our waste streams and drive non-hazardous profiled waste volumes into our EfW facilities. These acquired businesses typically accept waste under short-term contractual arrangements.

Summary information regarding our North America segment energy-from-waste assets is provided in the following table:

	Location	Design Capacity		Nature of Interest	Service Contract Expiration	
		Waste Processing (TPD)	Gross Electric (MW)			
TIP FEE STRUCTURES						
1.	Fairfax County ⁽¹⁾	Virginia	3,000	93.0	Owner/Operator	
2.	Southeast Massachusetts ⁽²⁾	Massachusetts	2,700	78.0	Owner/Operator	
3.	Delaware Valley ⁽¹⁾	Pennsylvania	2,688	87.0	Owner/Operator	
4.	Hempstead	New York	2,505	72.0	Owner/Operator	
5.	Indianapolis ⁽³⁾	Indiana	2,362	6.5	Owner/Operator	
6.	Niagara ⁽³⁾	New York	2,250	50.0	Owner/Operator	
7.	Essex County ⁽¹⁾	New Jersey	2,277	66.0	Owner/Operator	
8.	Haverhill ⁽¹⁾	Massachusetts	1,650	44.6	Owner/Operator	
9.	Union County ⁽¹⁾	New Jersey	1,440	42.1	Lessee/Operator	
10.	Plymouth ⁽¹⁾	Pennsylvania	1,216	32.0	Owner/Operator	
11.	Tulsa ⁽¹⁾⁽³⁾	Oklahoma	1,125	16.8	Owner/Operator	
12.	Camden ⁽¹⁾	New Jersey	1,050	21.0	Owner/Operator	
13.	Alexandria/Arlington ⁽¹⁾	Virginia	975	22.0	Owner/Operator	
14.	Stanislaus County	California	800	22.4	Owner/Operator	
15.	Southeast Connecticut ⁽⁴⁾	Connecticut	689	17.0	Owner/Operator	
16.	Bristol ⁽¹⁾	Connecticut	650	16.3	Owner/Operator	
17.	Lake County	Florida	528	14.5	Owner/Operator	
18.	Warren County ⁽¹⁾	New Jersey	450	13.5	Owner/Operator	
19.	Springfield ⁽¹⁾	Massachusetts	400	9.4	Owner/Operator	
20.	Pittsfield ⁽³⁾	Massachusetts	240	0.9	Owner/Operator	
SERVICE FEE (COVANTA OWNED) STRUCTURES						
21.	Onondaga County	New York	990	39.2	Owner/Operator	
22.	Huntington	New York	750	24.3	Owner/Operator	
23.	Babylon	New York	750	16.8	Owner/Operator	
24.	Marion County	Oregon	550	13.1	Owner/Operator	
SERVICE FEE (CLIENT OWNED) STRUCTURES						
25.	Pinellas County	Florida	3,150	75.0	Operator	2024
26.	Miami-Dade County ⁽¹⁾⁽²⁾	Florida	3,000	77.0	Operator	2023
27.	Honolulu ⁽²⁾⁽⁵⁾	Hawaii	2,950	90.0	Operator	2032
28.	Lee County ⁽⁵⁾	Florida	1,836	57.3	Operator	2024
29.	Montgomery County ⁽¹⁾⁽⁵⁾	Maryland	1,800	63.4	Operator	2021
30.	Hillsborough County	Florida	1,800	46.5	Operator	2029
31.	Long Beach	California	1,380	36.0	Operator	2024
32.	York County ⁽¹⁾	Pennsylvania	1,344	42.0	Operator	2035
33.	Hennepin County	Minnesota	1,212	38.7	Operator	2018
34.	Lancaster County ⁽¹⁾⁽³⁾	Pennsylvania	1,200	33.1	Operator	2032
35.	Pasco County	Florida	1,050	29.7	Operator	2024
36.	Harrisburg ⁽¹⁾	Pennsylvania	800	20.8	Operator	2032
37.	Burnaby	British Columbia	800	23.9	Operator	2025
38.	Huntsville ⁽³⁾	Alabama	690	—	Operator	2020
39.	Kent County	Michigan	625	16.8	Operator	2023
40.	MacArthur	New York	486	12.0	Operator	2030
41.	Durham-York	Durham Region, Canada	480	17.4	Operator	2036
		SUBTOTAL	56,638	1,498.0		

(1) These facilities either sell electricity into the regional power pool at prevailing market rates or have contractual arrangements to sell electricity at prevailing market rates

(2) These facilities use a refuse-derived fuel technology.

(3) These facilities have been designed to export steam for sale. See table below for the equivalent electric output. The equivalent electric output is part of, not in addition to, the design capacity megawatts ("MW") listed in the table above.

Facility	Equivalent Electric Output (MW)
Niagara	66
Indianapolis	52
Tulsa	25
Huntsville	15
Pittsfield	5
Lancaster	5

(4) This facility transitioned from a service fee (owned) to a tip fee contract effective February 2017.

(5) The client has a termination option under the service agreement.

Other Waste Management Infrastructure and Operations

In conjunction with our EfW business, we also own and/or operate 17 transfer stations, 19 material processing facilities, one regional metals recycling facility, and four landfills (primarily utilized for ash disposal). We utilize these assets to supplement and more efficiently manage the waste supply, ash disposal requirements, and metals processing activities at our EfW operations, and in some cases to expand our environmental solutions service offerings. Recent acquisitions will expand our presence in the environmental services sector and allow us to direct additional non-hazardous waste volumes into our EfW facilities. These businesses are highly synergistic with our existing profiled waste business and offer us the opportunity to expand the geographical sourcing of our waste streams and to provide additional environmental solutions and services to our clients.

OTHER PROJECTS

Outside the North America segment, we operate one EfW project in Ireland and have equity interests in EfW projects in Ireland and Italy. We intend to pursue additional international EfW projects where the regulatory and market environments are attractive, primarily through our joint venture with Green Investment Group ("GIG"). For additional information see *Item 8. Financial Statements and Supplementary Data- Note 3. New Business and Asset Management*. Ownership and operation of facilities in foreign countries potentially involves greater political and financial uncertainties than we experience in the United States, as described below and discussed in *Item 1A. Risk Factors*.

Summary information regarding our other EfW projects is provided in the following table:

		Location	Design Capacity		Nature of Interest
			Waste Processing (Metric)	Gross Electric (MW)	
1.	Dublin ⁽¹⁾	Ireland	1,800	58	50% Owner/Operator
2.	Trezzo	Italy	500	18	13% Owner/JV Operator
		SUBTOTAL	2,300	76	

(1) For additional information see *Item 8. Financial Statements and Supplementary Data- Note 3. New Business and Asset Management,- Dublin EfW Facility and Green Investment Group Limited ("GIG") Joint Venture*.

MARKETS, COMPETITION AND BUSINESS CONDITIONS

Waste Services

Post-recycled municipal solid waste generation in the United States is approximately 275 million tons per year, of which the EfW industry processes approximately 11% (of which we process approximately two-thirds).

EfW is an important part of the waste management infrastructure of the United States, particularly in regions with high population density but limited availability of land for landfilling, with nearly 80 facilities currently in operation that collectively process approximately 30 million tons of post-recycled solid waste and serve the needs of over 30 million people and produce enough electricity for the equivalent of 1.3 million homes. The use of EfW is even more prevalent in Western Europe and many countries in Asia, such as Japan. China has doubled its EfW capacity in about five years, and plans to further expand capacity by another 60% by 2020. Over 1,100 EfW facilities are in use today around the world, with a capacity to process approximately 230 million tons of waste per year. In the waste management hierarchies of the United States EPA and the European Union, EfW is designated as a superior solution to landfilling.

Renewable Energy

Public policy in the United States, at both the state and national levels, has developed over the past several years in support of increased generation of renewable energy as a means of combating the potential effects of climate change, as well as increasing domestic energy security. Today in the United States, approximately 15% of electricity is generated from renewable sources, approximately half of which is hydroelectric power.

EfW contributes approximately 4% of the United States non-hydroelectric renewable power. EfW is designated as renewable energy in 31 states, the District of Columbia, and Puerto Rico, as well as in several federal statutes and policies. Unlike most other renewable resources, EfW generation can serve base-load demand and is more often located near population centers where demand is greatest, minimizing the need for expensive incremental transmission infrastructure. Incorporated into local infrastructure, EfW facilities can also help provide community resiliency.

General Business Conditions

Economic - Changes in the economy affect the demand for goods and services generally, which affects overall volumes of waste requiring management and the pricing at which we can attract waste to fill available capacity. We receive the majority of our revenue under short- and long-term contracts, which limits our exposure to price volatility, but with adjustments intended to reflect changes in our costs. Where our revenue is received under other arrangements and depending upon the revenue source, we have varying amounts of exposure to price volatility.

The largest component of our revenue is waste revenue, which has generally been subject to less price volatility than our revenue derived from the sale of energy and metals. Waste markets tend to be affected, both with respect to volume and price, by local and regional economic activity, as well as state and local waste management policies.

At the same time, United States natural gas market prices influence electricity and steam pricing in regions where we operate, and thus affect our revenue for the portion of the energy we sell that is not under fixed-price contracts. Energy markets tend to be affected by regional supply and demand, as well as national economic activity and regulations.

The following are various published pricing indices relating to the U.S. economic drivers that are relevant to those aspects of our business where we have market exposure; however, there is not a precise correlation between our results and changes in these metrics.

	As of December 31,			
	2017	2016	2015	2014
Consumer Price Index ⁽¹⁾	2.1%	2.1%	0.7%	0.8%
PJM Pricing (Electricity) ⁽²⁾	\$ 28.69	\$ 24.85	\$ 36.00	\$ 56.99
NE ISO Pricing (Electricity) ⁽³⁾	\$ 32.75	\$ 29.74	\$ 42.93	\$ 64.58
Henry Hub Pricing (Natural Gas) ⁽⁴⁾	\$ 2.99	\$ 2.52	\$ 2.60	\$ 4.33
#1 HMS Pricing (Ferrous Metals) ⁽⁵⁾	\$ 268	\$ 197	\$ 217	\$ 355
Scrap Metals - Old Cast Aluminum Scrap ⁽⁶⁾	\$ 0.61	\$ 0.57	\$ 0.63	\$ 0.75

(1) Represents the year-over-year percent change in the Headline CPI number. The Consumer Price Index (CPI-U) data is provided by the U.S. Department of Labor Bureau of Labor Statistics.

(2) Average price per MWh for full year. Pricing for the PJM PSEG Zone is provided by the PJM ISO.

(3) Average price per MWh for full year. Pricing for the Mass Hub Zone is provided by the NE ISO.

(4) Average price per MMBtu for full year. The Henry Hub Pricing data is provided by the Natural Gas Weekly Update, Energy Information Administration, Washington, DC.

(5) Average price per gross ton for full year. The #1 Heavy Melt Steel ("HMS") composite index (\$/gross ton) price is published by American Metal Market.

(6) Average price per pound for full year. Calculated using the high price of Old Cast Aluminum Scrap (\$/lb) published by American Metal Market.

Seasonal - Our quarterly operating income within the same fiscal year typically differs substantially due to seasonal factors, primarily as a result of the timing of scheduled plant maintenance. We conduct scheduled maintenance periodically each year, which requires that individual boiler and/or turbine units temporarily cease operations. During these scheduled maintenance periods, we incur material repair and maintenance expense and receive less revenue until the boiler and/or turbine units resume operations. This scheduled maintenance usually occurs during periods of off-peak electric demand and/or lower waste volumes, which can vary regionally. The scheduled maintenance period in the first half of the year (primarily first quarter and early second quarter) is typically the most extensive, while the third quarter scheduled maintenance period is the least extensive. Given these factors, we normally experience our lowest operating income from our projects during the first half of each year.

Our operating income may also be affected by seasonal weather extremes during summers and winters. Increased demand for electricity and natural gas during unusually hot or cold periods may affect certain operating expense and may trigger material price increases for a portion of the electricity and steam we sell.

Performance - Our EfW facilities have historically demonstrated consistent reliability; our average boiler availability was 91% in 2017. We have historically met our operating obligations without experiencing material unexpected service interruptions or incurring material increases in costs. In addition, with respect to many of our contracts, we generally have limited exposure for risks not within our control. Across our fleet of facilities, we operate and maintain a large number of combustion units, turbine generators, and air-cooled condensers, among other systems. On an ongoing basis, we assess the effectiveness of our preventative maintenance programs, and implement adjustments to those programs in order to improve facility safety, reliability and performance. These assessments are tailored to each facility's particular technologies, age, historical performance and other factors. As our facilities age, we expect that the scope of work required to maintain our portfolio of facilities will increase in order to replace or extend the useful life of facility components and to ensure that historical levels of safe, reliable performance continue. For additional information about such risks and damages that we may owe for unexcused operating performance failures, see *Item 1A. Risk Factors - Operation of our businesses involves significant risks, which could have an adverse effect on our cash flows and results of operations*. In monitoring and assessing the ongoing operating and financial performance of our businesses, we focus on certain key factors: tons of waste processed, electricity and steam sold, boiler availability, plant operating expense and safety and environmental performance.

Waste, Energy and Metals Markets - We compete in waste markets that are highly competitive. In the United States, the market for waste management is almost entirely price-driven and is greatly influenced by economic factors within regional waste markets. These factors include:

- regional population and overall waste production rates;
- the number of waste disposal sites (including principally landfills, other EfW facilities and transfer stations) in existence or in the planning or permitting process;
- the available disposal capacity (in terms of tons of waste per day) that can be offered by other regional disposal sites;
- the extent to which local governments seek to control transportation and/or disposal of waste within their jurisdictions;
- the extent to which local governments and businesses continue to value sustainable approaches to handling of wastes; and
- the availability and cost of transportation options (e.g., rail, inter-modal, trucking) to provide access to more distant disposal sites, thereby affecting the size of the waste market itself.

In the waste market of our North America segment, waste service providers seek to obtain waste supplies for their facilities by competing on price (usually on a per-ton basis) with other service providers. At our facilities, where a service fee structure exists, we typically do not compete in this market because we do not have the contractual right to solicit merchant waste. At these facilities, the client community is responsible for obtaining the waste, if necessary by competing on price to obtain the tons of waste it has contractually promised to deliver to us. At our EfW facilities governed by tip fee structures and our waste procurement services businesses, we are responsible for obtaining waste supply, and therefore, actively compete in these markets to enter into spot, medium- and long-term contracts. These EfW projects are generally in densely-populated areas, with high waste generation rates and numerous large and small participants in the regional market. Our waste operations are largely concentrated in the northeastern United States. See *Item 1A. Risk Factors — Our waste operations are concentrated in one region and expose us to regional economic or market declines* for additional information concerning this geographic concentration. Certain of our competitors in these markets are vertically-integrated waste companies, which include waste collection operations, and thus have the ability to control supplies of waste, which may restrict our ability to offer services at attractive prices. Our business does not include traditional waste collection operations.

If a long-term contract expires and is not renewed or extended by a client community, our percentage of contracted processing capacity will decrease and we will need to compete in the regional market for waste supply at the facilities we own, from both municipal and commercial services. At that point, we will compete on price with landfills, transfer stations, other EfW facilities and other waste technologies that are then offering disposal or other services in the region.

Our sustainable service offerings seek to respond to increasing customer demand for environmentally preferred waste handling and disposal, as well as specific business risk mitigation requirements for certain materials. For these services, we compete with many large and small companies offering these services, in local and regional waste markets that are similarly influenced by the factors noted above which affect the broader waste markets.

We currently sell the majority of our electricity and other energy product output pursuant to contracts, and for this portion of our energy output we do not compete on price. As these contracts expire, we will sell an increasing portion of our energy output into competitive energy markets or pursuant to short-term contracts and, as such, generally expect to have a growing exposure to energy market price volatility.

We have entered into hedging arrangements in order to mitigate our exposure to this volatility, and we expect to continue to do so in the future. Our efforts in this regard will involve only mitigation of price volatility for the energy we produce, and will not involve speculative energy trading.

For the portion of our portfolio that is exposed to electricity markets, we expect prices will be driven by several factors including natural gas supply/demand conditions, regional electricity supply/demand factors, regional transmission and natural gas supply capacity and system conditions, weather conditions, and emerging environmental regulations. All of these factors will have national and regional impacts that affect electricity and steam prices.

Electricity and steam prices in the markets where the majority of our facilities are located are heavily impacted by movements in natural gas prices. The substantial increase in unconventional or shale gas supply has created downward pressure on gas prices relative to historical levels and therefore on prices for the electricity we sell that is not under contract. However, when demand for gas is high during certain seasons or weather conditions, the gas pipeline system has been limited in its ability to transport enough gas to certain regions, such as New England and California. As result, gas prices can experience short-term spikes, and electricity prices follow.

Several long-term trends are expected to affect U.S. natural gas prices; including shale gas production, storage capacity, liquefied natural gas ("LNG") exports, regulation, coal plant retirements, as well as industrial, transportation and residential demand. Furthermore, regional natural gas prices, especially in the Northeast are expected to be affected by changes in regional production and transportation capacity.

We generally enter into short-term contracts for sales of recovered ferrous and non-ferrous metals with processors and end-users (i.e., mills). We compete with other suppliers who are generally not in the EfW industry and whose product may be less costly to process than metals from EfW sources.

Technology, Research and Development

In our EfW business, we own and/or operate EfW facilities that utilize various technologies from several different vendors, including mass-burn combustion technologies and refuse-derived fuel technologies which include pre-combustion waste processing not required with a mass-burn design. As we continue our efforts to develop and/or acquire additional EfW projects internationally, we will consider mass-burn combustion and other technologies that best fit the needs of the local environment of a particular project.

In addition, we will continue to consider technologies better suited than mass-burn combustion for smaller scale applications, including gasification technologies.

We believe that all forms of EfW technologies offer an environmentally superior solution to post-recycled waste management and energy challenges faced by leaders around the world, and that our efforts to expand our business will be enhanced by the development of additional technologies in such fields as emission controls, residue disposal, alternative waste treatment processes, gasification, and combustion controls. We have advanced our research and development efforts in these areas, and have developed new and cost-effective technologies that represented major advances in controlling NO_x emissions. These technologies, for which patents have been granted, have been tested at existing facilities and we are now operating and/or installing such systems at a number of our facilities. We intend to maintain a focus on research and development of technologies in these and other areas that we believe will enhance our competitive position, and offer new technical solutions to waste and energy problems that augment and complement our business.

A number of other companies are similarly engaged in new technology development focused on extracting energy from waste materials through a variety of technical approaches, including: gasification, pyrolysis or other combustion designs; converting waste to fuels or other commodities; or processing waste to enable co-firing in larger power plants or industrial boilers. Firms engaged in these activities generally are less well-capitalized than Covanta, although some engage in joint ventures with larger and more well-capitalized companies. To date, we believe such efforts have not produced technologies that offer economically attractive alternatives in the absence of policy support.

REGULATION OF BUSINESS

Regulations Affecting Our Business

Environmental Regulations — General

Our business activities in the United States are extensively regulated pursuant to federal, state and local environmental laws. Federal laws, such as the Clean Air Act and Clean Water Act, and their state counterparts, govern discharges of pollutants to air and water. Other federal, state and local laws comprehensively govern the generation, transportation, storage, treatment and disposal of solid and hazardous waste and also regulate the storage and handling of chemicals and petroleum products (such laws and regulations are referred to collectively as the “Environmental Regulatory Laws”).

Other federal, state and local laws, such as the Comprehensive Environmental Response Compensation and Liability Act (commonly known as “CERCLA” and collectively referred to with such other laws as the “Environmental Remediation Laws”) make us potentially liable on a joint and several basis for any on site or off site environmental contamination which may be associated with our activities and the activities at our sites. These include landfills we have owned, operated or leased, or at which there has been disposal of residue or other waste generated, handled or processed by our facilities. Some state and local laws also impose liabilities for injury to persons or property caused by site contamination. Some service agreements provide us with indemnification from certain liabilities.

The Environmental Regulatory Laws prohibit disposal of regulated hazardous waste at our municipal solid waste facilities. The service agreements recognize the potential for inadvertent and improper deliveries of hazardous waste and specify procedures for dealing with hazardous waste that is delivered to a facility. Under some service agreements, we are responsible for some costs related to hazardous waste deliveries. We have not incurred material hazardous waste disposal costs to date.

The Environmental Regulatory Laws also require that many permits be obtained before the commencement of construction and operation of any waste or renewable energy project, and further require that permits be maintained throughout the operating life of the facility. We can provide no assurance that all required permits will be issued or re-issued, and the process of obtaining such permits can often cause lengthy delays, including delays caused by third-party appeals challenging permit issuance. Our failure to meet conditions of these permits or of the Environmental Regulatory Laws can subject us to regulatory enforcement actions by the appropriate governmental authority, which could include fines, penalties, damages or other sanctions, such as orders requiring certain remedial actions or limiting or prohibiting operation. See *Item 1A. Risk Factors — Compliance with environmental laws, including changes to such laws, could adversely affect our results of operations*. To date, we have not incurred material penalties, been required to incur material capital costs or additional expense, or been subjected to material restrictions on our operations as a result of violations of Environmental Regulatory Laws or permit requirements.

While we believe that we are in compliance with existing Environmental Regulatory and Remediation Laws, we may be identified, along with other entities, as being among parties potentially responsible for contribution to costs associated with the correction and remediation of environmental conditions at disposal sites subject to CERCLA and/or analogous state Environmental Remediation Laws. Our ultimate liability in connection with such environmental claims will depend on many factors, including our volumetric share of waste, the total cost of remediation, and the financial viability of other companies that have also sent waste to a given site and, in the case of divested operations, our contractual arrangement with the purchaser of such operations.

The Environmental Regulatory Laws may change. New technology may be required or stricter standards may be established for the control of discharges of air or water pollutants, for storage and handling of petroleum products or chemicals, or for solid or hazardous waste or ash handling and disposal. Thus, as new technology is developed and proven, we may be required to incorporate it into new facilities or make major modifications to existing facilities. This new technology may be more expensive than the technology we use currently.

Environmental Regulations — Recent Developments

Maximum Achievable Control Technology (“MACT”) Rules — EPA is authorized under the Clean Air Act to issue rules periodically which tighten air emission requirements to achievable standards, as determined under a specified regulatory framework. EPA is required to establish these MACT rules for a variety of industries, including new and existing municipal waste combustion (“MWC”) units, industrial boilers and solid waste incinerators. All of our facilities comply with all applicable MACT rules currently in effect.

EPA is currently conducting a combined Risk and Technology Review for the large MWC source category and will subsequently propose revised MWC MACT rules. While the scope of and timing for implementation of these rules is uncertain, the revised MWC MACT may lower existing MWC MACT emission limits for most, if not all, regulated air pollutants emitted by our facilities, and may require capital improvements and/or increased operating costs. We are unable at this time, to estimate the magnitude of such costs, which may be material, or to determine the potential impact on the profitability of our MWC facilities.

In some cases, the costs incurred to meet the revised MACT rules at facilities may be recovered from public sector clients and other users of our facilities through increased fees permitted to be charged under applicable contracts; however, to the extent we incur costs at other of our facilities to meet the applicable MACT rules, such costs are not subject to contractual recovery and instead will be borne directly by the affected facilities.

Revised Ground Level Ozone Standards — On October 26, 2015, EPA published a final rule to revise and strengthen the National Ambient Air Quality Standards for ground-level ozone or “smog”. If implemented by EPA and affected states, this rule could impact changes to our existing air permits that we may pursue in the future.

Energy Regulations

Our businesses are subject to the provisions of federal, state and local energy laws applicable to the development, ownership and operation of facilities located in the United States. The Federal Energy Regulatory Commission (“FERC”), among other things, regulates the transmission and the wholesale sale of electricity in interstate commerce under the authority of the Federal Power Act (“FPA”). In addition, under existing regulations, FERC determines whether an entity owning a generation facility is an Exempt Wholesale Generator (“EWG”), as defined in the Public Utility Holding Company Act of 2005 (“PUHCA 2005”). FERC also determines whether a generation facility meets the ownership and technical criteria of a Qualifying Facility (cogeneration facilities and other facilities making use of non-fossil fuel power sources, such as waste, which meet certain size and other applicable requirements, referred to as “QFs”), under the Public Utility Regulatory Policies Act of 1978, as amended (“PURPA”). Each of our United States generating facilities has either been determined by FERC to qualify as a QF or is otherwise exempt, or the subsidiary owning the facility has been determined to be an EWG.

Federal Power Act — The FPA gives FERC exclusive rate-making jurisdiction over the wholesale sale of electricity and transmission of electricity in interstate commerce. Under the FPA, FERC, with certain exceptions, regulates the owners of facilities used for the wholesale sale of electricity or transmission of electricity in interstate commerce as public utilities. The FPA also gives FERC jurisdiction to review certain transactions and numerous other activities of public utilities. Most of our QFs are currently exempt from FERC’s rate regulation under the FPA because (i) the QF is 20 MW or smaller; (ii) its sales are made pursuant to a state regulatory authority’s implementation of PURPA; (iii) the QF is owned by a municipality or subdivision thereof; or (iv) its sales are made pursuant to a contract executed on or before March 17, 2006. Our QFs that are not exempt, or that lose these exemptions from rate regulation, are or would be required to obtain market-based rate authority from FERC or otherwise make sales pursuant to rates on file with FERC.

Under the FPA, public utilities are required to obtain FERC’s acceptance of their rate schedules for the wholesale sale of electricity. Our generating companies in the United States that are not otherwise exempt from FERC’s rate regulation have sales of electricity pursuant to market-based rates or other rates authorized by FERC. With respect to our generating companies with market-based rate authorization, FERC has the right to suspend, revoke or revise that authority and require our sales of energy to be made on a cost-of-service basis if FERC subsequently determines that we can exercise market power, create barriers to entry, or engage in abusive affiliate transactions. In addition, amongst other requirements, our market-based rate sellers are subject to certain market behavior and market manipulation rules and, if any of our subsidiaries were deemed to have violated any one of those rules, such subsidiary could be subject to potential disgorgement of profits associated with the violation and/or suspension or revocation of market-based rate authority, as well as criminal and civil penalties. If the market-based rate authority for one (or more) of our subsidiaries was revoked or it was not able to obtain market-based rate authority when necessary, and it was required to sell energy on a cost-of-service basis, it could become subject to the full accounting, record keeping and reporting requirements of FERC. Even where FERC has granted market-based rate authority, FERC may impose various market mitigation measures, including price caps, bidding rules and operating restrictions where it determines that potential market power might exist and that the public interest requires such potential market power to be mitigated. A loss of, or an inability to obtain, market-based rate authority could have a material adverse impact on our business. We can offer no assurance that FERC will not revisit its policies at some future time with the effect of limiting market-based rate authority, regulatory waivers, and blanket authorizations.

Under the Energy Policy Act of 2005 (“EPA 2005”), FERC has approved the North American Electric Reliability Corporation, or “NERC,” to address the development and enforcement of mandatory reliability standards for the wholesale electric power system. Certain of our subsidiaries are responsible for complying with the standards in the regions in which we operate. NERC also has the ability to assess financial penalties for non-compliance. In addition to complying with NERC requirements, certain of our subsidiaries must comply with the requirements of the regional reliability council for the region in which that entity is located. Compliance with these reliability standards may require significant additional costs, and noncompliance could subject us to regulatory enforcement actions, fines, and increased compliance costs.

Public Utility Holding Company Act of 2005 — PUHCA 2005 provides FERC with certain authority over and access to books and records of public utility holding companies not otherwise exempt by virtue of their ownership of EWGs, QFs, and Foreign Utility Companies, as defined in PUHCA 2005. We are a public utility holding company, but because all of our generating facilities have QF status, are otherwise exempt, or are owned through EWGs, we are exempt from the accounting, record retention, and reporting requirements of PUHCA 2005.

Public Utility Regulatory Policies Act — PURPA was passed in 1978 in large part to promote increased energy efficiency and development of independent power producers. PURPA created QFs to further both goals, and FERC is primarily charged with administering PURPA as it applies to QFs. FERC has promulgated regulations that exempt QFs from compliance with certain provisions of the FPA, PUAHCA 2005, and certain state laws regulating the rates charged by, or the financial and organizational activities of, electric utilities. The exemptions afforded by PURPA to QFs from regulation under the FPA and most aspects of state electric utility regulation are of great importance to us and our competitors in the EfW and independent power industries.

PURPA also initially included a requirement that utilities must buy and sell power to QFs. Among other things, EPAAct 2005 eliminated the obligation imposed on utilities to purchase power from QFs at an avoided cost rate where the QF has non-discriminatory access to wholesale energy markets having certain characteristics, including nondiscriminatory transmission and interconnection services. In addition, FERC has established a regulatory presumption that QFs with a capacity greater than 20 MW have non-discriminatory access to wholesale energy markets in most geographic regions in which we operate. As a result, many of our expansion, renewal and development projects must rely on competitive energy markets rather than PURPA's historic avoided cost rates in establishing and maintaining their viability.

Recent Policy Debate Regarding Climate Change and Renewable Energy

The public and political debate over GHG emissions (principally CO₂ and methane) and their contribution to climate change continues both internationally and domestically. Any resulting regulations could in the future affect our business. As is the case with all combustion, our facilities emit CO₂, however EfW is recognized as creating net reductions in GHG emissions and is otherwise environmentally beneficial, because it:

- avoids CO₂ emissions from fossil fuel power plants;
- avoids methane emissions from landfills; and
- avoids GHG emissions from mining and processing metal because it recovers and recycles metals from waste.

In addition, EfW facilities are a domestic source of energy, preserve land, and are typically located close to the source of the waste and thus typically reduce fossil fuel consumption and air emissions associated with long-haul transportation of waste to landfills.

For policy makers at the local level who make decisions on sustainable waste management alternatives, we believe that using EfW instead of landfilling will result in significantly lower net GHG emissions, while also introducing more control over the cost of waste management and supply of local electrical power. We are actively engaged in encouraging policy makers at state and federal levels to enact legislation that supports EfW as a superior choice for communities to avoid both the environmental harm caused by landfilling waste, and reduce local reliance on fossil fuels as a source of energy.

Many of these same policy considerations apply equally to other renewable technologies. The extent to which such potential legislation and policy initiatives will affect our business will depend in part on whether EfW and our other renewable technologies are included within the range of clean technologies that could benefit from such legislation.

In October 2015, EPA published two new rules regulating greenhouse gas emissions. The first rule, the Clean Power Plan, regulates existing fossil fuel fired electric generating units. The second regulation sets greenhouse gas emissions standards for new power plants. Our facilities were not regulated entities under either of these rules and new EfW capacity was eligible to generate energy recovery credits for compliance under certain state plans. In October 2017, the EPA proposed to repeal the Clean Power Plan following a March 2017 Executive Order signed by President Trump to review the Clean Power Plan. We cannot predict at this time what, if any, proposal the EPA may make in place of the Clean Power Plan or its potential impact to our business. We continue to closely follow developments in this area.

In addition to the new EPA rules, several initiatives have been developed at the state or regional levels, and some initiatives exist in regions where we have projects. For example:

- The Regional Greenhouse Gas Initiative (“RGGI”) is an operating regional “cap-and-trade” program focused on fossil fuel-fired electric generators which does not directly affect EfW facilities. We operate one fossil-fuel fired boiler at our Niagara facility included in the RGGI program. Virginia issued a proposed regulation in November 2017 to reduce GHG emissions from its electricity sector and link to the RGGI program. EfW facilities were not included in the proposal.
- California's Global Warming Solutions Act of 2006 (“AB 32”), seeks to reduce GHG emissions in California to 1990 levels by 2020. AB 32 includes an economy-wide “cap-and-trade” program, which could impact our California EfW facilities.
- Regulatory amendments finalized in 2017 extended an exclusion of EfW facilities from the cap-and-trade program through the end of 2017. A resolution passed by the Board of the California Air Resources Board (“CARB”) directs the agency to provide transition assistance to EfW facilities beginning in 2018. The specific degree of assistance to be provided is uncertain at this time.

- The province of Ontario, Canada has developed a greenhouse gas cap and trade program under which EfW facilities, including the Durham-York facility, do not incur a compliance obligation under the program through the end of 2020. We cannot predict at this time the treatment of EfW facilities after 2020.

International Climate Change Policies

Certain international markets in which we compete have recently adopted regulatory or policy frameworks that encourage EfW projects as important components of GHG emission reduction strategies, as well as waste management planning and practice.

The European Union

The European Union has adopted legislation which requires member states to reduce the utilization of and reliance upon landfill disposal. The legislation emanating from the European Union is primarily in the form of “Directives,” which are binding on the member states but must be transposed through national enabling legislation to implement their practical requirements, a process which can result in significant variance between the legislative schemes introduced by member states. Certain Directives notably affect the regulation of EfW facilities across the European Union. These include (1) Directive 2010/75/EU on industrial emissions (the “Industrial Emissions Directive”) which consolidated and replaced seven existing Directives, including Directive 96/61/EC concerning integrated pollution prevention and control (known as the “IPPC Directive”) which governed emissions to air, land and water from certain large industrial installations, and Directive 2000/76/EC concerning the incineration of waste (known as the Waste Incineration Directive), which imposed limits on emissions to air or water from the incineration and co-incineration of waste; (2) Directive 1999/31/EC concerning the landfill of waste (known as the “Landfill Directive”) which imposes operational and technical controls on landfills and restricts, on a reducing scale, the amount of biodegradable municipal waste which member states may dispose of to landfill; and (3) Directive 2008/98/EC on waste (known as the revised “Waste Framework Directive”) which enshrines the waste hierarchy to divert waste from landfill and underpins a preference for efficient energy-from-waste for the recovery of value from residual wastes.

In December 2017, the European Commission and the European Parliament reached a provisional agreement on four legislative proposals to amend several of the Directives described above to advance a more circular economy. We cannot predict at this time the final outcome of this process, but continue monitoring developments closely.

In March, 2017, the United Kingdom notified the European Union of its intention to leave the European Union (so-called “Brexit”). The parties are now negotiating a transition period and future relations between the United Kingdom on a range of issues. We have studied and consulted with local experts regarding the potential regulatory and economic impacts of Brexit on the United Kingdom, with a particular focus on potential impacts to the waste and energy markets as they might affect our plans to expand our business through our recently-announced joint venture with Green Investment Group Limited. (For further information see *Item 8. Financial Statements And Supplementary Data — Note 3. New Business and Asset Management — Green Investment Group Limited (“GIG”) Joint Venture*). The government of the United Kingdom has shown no indication of an intention to rollback or reverse its policy support for environmental protection generally, the renewables market, or for EfW specifically, including with respect to the Directives described above. As such, while we can provide no assurance, we do not believe Brexit will materially impact the key drivers for investment in the combined pipeline of EfW projects we are pursuing jointly with Green Investment Group Limited.

Employee Health and Welfare

We are subject to numerous regulations enacted to protect and promote worker health and welfare through the implementation and enforcement of standards designed to prevent illness, injury and death in the workplace. The primary law relating to employee health and welfare applicable to our business in the United States is the Occupational Safety and Health Act of 1970 (“OSHA”), which establishes certain employer responsibilities including maintenance of a workplace free of recognized hazards likely to cause illness, death or serious injury, compliance with standards promulgated by OSHA, and assorted reporting and record keeping obligations, as well as disclosure and procedural requirements. Various OSHA standards apply to certain aspects of our operations.

Employee health and welfare laws governing our business in foreign jurisdictions include the Workplace Health and Safety Directive and the Directive concerning ionizing radiation in the European Union, and various provisions of the Canada Labour Code and related regulations in Canada.

EMPLOYEES

As of December 31, 2017, we employed approximately 3,700 full-time employees worldwide, the majority of which were employed in the United States. Of our employees in the United States and Canada, approximately 9% are represented by organized labor. Currently, we are party to 13 collective bargaining agreements: two expire in 2018, four expire in 2019, two expire in 2020 and five are currently in negotiations. We consider relations with our employees to be good.

EXECUTIVE OFFICERS OF THE REGISTRANT

A list of our executive officers and their business experience follows. Ages shown are as of February 1, 2018.

Name and Title	Age	Experience
Stephen J. Jones President and Chief Executive Officer	56	President and Chief Executive Officer since 2015. Prior to joining Covanta, Mr. Jones was employed by Air Products and Chemicals, Inc. ("Air Products"), a global supplier of industrial gases, equipment and services from 1992 through 2014. Mr. Jones served as Senior Vice President and General Manager, Tonnage Gases, Equipment and Energy, from 2009 through 2014. Mr. Jones also served as Air Products' China President from 2011 through 2014 at Air Products' office in Shanghai. He was also a member of Air Products' Corporate Executive Committee from 2007 through 2014. Mr. Jones joined Air Products in 1992 as an attorney in the Law Group representing various business areas and functions and in 2007 he was appointed Senior Vice President, General Counsel and Secretary.
Bradford J. Helgeson Executive Vice President and Chief Financial Officer	41	Executive Vice President and Chief Financial Officer since 2013. Mr. Helgeson served as Vice President and Treasurer from 2007 to 2013. Prior to joining Covanta in 2007, Mr. Helgeson was Vice President, Finance and Treasurer at Waste Services, Inc., a publicly-traded environmental services company with operations in the United States and Canada, from 2004 to 2007. Prior to these roles, Mr. Helgeson held positions in the investment banking departments at Lehman Brothers from 2000 to 2004 and at Donaldson, Lufkin & Jenrette from 1998 to 2000.
Michael J. de Castro Executive Vice President, Supply Chain	55	Executive Vice President, Supply Chain since 2015. Mr. de Castro was employed by Air Products from 2006 to 2010, serving in various operational capacities including Director, Global Operations Americas. Mr. de Castro was Chief Executive Officer of Interstate Waste Services ("IWS") from 2010 to 2013 when he returned to Air Products, serving as Director, Global Operations Strategic Development and as Fulfillment Director in the Performance Materials Division. Prior to his tenure at IWS and Air Products, Mr. de Castro held a variety of positions at American Ref-Fuel Company for 16 years, including of Vice President, Operations.
Derek W. Veenhof Executive Vice President, Asset Management	51	Executive Vice President since 2013. Mr. Veenhof served as Senior Vice President (2011-2013) and Vice President (2007-2010) of Covanta commercial subsidiaries managing contracting and market development efforts in waste and metals recycling. From 2002 to 2006, Mr. Veenhof was Covanta's Area Manager responsible for the Metro NY, NJ and Philadelphia market areas. Mr. Veenhof joined Covanta in 1997, serving as the Niagara Facility Business Manager from 1997-2001.
Timothy J. Simpson Executive Vice President, General Counsel and Secretary	59	Executive Vice President, General Counsel and Secretary since 2007. Mr. Simpson served as Senior Vice President, General Counsel and Secretary from 2004 to 2007. Previously, he served as Senior Vice President, General Counsel and Secretary of Covanta Energy from March 2004 to October 2004. Mr. Simpson joined Covanta in 1992.
Matthew R. Mulcahy Executive Vice President and Head of Corporate Development	54	Executive Vice President and Head of Corporate Development since 2017. Mr. Mulcahy served as Senior Vice President and Head of Corporate Development for Covanta from 2012 to 2016 and Senior Vice President of Business Development from 2007 through 2011. From 2003 to 2007, Mr. Mulcahy served as Vice President of Covanta Secure Service and TransRiver Marketing, a Covanta subsidiary. From 2000 to 2003, Mr. Mulcahy was Covanta's Vice President, Project Implementation. Mr. Mulcahy joined Covanta in 1990.
Paul E. Stauder Senior Vice President and President, Covanta Environmental Solutions	52	Senior Vice President since 2016 and President of Covanta Environmental Solutions, a subsidiary of Covanta Energy, since 2015. Mr. Stauder served as Senior Vice President of Business Management for Covanta Energy from 2008 to 2014, with primary responsibility for all commercial and client aspects of Covanta's EFW facilities. Prior to that role, Mr. Stauder served in a number of positions with Covanta Energy, including Regional Vice President, overseeing EFW plants and independent power plants. Mr. Stauder joined Covanta in 1997.
Michael A. Wright Senior Vice President and Chief Human Resources Officer	55	Senior Vice President and Chief Human Resources Officer since 2009. Mr. Wright served as President of The Wright Group, Inc., a boutique human capital consulting firm from 2008 to 2009, prior to which Mr. Wright spent 25 years serving in a variety of positions at the Altria family of companies (Kraft and Philip Morris), including Vice President-Human Resources & Technology for Altria Corporate Services, Inc. from 2006 to 2008.
Manpreet Grewal Vice President and Chief Accounting Officer	39	Mr. Grewal was appointed Vice President and Chief Accounting Officer in 2017. Prior to joining Covanta, he was the Senior Director, Global Financial & Operational Audits from 2016 through 2017 for Johnson Controls plc, a leading provider in building technologies and solutions and automotive batteries globally. Prior to this position, Mr. Grewal spent 13 years working in a variety of finance and accounting roles at Tyco International plc, prior to Tyco's 2016 merger with Johnson Controls. From 2014 through 2015 Mr. Grewal was the Director, Internal Audit and from 2012 to 2013, he was the Sr. Manager, Accounting Research & Shared Processes for Tyco.

Item 1A. **RISK FACTORS**

The following risk factors could have a material adverse effect on our business, financial condition and results of operations.

Exposure to energy, waste disposal, recycled metal and commodity prices may affect our results of operations.

Some of the electricity and steam we sell and all of the recycled metals we sell, are subject to market price volatility. Changes in the market prices for electricity and steam in particular can be affected by changes in natural gas prices, weather conditions and other market variables, while recycled metals prices are affected by general economic conditions and global demand for construction, goods and services. Similarly, the portion of waste processing capacity which is not under contract may be subject to volatility, principally as a result of general economic activity and waste generation rates, as well as the availability of alternative disposal sites and the cost to transport waste to alternative disposal. Volatility with respect to these all of these revenue categories could adversely impact our businesses' profitability and financial performance. We may not be successful in our efforts to mitigate our exposure to price swings relating to these revenue streams.

We may experience volatility in the market prices and availability of commodities we purchase, such as reagents, chemicals and fuel. Any price increase, delivery disruption or reduction in the availability of such supplies could affect our ability to operate the facilities and impair our cash flow and profitability. We may not be successful in our efforts to mitigate our exposure to supply and price swings for these commodities.

Compliance with environmental laws, including changes to such laws, could adversely affect our results of operations.

Our waste and energy services businesses are subject to extensive environmental laws and regulations by federal, state, local and foreign authorities, primarily relating to air, waste (including residual ash from combustion) and water. Costs relating to compliance with these laws and regulations are material to our business. If our businesses fail to comply with these regulations, our cash flow and profitability could be adversely affected, and we could be subject to civil or criminal liability, damages and fines.

In addition, lawsuits or enforcement actions by federal, state, local and/or foreign regulatory agencies may materially increase our costs. Stricter environmental regulation of air emissions, solid waste handling or combustion, residual ash handling and disposal, and waste water discharge could materially affect our cash flow and profitability. Certain environmental laws make us potentially liable on a joint and several basis for the remediation of contamination at or emanating from properties or facilities we currently or formerly owned or operated or properties to which we arranged for the disposal of hazardous substances. Such liability is not limited to the cleanup of contamination we actually caused. We cannot provide any assurance that we will not incur liability relating to the remediation of contamination, including contamination we did not cause. For additional information on environmental regulation, see *Item 1. Business — Regulation of Business*.

Existing environmental laws and regulations have been and could be revised or reinterpreted, and future changes in environmental laws and regulations are expected to occur. This may materially increase the amount we must invest to bring our facilities into compliance, impose additional expense on our operations, limit our ability to operate at capacity, or at all, or otherwise impose structural changes to markets which would adversely affect our competitive positioning in those markets.

Contracts to provide new services or services through new or different methods involves significant risks, which could have an adverse effect on our cash flows and results of operations.

As we enter into contracts to provide new services or services through new or different methods, such as our waste transportation and disposal contract with New York City or our acquired environmental services businesses, we may face additional operating risks. These may include:

- performance by multiple contractors critical to our ability to perform under our new customer agreements;
- logistics associated with transportation of waste via barge, rail or other methods with which we have limited experience;
- reliance on joint venture parties or technology providers with whom we have limited experience; and
- risks associated with providing new materials handling or treatment services.

Operation of our businesses involves significant risks, which could have an adverse effect on our cash flows and results of operations.

The operation of our businesses involves many risks, including:

- supply or transportation interruptions;
- the breakdown, failure or unplanned maintenance or repair of equipment or processes;
- difficulty or inability to find suitable replacement parts for equipment;
- the unavailability of sufficient quantities of waste or fuel;
- fluctuations in the heating value of the waste we use for fuel at our EfW facilities;
- failure or inadequate performance by subcontractors;
- disruption in the transmission of electricity generated;
- labor disputes and work stoppages;
- unforeseen engineering and environmental problems;
- unanticipated cost overruns;
- weather interferences and catastrophic events including fires, explosions, earthquakes, droughts, pandemics and acts of terrorism; and
- the exercise of the power of eminent domain.

We cannot predict the impact of these risks on our business or operations. One or more of these risks, if they were to occur, could prevent us from meeting our obligations under our operating contracts and have an adverse effect on our cash flows and results of operations.

Our results of operations may be adversely affected by market conditions existing at the time our contracts expire.

For the EfW facilities that we own or lease, the contracts pursuant to which we provide waste services and sell energy output expire on various dates between 2018 and 2038. Expiration of these contracts subjects us to greater market risk in entering into new or replacement contracts at pricing levels that may not generate comparable revenue. We cannot assure you that we will be able to enter into renewal or replacement contracts on favorable terms, or at all. We also expect that medium- and long-term contracts for sales of energy may be less available than in the past, and so after expiration of existing contracts we expect to sell our energy output either in short-term transactions or on a spot basis or pursuant to new contracts which may subject us to greater market risk in maintaining and enhancing revenue. As a result, following the expiration of our existing long-term contracts, we may have more exposure on a relative basis to market risk, and therefore revenue fluctuations, in energy markets than in waste markets.

Where we have leasehold interests, we cannot assure you that market conditions prevailing when such interests expire will allow us to enter into an extension or that the terms available in the market at the time will be favorable to us.

Significant policy shifts from the Trump Administration could have a material adverse effect on us.

The Trump Administration has called for substantial change to fiscal and tax policies, regulatory oversight of businesses, and greater restrictions on free trade including significant increases on tariffs on goods imported into the United States, including from China. Proposals espoused by President Trump may result in changes to social, political, regulatory and economic conditions in the United States or in laws and policies affecting the development and investment in countries where we currently conduct business. In addition, these changes could result in negative sentiments towards the United States among non-U.S. customers and among non-U.S. employees or prospective employees. We cannot predict the impact, if any, of these changes to our business. However, it is possible that these changes could adversely affect our business. It is likely that some policies adopted by the new administration will benefit us and others will negatively affect us.

Changes in public policies and legislative initiatives could materially affect our business and prospects.

There has been substantial debate recently in the United States and abroad in the context of environmental and energy policies affecting climate change, the outcome of which could have a positive or negative influence on our existing business and our prospects for growing our business. Congress and several states have considered legislation and/or regulations designed to increase the proportion of the nation's electricity that is generated from technologies considered "clean" or "renewable", through mandatory generation levels, tax incentives, and other means. For those sources of greenhouse gas emissions that are unable to meet the required limitations, such legislation could impose substantial financial burdens. The Trump administration has indicated that it generally favors traditional energy technologies. Our business and future prospects could be adversely affected if renewable technologies we use were either (i) disfavored in any new laws or regulations pursued by the Trump administration, or (ii) not included among those technologies identified in any final laws or regulations as favoring renewable technologies, or not included in the state plans to reduce carbon emissions, and therefore not entitled to the benefits of such laws, regulations, or plans.

Our substantial indebtedness could adversely affect our business, financial condition and results of operations and our ability to meet our payment obligations under our indebtedness.

The level of our consolidated indebtedness could have significant consequences on our future operations, including:

- making it difficult for us to meet our payment and other obligations under our outstanding indebtedness;
- limiting our ability to obtain additional financing to fund working capital, capital expenditures, new projects, acquisitions and other general corporate purposes;
- subjecting us to the risk of increased sensitivity to interest rate increases on indebtedness under our credit facilities;
- limiting our flexibility in planning for, or reacting to, and increasing our vulnerability to, changes in our business, the industries in which we operate and the general economy; and
- placing us at a competitive disadvantage compared to our competitors that have less debt or are less leveraged.

Any of the above-listed factors could have an adverse effect on our business, financial condition and results of operations and our ability to meet our payment obligations under our consolidated debt, and the price of our common stock.

We cannot assure you that our cash flow from operations will be sufficient to service our indebtedness, which could have a material adverse effect on our financial condition.

Our ability to meet our obligations under our indebtedness depends on our ability to receive dividends and distributions from our subsidiaries in the future. This, in turn, is subject to many factors, some of which are beyond our control, including the following:

- the continued operation and maintenance of our facilities, consistent with historical performance levels;
- maintenance or enhancement of revenue from renewals or replacement of existing contracts and from new contracts to expand existing facilities or operate additional facilities;
- market conditions affecting waste disposal and energy pricing, as well as competition from other companies for contract renewals, expansions and additional contracts, particularly after our existing contracts expire;
- the continued availability of the benefits of our net operating loss carryforwards; and
- general economic, financial, competitive, legislative, regulatory and other factors.

We cannot assure you that our business will generate cash flow from operations, or that future borrowings will be available to us under our credit facilities or otherwise, in an amount sufficient to enable us to meet our payment obligations under our outstanding indebtedness and to fund other liquidity needs. If we are not able to generate sufficient cash flow to service our debt obligations, we may need to refinance or restructure our debt, sell assets, reduce or delay capital investments, or seek to raise additional capital. If we are unable to implement one or more of these alternatives, we may not be able to meet our payment obligations under our outstanding indebtedness, which could have a material and adverse effect on our financial condition.

Our credit facilities and the indentures for our other corporate debt contain covenant restrictions that may limit our ability to operate our business.

Our credit facilities and the indentures for our other corporate debt contain operating and financial restrictions and covenants that impose operating and financial restrictions on us and require us to meet certain financial tests. Complying with these covenant restrictions may limit our ability to engage in certain transactions or activities, including incurring additional indebtedness, making certain investments, and distributions, and selling certain assets.

As a result of these covenant restrictions, our ability to respond to changes in business and economic conditions and to obtain additional financing, if needed, may be restricted, and we may be prevented from engaging in transactions that might otherwise be beneficial to us.

Our ability to comply with these covenants is dependent on our future performance, which will be subject to many factors, some of which are beyond our control, including prevailing economic conditions. In addition, the failure to comply with these covenants may result in a default under our credit facilities and other corporate debt. Upon the occurrence of such an event of default, the lenders under our credit facilities could elect to declare all amounts outstanding under such credit facilities, together with accrued interest, to be immediately due and payable. If the lenders accelerate the payment of the indebtedness under our credit facilities, we cannot assure you that the assets securing such indebtedness would be sufficient to repay in full that indebtedness and our other indebtedness, which could have a material and adverse effect on our financial condition.

Dislocations in credit and capital markets and increased capital constraints on banks may make it more difficult for us to borrow money or raise capital needed to finance the construction of new projects, expand existing projects, acquire certain businesses and refinance our existing debt.

Our business is capital intensive, and we seek to finance a significant portion of our existing assets, as well as our investments in new assets, with debt capital to the extent that we believe such financing is prudent and accretive to stockholder value.

As of December 31, 2017, we had approximately \$2.5 billion in long-term debt and project debt. Prolonged instability or deterioration in the bank credit and/or debt and equity capital markets may adversely affect our ability to obtain refinancing of our existing debt on favorable terms, or at all. Such circumstances could adversely affect our business, financial condition, and/or the share price of our common stock.

We intend to grow our business through the development of new projects, the expansion and/or enhancement of existing facilities, and opportunistic acquisitions of projects or businesses. Such investments may be large enough to require capital in excess of our cash on hand and availability under our existing credit facilities. Prolonged instability or deterioration in the credit markets may adversely impact our access to capital on terms that we find acceptable, thereby impacting our ability to execute our strategy to grow our business.

Our revenue and cash flows may decline if we are not successful in retaining rights or such rights terminate to operate facilities after our contracts expire.

We operate some facilities owned by public sector clients, under long-term contracts. If, when existing contracts expire, we are unable to reach agreement with our municipal clients on the terms under which they would extend our operating contracts, this may adversely affect our revenue, cash flow and profitability. We cannot assure that we will be able to enter into such contracts or that the terms available in the market at the time will be favorable to us.

At a limited number of facilities we operate that are owned by public sector clients, our clients have certain rights to terminate such contracts without cause. If any such terminations were to occur, this may adversely affect our revenue, cash flow and profitability. We cannot assure that such contract terminations will not occur in the future.

Development and construction of new projects and expansions may not commence as anticipated, or at all.

Development and construction involves many risks including:

- difficulties in identifying, obtaining and permitting suitable sites for new projects;
- the inaccuracy of our assumptions with respect to the cost of and schedule for completing construction;
- difficulty, delays or inability to obtain financing for a project on acceptable terms;
- delays in deliveries of, or increases in the prices of, equipment sourced from other countries;
- the unavailability of sufficient quantities of waste or other fuels for startup;
- permitting and other regulatory issues, license revocation and changes in legal requirements;
- labor disputes and work stoppages;
- unforeseen engineering and environmental problems;
- interruption of existing operations;
- unanticipated cost overruns or delays; and
- weather interferences and catastrophic events including fires, explosions, earthquakes, droughts, pandemics and acts of terrorism.

In addition, new facilities have no operating history and may employ recently developed technology and equipment. A new facility may be unable to fund principal and interest payments under its debt service obligations or may operate at a loss. In certain situations, if a facility fails to achieve commercial operation, at certain levels or at all, termination rights in the agreements governing the facilities financing may be triggered, rendering all of the facility's debt immediately due and payable. As a result, the facility may be rendered insolvent and we may lose our interest in the facility.

Construction activities may cost more and take longer than we estimate.

The design and construction of new projects or expansions requires us to contract for services from engineering and construction firms, and make substantial purchases of equipment such as boilers, turbine generators and other components that require large quantities of steel to fabricate. These are complex projects that include many factors and conditions which may adversely affect our ability to successfully compete for new projects, or construct and complete such projects on time and within budget.

Our revenue and cash flows may be subject to greater volatility if we extend or renew our contracts under tip fee structures more often than service fee structures.

Our revenue and cash flows may be subject to greater volatility if we extend or renew our contracts under tip fee structures more often than under service fee structures. Due to the nature of tip fee structures, if that were to occur, we may be exposed to greater performance and price risk on the energy we sell.

Some of our EfW projects involve greater risk of exposure to performance levels which, if not satisfied, could result in materially lower revenue.

At our EfW facilities where tip fee structures exist, we receive 100% of the energy revenue they generate. As a result, if we are unable to operate these facilities at their historical performance levels for any reason, our revenue from energy sales could materially decrease.

Weakness in the economy may have an adverse effect on our revenue, cash flow and our ability to grow our business.

Our business is directly affected by economic slowdowns and general reduction in demand for goods and services. A weak economy generally results in reduced overall demand for waste disposal, recycled metal and energy production. Under such conditions, the pricing we are able to charge for our waste management services, and for our energy and recycled metals, may decline and/or experience increased volatility. In addition, many of our customers are municipalities and other public sector entities which may be adversely affected in an economic downturn due to reduced tax revenue. Consequently, some of these entities could be unable to pay amounts owed to us or renew contracts with us for similar volumes or at previous or increased rates.

Furthermore, lower prices for waste disposal and energy production, particularly in the absence of energy policies which encourage renewable technologies such as EfW, may also make it more difficult for us to sell waste and energy services at prices sufficient to allow us to grow our business through developing and building new projects. These factors could have a material adverse effect on our profitability and cash flow.

Changes in climate conditions could materially affect our business and prospects.

Significant changes in weather patterns and volatility could have a negative influence on our existing business and our prospects for growing our business. Such changes may cause episodic events (such as floods or storms) that are difficult to predict or prepare for, or longer-term trends (such as droughts or sea-level rise). These or other meteorological changes could lead to increased operating costs, capital expense, disruptions in facility operations or supply chains, changes in waste generation and interruptions in waste deliveries, limited availability of water for plant cooling operations, and changes in energy pricing, among other effects.

Our reputation could be adversely affected if we are unable to operate our businesses in compliance with laws, or if our efforts to grow our business results in adverse publicity.

If we encounter regulatory compliance issues in the course of operating our businesses, we may experience adverse publicity, which may intensify if such non-compliance results in civil or criminal liability. This adverse publicity may harm our reputation, and result in difficulties in attracting new customers, or retaining existing customers.

With respect to our efforts to grow and maintain our business globally, we sometimes experience opposition from advocacy groups or others intended to halt our development or on-going business. Such opposition is often intended to discourage third parties from doing business with us and may be based on misleading, inaccurate, incomplete or inflammatory assertions. Our reputation may be adversely affected as a result of adverse publicity resulting from such opposition. Such damage to our reputation could adversely affect our ability to grow and maintain our business.

Exposure to foreign currency fluctuations may affect our results from operations or construction costs of facilities we develop in international markets.

We have sought to participate in projects where the host country has allowed the convertibility of its currency into U.S. dollars and repatriation of earnings, capital and profits subject to compliance with local regulatory requirements. As and if we grow our business in other countries and enter new international markets, we expect to invest substantial amounts in foreign currencies to pay for the construction costs of facilities we develop, or for the cost to acquire existing businesses or assets. Currency volatility in those markets, as well as the effectiveness of any currency hedging strategies we may implement, may impact the amount we are required to invest in new projects, as well as our reported results.

Our growth could strain our resources and cause our business to suffer.

We have made and may continue to plan and execute acquisitions and take other actions to grow our business. Acquisitions present significant challenges and risks relating to the integration of the business into the company. If we make acquisitions, it could place a strain on our management systems, infrastructure and resources, as well as present new or different risks to our business. We expect that we will need to continually evaluate and maintain our financial and managerial controls, reporting systems and procedures. We will also need to expand, train and manage our workforce worldwide. We can provide no assurances that the company will manage and integrate acquisitions successfully.

Changes in technology may have a material adverse effect on our profitability.

Our company and others have recognized the value of the traditional waste stream as a potential resource. Research and development activities are ongoing to provide alternative and more efficient technologies to manage waste, produce or extract by-products from waste, or to produce power. We and many other companies are pursuing these technologies, and capital is being invested to find new approaches to waste management, waste treatment, and renewable power generation. It is possible that this deployment of capital may lead to advances in these or other technologies which will reduce the cost of waste management or power production to a level below our costs and/or provide new or alternative methods of waste management or energy generation that become more accepted than those we currently utilize. Unless we are able to participate in these advances, any of these changes could have a material adverse effect on our revenue, profitability and the value of our existing facilities.

Our ability to optimize our operations depends in part on our ability to compete for and obtain fuel for our facilities, and our failure to do so may adversely affect our financial results.

Our EfW facilities depend on solid waste for fuel, which provides a source of revenue. For some of our EfW facilities, the availability of solid waste to us, as well as the tipping fee that we charge to attract solid waste to our facilities, depends upon competition from a number of sources such as other EfW facilities, landfills and transfer stations competing for waste in the market area. In addition, we may need to obtain waste on a competitive basis as our long-term contracts expire at our owned facilities. There has been consolidation, and there may be further consolidation, in the solid waste industry that would reduce the number of solid waste collectors or haulers that are competing for disposal facilities or enable such collectors or haulers to use wholesale purchasing to negotiate favorable below-market rates. The consolidation in the solid waste industry has resulted in companies with vertically integrated collection activities and disposal facilities. Such consolidation may result in economies of scale for those companies, as well as the use of disposal capacity at facilities owned by such companies or by affiliated companies. Such activities can affect both the availability of waste to us for processing at some of our EfW facilities and market pricing, which could materially and adversely affect our results of operations.

Our ability to successfully manage organizational, process and cost-efficiency initiatives could strain our resources and affect our profitability.

We have made and may continue to undertake organizational, process and cost efficiency changes intended to improve our business. These changes, which may include implementation of new systems and processes, staff adjustments and reassignments of responsibilities, are important to our business success. Failure or delay in implementing these actions, or ineffective implementation could strain our resources and systems, resulting in disruption to our business and/or adversely affecting our results.

Our businesses generate their revenue primarily under long-term contracts and must avoid defaults under those contracts in order to service their debt and avoid material liability to contract counterparties.

We must satisfy performance and other obligations under contracts governing EfW facilities. These contracts typically require us to meet certain performance criteria relating to amounts of waste processed, energy generation rates per ton of waste processed, residue quantity and environmental standards. Our failure to satisfy these criteria may subject us to termination of operating contracts. If such a termination were to occur, we would lose the cash flow related to the projects and incur material termination damage liability, which may be guaranteed by us. In circumstances where the contract has been terminated due to our default, we may not have sufficient sources of cash to pay such damages. We cannot assure you that we will be able to continue to perform our respective obligations under such contracts in order to avoid such contract terminations, or damages related to any such contract termination, or that if we could not avoid such terminations that we would have the cash resources to pay amounts that may then become due.

We have provided guarantees and financial support in connection with our projects.

We are obligated to guarantee or provide financial support for our projects in one or more of the following forms:

- support agreements in connection with construction, service or operating agreement-related obligations;
- direct guarantees of certain debt relating to our facilities;
- contingent obligations to pay lease payment installments in connection with certain of our facilities;
- agreements to arrange financing for projects under development;
- contingent credit support for damages arising from performance failures;
- environmental indemnities; and
- contingent capital and credit support to finance costs, in most cases in connection with a corresponding increase in service fees, relating to uncontrollable circumstances.

Many of these contingent obligations cannot readily be quantified, but, if we were required to provide this support, it could materially and adversely affect our cash flow, results of operations and financial condition.

Our businesses depend on performance by third parties under contractual arrangements.

Our waste and energy services businesses depend on a limited number of third parties to, among other things, purchase the electric and steam energy produced by our facilities, supply and deliver the waste and other goods and services necessary for the operation of our energy facilities, and purchase the metals we recover. The viability of our facilities depends significantly upon the performance by third parties in accordance with long-term and short-term contracts, and such performance depends on factors which may be beyond our control. If those third parties do not perform their obligations, or are excused from performing their obligations because of nonperformance by our waste and energy services businesses or other parties to the contracts, or due to force majeure events or changes in laws or regulations, our businesses may not be able to secure alternate arrangements on substantially the same terms, or at all. In addition, the bankruptcy or financial stability of third parties with whom we do business could result in nonpayment or nonperformance of that party's obligations to us.

We are subject to counterparty and market risk with respect to transactions with financial and other institutions.

Following the expiration of our initial contracts to sell electricity from our projects, we expect to have on a relative basis more exposure to market risk, and therefore revenue fluctuations, in energy markets than in waste markets. Consequently, we may enter into futures, forward contracts, swaps or options with financial institutions to hedge our exposure to market risk in energy markets. We can provide no assurances as to the financial stability or viability of these financial and other institutions.

Concentration of suppliers and customers may expose us to heightened financial exposure.

Our waste and energy services businesses often rely on single suppliers and single customers at our facilities, exposing such facilities to financial risks if any supplier or customer should fail to perform its obligations.

For example, our businesses often rely on a single supplier to provide waste, fuel, water and other services required to operate a facility and on a single customer or a few customers to purchase all or a significant portion of a facility's output. The financial performance of these facilities depends on such customers and suppliers continuing to perform their obligations under their long-term agreements. A facility's financial results could be materially and adversely affected if any one customer or supplier fails to fulfill its contractual obligations and we are unable to find other customers or suppliers to produce the same level of profitability. We cannot assure you that such performance failures by third parties will not occur, or that if they do occur, such failures will not adversely affect the cash flows or profitability of our businesses.

In addition, we rely on the public sector clients as a source not only of waste for fuel, but also of revenue from the fees for waste services we provide. Because our contracts with public sector clients are generally long-term, we may be adversely affected if the credit quality of one or more of our public sector clients were to decline materially.

Our waste operations are concentrated in one region and expose us to regional economic or market declines.

The majority of our waste disposal facilities are located in the northeastern United States, primarily along the Washington, D.C. to Boston, Massachusetts corridor. Adverse economic developments in this region could affect regional waste generation rates and demand for waste management services provided by us. Adverse market developments caused by additional waste processing capacity in this region could adversely affect waste disposal pricing. Either of these developments could have a material adverse effect on our profitability and cash generation.

Exposure to international economic and political factors may materially and adversely affect our international businesses.

Our international operations expose us to political, legal, tax, currency, inflation, convertibility and repatriation risks, as well as potential constraints on the development and operation of potential business, any of which can limit the benefits to us of an international project.

The financing, development and operation of projects outside the United States can entail significant political and financial risks, which vary by country, including:

- changes in law or regulations;
- changes in electricity pricing;
- changes in foreign tax laws and regulations;
- changes in United States federal, state and local laws, including tax laws, related to foreign operations;
- compliance with United States federal, state and local foreign corrupt practices laws;
- changes in government policies or personnel;
- changes in general economic conditions affecting each country, including conditions in financial markets;
- changes in labor relations in operations outside the United States;
- political, economic or military instability and civil unrest;
- expropriation and confiscation of assets and facilities; and
- credit quality of entities that pay for our services or purchase our power.

The legal and financial environment in foreign countries in which we currently own assets or projects could also make it more difficult for us to enforce our rights under agreements relating to such projects.

Any or all of the risks identified above with respect to our international projects could adversely affect our profitability and cash generation. As a result, these risks may have a material adverse effect on our business, consolidated financial condition and results of operations.

Our reputation could be adversely affected if our businesses, or third parties with whom we have a relationship, were to fail to comply with United States or foreign anti-corruption laws or regulations.

Some of our projects and new business may be conducted in countries where corruption has historically penetrated the economy to a greater extent than in the United States. It is our policy to comply, and to require our local partners and those with whom we do business to comply, with all applicable anti-bribery laws, such as the U.S. Foreign Corrupt Practices Act, and with applicable local laws of the foreign countries in which we operate. Our reputation may be adversely affected if we were reported to be associated with corrupt practices or if we or our local partners failed to comply with such laws. Such damage to our reputation could adversely affect our ability to grow our business.

Energy regulation could adversely affect our revenue and costs of operations.

Our waste and energy services businesses are subject to extensive energy regulations by federal, state and foreign authorities. We cannot predict whether the federal, state or foreign governments will modify or adopt new legislation or regulations relating to the solid waste or energy industries. The economics, including the costs, of operating our facilities may be adversely affected by any changes in these regulations or in their interpretation or implementation or any future inability to comply with existing or future regulations or requirements.

If our businesses lose existing exemptions under the Federal Power Act, the economics and operations of our energy projects could be adversely affected, including as a result of rate regulation by the Federal Energy Regulatory Commission with respect to our output of electricity, which could result in lower prices for sales of electricity and increased compliance costs. In addition, depending on the terms of the project's power purchase agreement, a loss of our exemptions could allow the power purchaser to cease taking and paying for electricity under existing contracts. Such results could cause the loss of some or all contract revenue or otherwise impair the value of a project and could trigger defaults under provisions of the applicable project contracts and financing agreements. Defaults under such financing agreements could render the underlying debt immediately due and payable. Under such circumstances, we cannot assure you that revenue received, the costs incurred, or both, in connection with the project could be recovered through sales to other purchasers.

Failure to obtain regulatory approvals could adversely affect our operations.

Our waste and energy services businesses are continually in the process of obtaining or renewing federal, state, local and foreign approvals required to operate our facilities. While we believe our businesses currently have all necessary operating approvals, we may not always be able to obtain all required regulatory approvals, and we may not be able to obtain any necessary modifications to existing regulatory approvals or maintain all required regulatory approvals. If there is a delay in obtaining any required regulatory approvals or if we fail to obtain and comply with any required regulatory approvals, the operation of our facilities or the sale of electricity to third parties could be prevented, made subject to additional regulation or subject our businesses to additional costs or a decrease in revenue.

The energy industry is becoming increasingly competitive, and we might not successfully respond to these changes.

We may not be able to respond in a timely or effective manner to the changes resulting in increased competition in the energy industry in global markets. These changes may include deregulation of the electric utility industry in some markets, privatization of the electric utility industry in other markets and increasing competition in all markets. To the extent competitive pressures increase and the pricing and sale of electricity assumes more characteristics of a commodity business, the economics of our business may be subject to greater volatility and we might not successfully respond to these changes.

Future impairment charges could have a material adverse impact on our financial condition and results of operations.

In accordance with accounting guidance, we evaluate long-lived assets for impairment whenever events or changes in circumstances, such as significant adverse changes in regulation, business climate or market conditions, could potentially indicate the carrying amount may not be recoverable. Significant reductions in our expected revenue or cash flows for an extended period of time resulting from such events could result in future asset impairment charges, which could have a material adverse impact on our financial condition and results of operations.

Security breaches and other disruptions to our information technology infrastructure could interfere with our operations, compromise information belonging to us and our customers, suppliers or employees, and expose us to liability that could adversely impact our business and reputation.

In the ordinary course of business, we rely on information technology networks and systems to process, transmit and store electronic information, and to manage or support a variety of business processes and activities. Despite security measures and business continuity plans, interruptions and breaches of computer and communications systems, including computer viruses, "hacking" and "cyber-attacks," power outages, telecommunication or utility facilities, system failures, natural disasters or other catastrophic events that could impair our ability to conduct business and communicate internally and with our customers, or result in the theft of trade secrets or other misappropriation of assets, or otherwise compromise privacy of sensitive information belonging to us, our customers or other business partners. Any such events could result in legal claims or proceedings, liability or penalties under privacy laws, disruption in revenue from operations, and damage to our reputation, which could adversely affect our business.

We cannot be certain that our NOLs will continue to be available to offset our federal tax liability.

As of December 31, 2017, we had \$240 million of net operating loss carryforwards ("NOLs"). NOLs offset our consolidated taxable income and will expire in various amounts, if not used, between 2028 and 2036. The NOLs are also used to offset income from certain grantor trusts that were established as part of the reorganization in 1990 of certain of our subsidiaries engaged in the insurance business and are administered by state regulatory agencies. As the administration of these grantor trusts concludes, taxable income could result, utilizing a portion of our NOLs and accelerating the date on which we may be otherwise obligated to pay incremental cash taxes.

Our insurance and contractual protections may not always cover lost revenue, increased expense or contractual liabilities.

Although our businesses maintain insurance, obtain warranties from vendors, require contractors to meet certain performance levels and, in some cases, pass risks we cannot control to the service recipient or output purchaser, the proceeds of such insurance, warranties, performance guarantees or risk sharing arrangements may not be adequate to cover lost revenue, increased expense or contractual liabilities.

We depend on our senior management and key personnel and we may have difficulty attracting and retaining qualified professionals.

Our future operating results depend to a large extent upon the continued contributions of key senior managers and personnel. In addition, we are dependent on our ability to attract, train, retain and motivate highly skilled employees. However, there is significant competition for employees with the requisite level of experience and qualifications. If we cannot attract, train, retain and motivate qualified personnel, we may be unable to compete effectively and our growth may be limited, which could have a material adverse effect on our business, results of operations, financial condition and prospects and our ability to fulfill our debt obligations.

Our controls and procedures may not prevent or detect all errors or acts of fraud.

Any disclosure controls and procedures or internal controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must consider the benefits of controls relative to their costs. Inherent limitations within a control system include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by an unauthorized override of the controls. While the design of any system of controls is to provide reasonable assurance of the effectiveness of disclosure controls, such design is also based in part upon certain assumptions about the likelihood of future events, and such assumptions, while reasonable, may not take into account all potential future conditions. Accordingly, because of the inherent limitations in a cost effective control system, misstatements due to error or fraud may occur and may not be prevented or detected.

Failure to maintain an effective system of internal controls over financial reporting may have an adverse effect on our stock price.

We have in the past discovered, and may potentially in the future discover, areas of internal control over financial reporting that may require improvement. If we are unable to assert that our internal control over financial reporting is effective now or in any future period, or if our independent auditors are unable to express an opinion on the effectiveness of our internal controls, we could lose investor confidence in the accuracy and completeness of our financial reports, which could have an adverse effect on our stock price.

Provisions of our certificate of incorporation, our credit facilities and our other corporate debt could discourage an acquisition of us by a third party.

Certain provisions of our credit facilities and our other corporate debt could make it more difficult or more expensive for a third party to acquire us. Upon the occurrence of certain transactions constituting a fundamental change, holders of our credit facilities and our other corporate debt will have the right to require Covanta Holding or Covanta Energy, as the case may be, to repurchase their corporate debt or repay the facilities, as applicable. In addition, provisions of our certificate of incorporation and bylaws, each as amended, could make it more difficult for a third party to acquire control of us. For example, our certificate of incorporation authorizes our board of directors to issue preferred stock without requiring any stockholder approval, and preferred stock could be issued as a defensive measure in response to a takeover proposal. All these provisions could make it more difficult for a third party to acquire us or discourage a third party from acquiring us even if an acquisition might be in the best interest of our stockholders.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

We lease approximately 250,000 square feet of office space throughout North America, including 104,000 square feet for our headquarters in Morristown, New Jersey. In addition, we own 83 acres of undeveloped land in California. As of December 31, 2017, we owned, had equity investments in and/or operated 87 facilities in the North America segment consisting of 41 EfW operations, 17 transfer stations, 19 material processing facilities, four landfills (primarily for ash disposal), two wood waste (biomass) energy projects, two water (hydroelectric) energy projects, one landfill gas project and one regional metals recycling facility. Principal projects are described above under *Item 1. Business — North America Segment*. Projects in the North America segment that we own or lease are conducted at properties, which we also own or lease, aggregating approximately 1,707 acres, of which 1,382 acres are owned and 325 acres are leased.

We operate projects outside of our North America segment and have offices located in Dublin, Ireland and Shanghai, China, where we lease office space of approximately 6,180 square feet. As of December 31, 2017, we are the part owner/operator of two international projects with businesses conducted at properties that are either leased or have land rights aggregating to 12 acres. Principal projects are described above under *Item 1. Business — Other Projects*.

Item 3. LEGAL PROCEEDINGS

For information regarding legal proceedings, see *Item 8. Financial Statements And Supplementary Data — Note 16. Commitments and Contingencies*, which information is incorporated herein by reference.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

Item 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is traded on the New York Stock Exchange under the symbol "CVA". On February 16, 2018, there were approximately 696 holders of record of our common stock. On February 16, 2018, the closing price of our common stock on the New York Stock Exchange was \$16.15 per share. The following table sets forth the high and low stock prices of our common stock for the last two years.

	2017			2016		
	High	Low	Dividend Declared	High	Low	Dividend Declared
First Quarter	\$ 16.50	\$ 14.85	\$ 0.25	\$ 17.75	\$ 12.48	\$ 0.25
Second Quarter	\$ 15.80	\$ 13.00	\$ 0.25	\$ 17.22	\$ 15.52	\$ 0.25
Third Quarter	\$ 15.28	\$ 13.08	\$ 0.25	\$ 17.16	\$ 14.43	\$ 0.25
Fourth Quarter	\$ 17.30	\$ 14.60	\$ 0.25	\$ 15.95	\$ 13.45	\$ 0.25

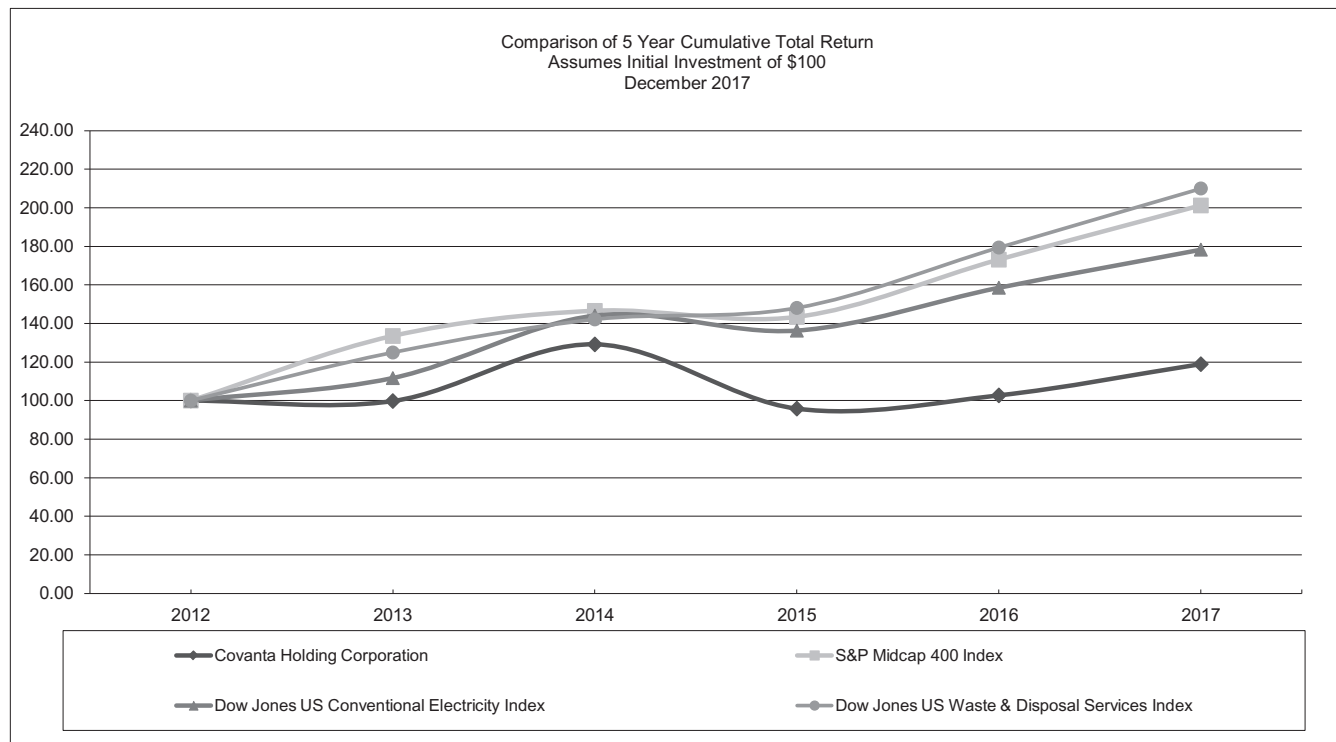
Under current financing arrangements, there are restrictions on the ability of our subsidiaries to transfer funds to us in the form of cash dividends, loans or advances that could limit the future payment of dividends on our common stock. However, given our strong cash generation, we anticipate returning additional capital to our shareholders. See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources* and *Item 8. Financial Statements and Supplementary Data — Note 5. Equity and Earnings Per Share ("EPS")* for additional information on the restrictions under our financing arrangements and our dividend payments.

Share Repurchases

Under our share repurchase program, common stock repurchases may be made in the open market, in privately negotiated transactions from time to time, or by other available methods, at management's discretion in accordance with applicable federal securities laws. The timing and amounts of any repurchases will depend on many factors, including our capital structure, the market price of our common stock and overall market conditions, and whether any restrictions then exist under our policies relating to trading in compliance with securities laws. As of December 31, 2017, the amount remaining under our currently authorized share repurchase program was \$66 million. There were no repurchases made under our share repurchase program during the year ended December 31, 2017.

Performance Measurement Comparison

The following performance graph sets forth a comparison of the yearly percentage change in the Company’s cumulative total stockholder return on common stock with the Standard and Poor’s Midcap 400 Index*, the Dow Jones US Conventional Electricity Index**, and the Dow Jones US Waste & Disposal Services Index**. The foregoing cumulative total returns are computed assuming (a) an initial investment of \$100, and (b) the reinvestment of dividends at the frequency which dividends were paid during the applicable years. The graph above reflects comparative information for the five fiscal years beginning with the close of trading on December 31, 2012 and ending December 31, 2017.



The stockholder return reflected above is not necessarily indicative of future performance.

* The Standard and Poor’s Midcap 400 Index is a capitalization-weighted index designed to measure performance of the broad domestic economy through changes in the aggregate market value of the component stocks representing all major industries. Copyright 2018 Standard and Poor’s, Inc. All Rights Reserved. Used with permission.

** The Dow Jones US Waste & Disposal Services Index and the Dow Jones US Conventional Electricity Index are maintained by Dow Jones & Company, Inc. As described by Dow Jones, the Dow Jones US Waste & Services Index consists of providers of pollution control and environmental services for the management, recovery and disposal of solid and hazardous waste materials, such as landfills and recycling centers. The Dow Jones US Conventional Electricity Index consists of companies generating and distributing electricity through the burning of fossil fuels such as coal, petroleum and natural gas, and through nuclear energy. Copyright 2018 Dow Jones & Company. All Rights Reserved. Used with permission.

Item 6. SELECTED FINANCIAL DATA

The selected financial information presented below should be read in conjunction with *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations* and *Item 8. Financial Statements and Supplementary Data*.

	Year Ended December 31,				
	2017	2016	2015	2014	2013
	(In millions, except per share amounts)				
Statements of Operations Data:					
Operating revenue	\$ 1,752	\$ 1,699	\$ 1,645	\$ 1,682	\$ 1,630
Operating expense	\$ 1,651	\$ 1,590	\$ 1,536	\$ 1,528	\$ 1,395
Operating income	\$ 101	\$ 109	\$ 109	\$ 154	\$ 235
Income (loss) from continuing operations ⁽¹⁾	\$ 57	\$ (4)	\$ 69	\$ (1)	\$ 42
Loss from discontinued operations, net of taxes	\$ —	\$ —	\$ —	\$ —	\$ (52)
Net income (loss) ⁽¹⁾	\$ 57	\$ (4)	\$ 69	\$ (1)	\$ (10)
Net income (loss) attributable to Covanta Holding Corporation stockholders:					
Continuing operations ⁽¹⁾	\$ 57	\$ (4)	\$ 68	\$ (2)	\$ 43
Discontinued operations	\$ —	\$ —	\$ —	\$ —	\$ (52)
Basic earnings (loss) per share attributable to Covanta Holding Corporation: ⁽¹⁾					
Continuing operations	\$ 0.44	\$ (0.03)	\$ 0.52	\$ (0.01)	\$ 0.33
Discontinued operations	—	—	—	—	(0.40)
Covanta Holding Corporation	<u>\$ 0.44</u>	<u>\$ (0.03)</u>	<u>\$ 0.52</u>	<u>\$ (0.01)</u>	<u>\$ (0.07)</u>
Diluted earnings (loss) per share attributable to Covanta Holding Corporation: ⁽¹⁾					
Continuing operations	\$ 0.44	\$ (0.03)	\$ 0.51	\$ (0.01)	\$ 0.33
Discontinued operations	—	—	—	—	(0.40)
Covanta Holding Corporation	<u>\$ 0.44</u>	<u>\$ (0.03)</u>	<u>\$ 0.51</u>	<u>\$ (0.01)</u>	<u>\$ (0.07)</u>
Cash dividend declared per share	<u>\$ 1.00</u>	<u>\$ 1.00</u>	<u>\$ 1.00</u>	<u>\$ 0.86</u>	<u>\$ 0.66</u>
Weighted average common shares outstanding:					
Basic	130	129	132	130	129
Diluted	131	129	133	130	130

(1) The year ended December 31, 2017 includes the significant impact of the enactment of the Tax Cuts and Jobs Act. For further information see *Item 1. Business* and *Item 8. Financial Statements And Supplementary Data — Note 14. Income Taxes*.

	As of December 31,				
	2017	2016	2015	2014	2013
	(In millions)				
Balance Sheet Data:					
Cash and cash equivalents	\$ 46	\$ 84	\$ 94	\$ 84	\$ 190
Property, plant and equipment, net	\$ 2,606	\$ 3,024	\$ 2,690	\$ 2,607	\$ 2,579
Assets held for sale	\$ 653	\$ —	\$ —	\$ —	\$ —
Total assets	\$ 4,441	\$ 4,284	\$ 4,234	\$ 4,178	\$ 4,357
Long-term debt (incl. current portion)	\$ 2,349	\$ 2,252	\$ 2,263	\$ 1,948	\$ 2,062
Project debt (incl. current portion)	\$ 174	\$ 383	\$ 198	\$ 222	\$ 212
Liabilities held for sale	\$ 540	\$ —	\$ —	\$ —	\$ —
Total liabilities	\$ 4,014	\$ 3,815	\$ 3,594	\$ 3,394	\$ 3,451
Total Covanta Holding Corporation stockholders' equity	\$ 427	\$ 469	\$ 638	\$ 782	\$ 902

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

The terms “we,” “our,” “ours,” “us,” “Covanta” and “Company” refer to Covanta Holding Corporation and its subsidiaries; the term “Covanta Energy” refers to our subsidiary Covanta Energy, LLC and its subsidiaries.

OVERVIEW

Covanta is one of the world's largest owners and operators of infrastructure for the conversion of waste to energy (known as “energy-from-waste” or “EfW”), as well as other waste disposal and renewable energy production businesses. Energy-from-waste serves two key markets as both a sustainable waste management solution that is environmentally superior to landfilling and as a source of clean energy that reduces overall greenhouse gas (“GHG”) emissions. Energy-from-waste is also considered renewable under the laws of many states and under federal law. Our facilities are critical infrastructure assets that allow our customers, which are principally municipal entities, to provide an essential public service. For a discussion of our facilities, the energy-from-waste process and the environmental benefits of energy-from-waste, see *Item 1. Business*.

We have one reportable segment, North America, which is comprised of waste and energy services operations located primarily in the United States and Canada. Additional information about our reportable segment is contained in *Item 1. Business* and *Item 8. Financial Statements And Supplementary Data — Note 6. Financial Information by Business Segments*.

For a discussion of key strategies and the execution thereof in 2017, see *Item 1. Business — Strategy and Execution on Strategy*.

General Business Conditions

See *Item 1. Business — Markets, Competition and Business Conditions* for a discussion of factors affecting business conditions and financial results.

RESULTS OF OPERATIONS

The following general discussions should be read in conjunction with the consolidated financial statements, the notes to the consolidated financial statements and other financial information appearing and referred to elsewhere in this report. Additional detail relating to changes in operating revenue and operating expense and the quantification of specific factors affecting or causing such changes, is provided in the segment discussion below.

The comparability of the information provided below with respect to our revenue, expense and certain other items for periods during each of the years presented was affected by several factors. As outlined in *Item 8. Financial Statements And Supplementary Data — Note 1. Organization and Summary of Significant Accounting Policies* and *Note 3. New Business and Asset Management*, our business development initiatives and acquisitions resulted in various transactions, which are reflected in comparative revenue and expense. These factors must be taken into account in developing meaningful comparisons between the periods compared below.

The Results of Operations discussion below compares our revenue, expense and certain other items during each of the years presented for continuing operations.

The following terms used within the Results of Operations discussion are defined as follows:

- “Organic growth”: reflects the performance of the business on a comparable period-over-period basis, excluding the impacts of transactions and contract transitions.
- “Transactions”: includes the impacts of acquisitions, divestitures, and the addition or loss of operating contracts.
- “Contract transitions”: includes the impact of the expiration of: (a) long-term major waste and service contracts, most typically representing the transition to a new contract structure, and (b) long-term energy contracts.

RESULTS OF OPERATIONS — OPERATING INCOME

Year Ended December 31, 2017 vs. Year Ended December 31, 2016

<i>Consolidated:</i>	Year Ended December 31,		Variance Increase (Decrease)
	2017	2016	
	(In millions)		
OPERATING REVENUE:			
Waste and service revenue	\$ 1,231	\$ 1,187	\$ 44
Energy revenue	334	370	(36)
Recycled metals revenue	82	61	21
Other operating revenue	105	81	24
Total operating revenue	1,752	1,699	53
OPERATING EXPENSE:			
Plant operating expense	1,271	1,177	94
Other operating expense	51	86	(35)
General and administrative expense	112	100	12
Depreciation and amortization expense	215	207	8
Impairment charges	2	20	(18)
Total operating expense	1,651	1,590	61
Operating income	\$ 101	\$ 109	\$ (8)

Operating Revenue

Waste and Service Revenue

<i>Consolidated (in millions):</i>	Year Ended December 31,		Variance
	2017	2016	
EfW tip fees	\$ 572	\$ 551	\$ 21
EfW service fees	393	406	(13)
Environmental services	129	104	25
Municipal services ⁽¹⁾	194	186	8
Other	42	36	6
Intercompany	(99)	(96)	(3)
Total waste and service revenue	\$ 1,231	\$ 1,187	\$ 44

(1) Consists of transfer stations and transportation component of our New York City waste transport and disposal contract.

EfW Facilities - Tons Received ⁽¹⁾ (in millions):

	Year Ended December 31,		Variance
	2017	2016	
Tip fee - contracted	8.0	8.4	(0.4)
Tip fee - uncontracted	2.1	2.2	(0.1)
Service fee	8.6	8.9	(0.3)
Total Tons	18.7	19.5	(0.8)

(1) Includes solid tons only. Does not include contribution from China investments. Certain amounts may not total due to rounding.

For the twelve month comparative period, waste and service revenue increased by \$44 million year-over-year, driven by \$13 million of organic growth, \$28 million from transactions, of which \$19 million related to the start-up of the Dublin EfW facility in the fourth quarter of 2017, and \$4 million resulting from contract transitions. Within organic growth, EfW tip fee revenue decreased by \$16 million, with the benefit from higher average revenue per ton of \$14 million, more than offset by lower volume of waste processed of \$29 million, primarily due to downtime at the Fairfax County facility, while environmental services and municipal services revenue were higher by \$16 million and \$8 million, respectively.

Energy Revenue

Consolidated ⁽¹⁾ (in millions):

	Year Ended December 31,		
	2017	2016	Variance
Energy sales	\$ 288	\$ 321	\$ (33)
Capacity	46	40	6
Other revenue	—	9	(9)
Total energy revenue	<u>\$ 334</u>	<u>\$ 370</u>	<u>\$ (36)</u>

(1) Covanta share only. Represents the sale of electricity and steam based upon output delivered and capacity provided. Certain amounts may not total due to rounding.

Total EfW (in millions):	Year Ended December 31,							
	2017			2016			Variance	
	Revenue ⁽¹⁾	Volume ^{(1),(2)}	% of Total Volume	Revenue ⁽¹⁾	Volume ^{(1),(2)}	% of Total Volume	Revenue	Volume
At Market	\$ 23	0.8	13%	\$ 33	1.0	17%	\$ (10)	(0.2)
Contracted	216	2.5	41%	245	3.1	51%	(29)	(0.6)
Hedged	95	2.7	46%	83	1.9	32%	12	0.8
Total EfW	<u>\$ 334</u>	<u>6.0</u>	<u>100%</u>	<u>\$ 361</u>	<u>6.1</u>	<u>100%</u>	<u>\$ (27)</u>	<u>(0.1)</u>

(1) Covanta share only. Represents the sale of electricity and steam based upon output delivered and capacity provided.

(2) Steam converted to MWh at an assumed average rate of 11 klbs of steam / MWh. Certain amounts may not total due to rounding.

For the twelve month comparative period, energy revenue decreased by \$36 million year-over-year, driven by the expiration of certain long-term energy contracts (\$28 million) and lower production at EfW facilities (\$15 million), primarily due to downtime at the Fairfax County facility, which were partially offset by a favorable impact from service contract transitions (\$5 million) and \$2 million related to transactions.

Recycled Metal Revenue

	Year Ended December 31,					
	Metal Revenue (in millions)		Tons Sold (in thousands) ⁽¹⁾		Tons Recovered (in thousands)	
	2017	2016	2017	2016	2017	2016
Ferrous Metal	\$ 48	\$ 38	302	345	396	401
Non-Ferrous Metal	34	23	31	36	38	36
Total	<u>\$ 82</u>	<u>\$ 61</u>				

(1) Represents the portion of total volume that is equivalent to Covanta's share of revenue under applicable client revenue sharing arrangements.

For the twelve month comparative period, recycled metals revenue increased by \$21 million year-over-year, driven by higher pricing for both ferrous (\$17 million) and non-ferrous (\$17 million) material, partially offset by lower volume sold (\$14 million) which primarily resulted from the centralized processing of non-ferrous material and the timing of sales shipments as compared to the prior year.

Other Operating Revenue

Other operating revenue increased by \$24 million for the twelve month comparative period primarily due to higher construction revenue (\$12 million) and contractual energy sales related to facilities that did not produce power (\$12 million).

Operating Revenue

Waste and Service Revenue

Consolidated (in millions):

	Year Ended December 31,		Variance
	2016	2015	
EfW tip fees	\$ 551	\$ 507	\$ 44
EfW service fees	406	418	(12)
Environmental services	104	60	44
Municipal services ⁽¹⁾	186	159	27
Other	36	38	(2)
Intercompany	(96)	(78)	(18)
Total waste and service revenue	\$ 1,187	\$ 1,104	\$ 83

(1) Consists of transfer stations and transportation component of our New York City waste transport and disposal contract.

North America Segment - EfW Facilities - Tons Received ⁽¹⁾ (in millions):

	Year Ended December 31,		Variance
	2016	2015	
Tip fee - contracted	8.4	7.4	1.0
Tip fee - uncontracted	2.2	2.2	—
Service fee	8.9	9.8	(0.9)
Total Tons	19.5	19.4	0.1

(1) Includes solid tons only. Does not include contribution from China investments. Certain amounts may not total due to rounding.

Waste and service revenue increased by \$83 million year-over-year, driven by organic growth of \$35 million and net contribution from transactions of \$52 million, partially offset by a decline of \$5 million related to contract transitions. Within organic growth, EfW tip fee revenue increased by \$20 million, due to a benefit from higher average revenue per ton of \$14 million and higher volume of waste processed of \$6 million. Environmental services revenue increased by \$14 million as a result of increased activity at newly acquired environmental services businesses. Transactions impacting revenue in the period included environmental services acquisitions (\$30 million), a full year of operations under the New York City MTS contract, and commencement of operations at the Durham-York EfW facility.

Energy Revenue

Consolidated ⁽¹⁾ (in millions):

	Year Ended December 31,		Variance
	2016	2015	
Energy sales	\$ 321	\$ 308	\$ 13
Capacity	40	38	2
Other revenue	9	75	(66)
Total energy revenue	\$ 370	\$ 421	\$ (51)

(1) Covanta share only. EfW excludes contribution from China investments. Represents the sale of electricity and steam based upon output delivered and capacity provided. Certain amounts may not total due to rounding.

	Year Ended December 31,							
	2016			2015			Variance	
	Revenue ⁽¹⁾	Volume ^{(1),(2)}	% of Total Volume	Revenue ⁽¹⁾	Volume ^{(1),(2)}	% of Total Volume	Revenue	Volume
Total EfW (in millions):								
At Market	\$ 33	1.0	17%	\$ 46	1.4	24%	\$ (13)	(0.4)
Contracted	245	3.1	51%	238	3.0	53%	7	0.1
Hedged	83	1.9	32%	62	1.4	23%	21	0.5
Total EfW	<u>\$ 361</u>	<u>6.1</u>	<u>100%</u>	<u>\$ 346</u>	<u>5.8</u>	<u>100%</u>	<u>\$ 15</u>	<u>0.3</u>

(1) Covanta share only. EfW excludes China. Represents the sale of electricity and steam based upon output delivered and capacity provided.

(2) Steam converted to MWh at an assumed average rate of 11 klbs of steam / MWh.

Certain amounts may not total due to rounding.

Energy revenue decreased by \$51 million year-over-year, driven by a \$66 million decline from transactions (including \$36 million related to economically dispatching biomass facilities and \$29 million resulting from the exchange of our ownership interest in a facility in China, both in the first quarter of 2016), \$5 million from lower production at EfW facilities (primarily related to turbine generator downtime at our Plymouth facility) and a \$6 million decline related to the expiration of certain long-term energy contracts. These declines were partially offset by higher revenue following waste and service contract transitions (as a result of increased share of energy revenue).

Recycled Metal Revenue

	Year Ended December 31,					
	Metal Revenue (in millions)		Tons Sold (in thousands) ⁽¹⁾		Tons Recovered (in thousands)	
	2016	2015	2016	2015	2016	2015
Ferrous Metal	\$ 38	\$ 38	345	330	401	353
Non-Ferrous Metal	23	23	36	32	36	32
Total	<u>\$ 61</u>	<u>\$ 61</u>				

(1) Represents the portion of total volume that is equivalent to Covanta's share of revenue under applicable client revenue sharing arrangements.

Recycled metals revenue was flat year-over-year, with higher metal recovery and the benefit of processing on realized sales prices for ferrous scrap offset by lower market prices.

Other Operating Revenue

Other operating revenue increased by \$22 million for the twelve month comparative period primarily due to higher construction revenue.

Operating Expense

Plant Operating Expense

Consolidated (in millions):	Year Ended December 31,		
	2016	2015	Variance
	Plant maintenance ⁽¹⁾	\$ 279	\$ 270
All other	898	859	39
Plant operating expense	<u>\$ 1,177</u>	<u>\$ 1,129</u>	<u>\$ 48</u>

(1) Plant maintenance costs include our internal maintenance team and non-facility employee costs for facility scheduled and unscheduled maintenance and repair expense.

Plant operating expenses increased by \$48 million for the twelve month comparable period, driven primarily by higher incentive compensation expense (\$24 million), increased EfW plant maintenance expense (\$17 million), escalation in wages and benefits (\$16 million), the start-up of our centralized metals processing facility, other organic cost increases and the impact of contract transitions, partially offset by transactions, as noted above, reducing plant operating expenses by \$22 million on a net basis.

Other Operating Expense

Other operating expenses increased by \$13 million for the twelve month comparable period primarily due to higher construction expense, partially offset by increased insurance recoveries.

For additional information, see *Item 8. Financial Statements And Supplementary Data - Note 13. Supplementary Information - Other Operating Expenses.*

General and Administrative Expense

Consolidated general and administrative expenses increased for the twelve month comparative period by \$7 million primarily due to an increase in incentive compensation.

Impairment Charges

During the year ended December 31, 2016, we recorded non-cash impairment charges of \$20 million, pre-tax, of which \$13 million related to the previously planned closure of our Pittsfield EfW facility which we continue to operate, and \$3 million, pre-tax, related to an investment in a joint venture to recover and recycle metals. During the year ended December 31, 2015, we recorded non-cash impairment charges totaling \$43 million related to our biomass facilities. For additional information, see *Item 8. Financial Statements And Supplementary Data — Note 13. Supplementary Information — Impairment Charges.*

CONSOLIDATED RESULTS OF OPERATIONS — NON-OPERATING INCOME ITEMS **Years Ended December 31, 2017, 2016 and 2015**

Other Expense:

	Year Ended December 31,			Variance Increase (Decrease)	
	2017	2016	2015	2017 vs 2016	2016 vs 2015
	(In millions)				
CONSOLIDATED RESULTS OF OPERATIONS:					
Interest expense, net	(147)	(138)	(134)	(9)	(4)
(Loss) gain on asset sales	(6)	44	—	(50)	44
Loss on extinguishment of debt	(84)	—	(2)	(84)	2
Other expense, net	1	(1)	(1)	2	—
Total other expense	<u>\$ (236)</u>	<u>\$ (95)</u>	<u>\$ (137)</u>	<u>\$ (141)</u>	<u>\$ 42</u>

Interest expense, net increased by \$9 million for the year ended December 31, 2017 compared to the year ended December 31, 2016, primarily due to the cost of non-recourse project subsidiary debt at the Dublin EfW project in the fourth quarter of 2017 following commencement of commercial operations. Interest expense, net increased for the year ended December 31, 2016 compared to the year ended December 31, 2015 due to higher levels of borrowing under our Revolving Credit Facility. For additional information see *Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt.*

(Loss) gain on assets sales for the year ended December 31, 2017 and 2016, is primarily due to the sale of our interests in China. For additional information see *Item 8. Financial Statements And Supplementary Data — Note 4. Dispositions and Assets Held for Sale and Note 18. Subsequent Events.*

Loss on extinguishment of debt for the year ended December 31, 2017 is comprised of \$13 million of charges related to the redemption of our 7.25% Senior Notes due 2020 and approximately \$71 million in connection with the refinancing of our Dublin project debt. For additional information see *Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt.*

Income Tax (Benefit) Expense:

	Year Ended December 31,			Variance Increase (Decrease)	
	2017	2016	2015	2017 vs 2016	2016 vs 2015
	(In millions, except percentages)				
CONSOLIDATED RESULTS OF OPERATIONS:					
Income tax (benefit) expense	\$ (191)	\$ 22	\$ (84)	\$ (213)	\$ 106
Effective income tax rate	142%	150%	302%		

The decrease in the effective tax rate for the year ended December 31, 2017, compared to the year ended December 31, 2016 is primarily due to the combined effects of (i) the recognition of tax benefit from the re-measurement of the deferred taxes and the estimated transition tax due to the enactment of the Tax Cuts and Jobs Act and (ii) the change from pre-tax income in 2016 to pre-tax loss in 2017.

The decrease in effective tax rate for the year ended December 31, 2016, compared to the year ended December 31, 2015 is primarily due to the combined effects of (i) the recognition of tax benefit due to the resolution of the IRS audit in 2015 and (ii) the fact that the Company turned from pre-tax loss in 2015 to pre-tax income in 2016, offset by the uncertain tax positions recorded in 2016.

For additional information see *Item 8. Financial Statements And Supplementary Data — Note 14. Income Taxes.*

Net Income (Loss) Attributable to Covanta Holding Corporation and Earnings Per Share:

	Year Ended December 31,			Variance Increase (Decrease)	
	2017	2016	2015	2017 vs 2016	2016 vs 2015
	(In millions, except per share amounts)				
CONSOLIDATED RESULTS OF OPERATIONS:					
Net Income (Loss) Attributable to Covanta Holding Corporation	\$ 57	\$ (4)	\$ 68	\$ 61	\$ (72)
Earnings (Loss) Per Share Attributable to Covanta Holding Corporation stockholders:					
Weighted Average Shares:					
Basic:	130	129	132	1	(3)
Diluted:	131	129	133	2	(4)
Earnings (Loss) Per Share:					
Basic:	\$ 0.44	\$ (0.03)	\$ 0.52	\$ 0.47	\$ (0.55)
Diluted:	\$ 0.44	\$ (0.03)	\$ 0.51	\$ 0.47	\$ (0.54)
Cash Dividend Declared Per Share ⁽¹⁾	\$ 1.00	\$ 1.00	\$ 1.00	\$ —	\$ —

(1) For information on dividends declared to shareholders and share repurchases, see *Liquidity and Capital Resources* below.

Supplementary Financial Information — Adjusted EBITDA (Non-GAAP Discussion)

To supplement our results prepared in accordance with GAAP, we use the measure of Adjusted EBITDA, which is a non-GAAP financial measure as defined by the SEC. This non-GAAP financial measure is described below, and is not intended as a substitute and should not be considered in isolation from measures of financial performance prepared in accordance with GAAP. In addition, our use of non-GAAP financial measures may be different from non-GAAP financial measures used by other companies, limiting their usefulness for comparison purposes. The presentation of Adjusted EBITDA is intended to enhance the usefulness of our financial information by providing a measure which management internally uses to assess and evaluate the overall performance of its business and those of possible acquisition candidates, and highlight trends in the overall business.

We use Adjusted EBITDA to provide additional ways of viewing aspects of operations that, when viewed with the GAAP results provide a more complete understanding of our core business. As we define it, Adjusted EBITDA represents earnings before interest, taxes, depreciation and amortization, as adjusted for additional items subtracted from or added to net income including the effects of impairment losses, gains or losses on sales, dispositions or retirements of assets, adjustments to reflect the Adjusted EBITDA from our unconsolidated investments, adjustments to exclude significant unusual or non-recurring items that are not directly related to our operating performance plus adjustments to capital type expenses for our service fee facilities in line with our credit agreements. We adjust for these items in our Adjusted EBITDA as our management believes that these items would distort their ability to efficiently view and assess our core operating trends. Going forward, as larger parts of our business will be conducted through unconsolidated entities that we do not control, we will begin to adjust for our proportionate share of the entities depreciation and amortization, interest expense and taxes in order to improve comparability to the Adjusted EBITDA of our wholly owned entities.

Adjusted EBITDA should not be considered as an alternative to net income or cash flow provided by operating activities as indicators of our performance or liquidity or any other measures of performance or liquidity derived in accordance with GAAP.

In order to provide a meaningful basis for comparison, we are providing information with respect to our Adjusted EBITDA for the years ended December 31, 2017, 2016 and 2015, respectively, reconciled for each such period to net income and cash flow provided by operating activities, which are believed to be the most directly comparable measures under GAAP. The following is a reconciliation of Net (Loss) Income to Adjusted EBITDA (in millions):

Adjusted EBITDA	Year Ended December 31,		
	2017	2016	2015
Net Income (Loss) Attributable to Covanta Holding Corporation ^(a)	\$ 57	\$ (4)	\$ 68
Depreciation and amortization expense	215	207	198
Interest expense, net	147	138	134
Income tax (benefit) expense ^(a)	(191)	22	(84)
Impairment charges ^(b)	2	20	43
Loss (gain) on asset sales ^(c)	6	(44)	—
Loss on extinguishment of debt ^(d)	84	—	2
Property insurance recoveries, net ^(e)	(2)	—	—
Net income attributable to noncontrolling interests in subsidiaries	—	—	1
Capital type expenditures at client owned facilities ^(f)	55	39	31
Debt service billing in excess of revenue recognized	5	4	1
Business development and transaction costs	5	2	3
Severance and reorganization costs	1	3	4
Non-cash compensation expense	18	16	18
Other ^(g)	6	7	9
Adjusted EBITDA	\$ 408	\$ 410	\$ 428

(a) The year ended December 31, 2017 include a provisional net tax benefit of \$183 million (\$1.40 per diluted share) associated with the enactment of the Tax Cuts and Jobs Act of 2017. The enactment of this legislation resulted in an estimated income tax benefit and net income increase of \$204 million, primarily due to a one-time revaluation of our net deferred tax liability based on a U.S. federal tax rate of 21%, partially offset by the estimated impact of a one-time transition tax on our unremitted foreign earnings totaling \$21 million, which we will elect to offset with historical net operating losses. These amounts are provisional and subject to change. For additional information, see *Item 8. Financial Statements And Supplementary Data — Note 14. Income Taxes*.

(b) During the year ended December 31, 2016, we recorded a non-cash impairment totaling \$20 million which primarily consisted of \$13 million related to the previously planned closure of our Pittsfield EfW facility in March 2017, which we now continue to operate, and \$3 million related to an investment in a joint venture to recover and recycle metals. During the year ended December 31, 2015, we recorded non-cash impairments of our biomass facility assets of \$43 million.

(c) During the year ended December 31, 2017, we recorded a \$6 million charge for indemnification claims related to the sale of our interests in China, which was completed in 2016. During the year ended ended December 31, 2016, we recorded a \$41 million gain on the sale of our interests in China. For additional information see *Item 8. Financial Statements And Supplementary Data — Note 4. Dispositions and Assets Held for Sale and Note 18. Subsequent Events*.

- (d) During the year ended December 31, 2017, we recorded a \$71 million loss related to our Dublin debt refinancing and a \$13 million loss related to the redemption of our 7.25% Senior Notes. For additional information, see *Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt*.
- (e) During the year ended December 31, 2017, we recorded a \$2 million property insurance gain related to our property insurance recoveries.
- (f) Adjustment for impact of adoption of FASB ASC 853 - *Service Concession Arrangements*. These types of capital equipment related expenditures at our service fee operated facilities were historically capitalized prior to adoption of this new accounting standard effective January 1, 2015 and are capitalized at facilities that we own.
- (g) Includes certain other items that are added back under the definition of Adjusted EBITDA in Covanta Energy, LLC's credit agreement.

The following is a reconciliation of cash flow provided by operating activities to Adjusted EBITDA (in millions):

	Year Ended December 31,		
	2017	2016	2015
Cash flow provided by operating activities	\$ 243	\$ 286	\$ 254
Cash paid for interest, net of capitalized interest	132	135	131
Cash paid for taxes	—	6	2
Capital type expenditures at service fee operated facilities ^(a)	55	39	31
Equity in net income from unconsolidated investments	1	4	13
Dividends from unconsolidated investments	(2)	(2)	(5)
Adjustment for working capital and other	(21)	(58)	2
Adjusted EBITDA	\$ 408	\$ 410	\$ 428

(a) See *Adjusted EBITDA - Note (f)* above.

For additional discussion related to management's use of non-GAAP measures, see *Liquidity and Capital Resources — Supplementary Financial Information — Free Cash Flow and Free Cash Flow Before Working Capital (Non-GAAP Discussion)* below.

Supplementary Financial Information — Adjusted Earnings Per Share (“Adjusted EPS”) (Non-GAAP Discussion)

We use a number of different financial measures, both United States generally accepted accounting principles (“GAAP”) and non-GAAP, in assessing the overall performance of our business. To supplement our results prepared in accordance with GAAP, we use the measure of Adjusted EPS, which is a non-GAAP financial measure as defined by the Securities and Exchange Commission (“SEC”). The non-GAAP financial measure of Adjusted EPS is not intended as a substitute or as an alternative to diluted earnings per share as an indicator of our performance or any other measure of performance derived in accordance with GAAP. In addition, our non-GAAP financial measures may be different from non-GAAP financial measures used by other companies, limiting their usefulness for comparison purposes. We use the non-GAAP financial measure of Adjusted EPS to enhance the usefulness of our financial information by providing a measure which management internally uses to assess and evaluate the overall performance and highlight trends in the ongoing business.

Adjusted EPS excludes certain income and expense items that are not representative of our ongoing business and operations, which are included in the calculation of diluted earnings per share in accordance with GAAP. The following items are not all-inclusive, but are examples of reconciling items in prior comparative and future periods. They would include impairment charges, the effect of derivative instruments not designated as hedging instruments, significant gains or losses from the disposition or restructuring of businesses, gains and losses on assets held for sale, transaction-related costs, income and loss on the extinguishment of debt and other significant items that would not be representative of our ongoing business.

In order to provide a meaningful basis for comparison, we are providing information with respect to our Adjusted EPS for the years ended December 31, 2017, 2016 and 2015, respectively, reconciled for each such period to diluted earnings per share, which is believed to be the most directly comparable measure under GAAP (in millions, except per share amounts):

	Year Ended December 31,		
	2017	2016	2015
Diluted earnings (loss) per share	\$ 0.44	\$ (0.03)	\$ 0.51
Reconciling items ⁽¹⁾	(0.81)	(0.03)	(0.44)
Adjusted EPS	\$ (0.37)	\$ (0.06)	\$ 0.07

(1) Additional information is provided in the Reconciling Items table below.

	Year Ended December 31,		
	2017	2016	2015
Reconciling Items			
Impairment charges ^(a)	2	20	43
Loss (gain) on asset sales ^(a)	6	(44)	—
Property insurance recoveries ^(a)	(2)	—	—
Severance and reorganization costs	1	2	7
Loss on extinguishment of debt ^(a)	84	—	2
Effect on income of derivative instruments not designated as hedging instruments	—	2	(6)
Effect of foreign exchange loss on indebtedness	(2)	(1)	3
Other	1	—	1
Total Reconciling Items, pre-tax	90	(21)	50
Pro forma income tax impact ^(b)	(4)	2	(20)
Impact of IRS audit settlement	—	—	(93)
Adjustment to uncertain tax positions	—	14	—
Tax liability related to expected gain on sale of China assets ^(b)	—	—	4
Grantor trust activity	(9)	1	—
Impact of federal tax reform rate change ^(a)	(204)	—	—
Transition tax ^(a)	21	—	—
Total reconciling Items, net of tax	\$ (106)	\$ (4)	\$ (59)
Diluted per share impact	\$ (0.81)	\$ (0.03)	\$ (0.44)
Weighted average diluted shares outstanding	131	129	133

(a) For additional information, see *Adjusted EBITDA* above.

(b) We calculate the federal and state tax impact of each item using the statutory federal tax rate and applicable blended state rate.

BUSINESS OUTLOOK

In 2018 and beyond, we expect that our financial results will be affected by several factors, including: market prices, contract transitions, new contracts, new project development and construction, acquisitions, and the organic growth of earnings and cash flow generated by our existing assets. In order to drive organic growth, we will be focused on growing our environmental services and profiled waste businesses, enhanced metals recovery and centralized processing, ash management, continuous improvement using Lean Six Sigma concepts, and managing facility production and operating costs.

In 2018, the following specific factors are expected to impact our financial results as compared to 2017 (as measured by Adjusted EBITDA):

Positive factors include:

- Contribution from the organic growth initiatives discussed above;
- A full year of service fee contribution from the operation of the Dublin EfW facility, which commenced operations in late 2017, and a pro rata contribution from our share of the JV, which now owns the project. For further information on the Dublin EfW facility, see *Item 8. Financial Statements And Supplementary Data Note 3. New Business and Asset Management*; and
- A full year of operations at our Fairfax County energy-from-waste facility, which experienced a fire in the front-end receiving portion of the facility in February 2017 and resumed operations in December 2017.

Negative factors include:

- Up to \$15 million lower anticipated prices for electricity as compared to 2017, including lower anticipated market pricing as compared to our hedged prices in 2017, lower anticipated pricing on collared energy, and mark-to-market on the expiration of long-term power purchase agreements; and
- Approximately \$20 million related to waste and service contract transitions, most notably the non-recurring benefit that we received in 2017 from the settlement of our contract dispute with Hennepin County.

LIQUIDITY AND CAPITAL RESOURCES

Our principal sources of liquidity are our cash and cash equivalents, cash flow generated from our ongoing operations, and unutilized capacity under our Revolving Credit Facility, which we believe, will allow us to meet our liquidity needs. Our business is capital intensive and our ability to successfully implement our strategy is, in part, dependent on the continued availability of capital on desirable terms. For additional information regarding our credit facilities and other debt, see *Item 8. Financial Statements And Supplementary Data - Note 10. Consolidated Debt*.

In 2018, we expect to generate net cash from operating activities which may not alone meet all of our cash requirements for both capital expenditures to maintain our existing assets, debt services and for ongoing dividends to shareholders, in which case we would utilize our Revolving Credit Facility on an interim basis. See *Results of Operations - Business Outlook* above for discussion of the factors impacting our 2018 business outlook. We plan to use the net proceeds from the sale of 50% of our Dublin EfW facility initially to repay borrowings under our Revolving Credit Facility. When and as necessary, we expect to utilize a combination of cash and cash equivalents on hand, cash expected to be generated from future operations and our Revolving Credit Facility to fund our portion of project equity investment required for the JV development pipeline in the U.K. We also intend to utilize expected cash flows from operations and borrowings under our Revolving Credit Facility to fund all other growth investments in our business, as necessary.

We generally intend to refinance our debt instruments prior to maturity with like-kind financing in the bank and/or debt capital markets in order to maintain a capital structure comprised primarily of long-term debt, which we believe appropriately matches the long-term nature of our assets and contracts.

The loan documentation governing the Credit Facilities contains various affirmative and negative covenants, as well as financial maintenance covenants (financial ratios), that limit our ability to engage in certain types of transactions. We were in compliance with all of the covenants under the Credit Facilities as of December 31, 2017. Further, we do not anticipate our existing debt covenants to restrict our ability to meet future liquidity needs.

As of December 31, 2017, Covanta Energy had \$1.2 billion in senior secured credit facilities, which includes a \$1.0 billion Revolving Credit Facility expiring between 2019 and 2020. As of December 31, 2017, our potential sources of near-term liquidity included (in millions):

	As of December 31, 2017
Cash	\$ 46
Unutilized capacity under the Revolving Credit Facility	363
Total cash and unutilized capacity under the Revolving Credit Facility	<u>\$ 409</u>

In addition, as of December 31, 2017, we had restricted cash of \$71 million, of which \$18 million was designated for future payment of project debt principal. Restricted funds held in trust are primarily amounts received and held by third-party trustees relating to certain projects we own. We generally do not control these accounts and these funds may be used only for specified purposes. For additional information on restricted funds held in trust, see *Item 8. Financial Statements And Supplementary Data — Note 1. Organization and Summary of Significant Accounting Policies - Restricted Funds Held in Trust*.

We typically receive cash distributions from our North America segment projects on a monthly basis. The frequency and predictability of which differs depending upon various factors, including, whether a project is domestic or international, and whether a project has been able to operate at its historical levels of production. The timing of our receipt of cash from construction projects for public sector clients is generally based upon our reaching completion milestones as set forth in the applicable contracts, and the timing and size of these milestone payments can result in material working capital variability between periods. Future cash distributions from the joint venture with GIG are subject to certain covenants under the Dublin project financing agreements. We expect to begin to receive cash distributions from the Dublin project, via the joint venture, beginning in October 2018.

Our primary future cash requirements will be to fund capital expenditures to maintain our existing businesses, service our debt, invest in the growth of our business, and return capital to our shareholders. We believe that our liquidity position and ongoing cash flow from operations will be sufficient to finance these requirements.

The following summarizes our key financing activities completed during the year ended December 31, 2017:

- On December 14, 2017, we executed agreements for project financing totaling €446 million (\$534 million) to refinance the existing project debt and a convertible preferred investment related to our Dublin project. For additional information on the project financing terms, see *Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt - Dublin Project Refinancing*.
- In March 2017, we sold \$400 million aggregate principal amount of 5.875% Senior Notes due July 2025. We utilized the net proceeds of the 5.875% Notes offering together with funds borrowed under our Credit Facilities, to redeem the 7.25% Senior

Notes due 2020. For additional information see *Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt - 5.875% Senior Notes due July 2025.*

Share Repurchases and Dividends

For additional information on share repurchases and dividends, see *Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities* and *Item 8. Financial Statements And Supplementary Data — Note 5. Equity and Earnings Per Share ("EPS")*.

Sources and Uses of Cash Flow

Year Ended December 31, 2017 vs. Year Ended December 31, 2016

Net cash provided by operating activities for the year ended December 31, 2017 decreased \$43 million from the prior year period. The decrease was primarily due to the operating performance as discussed in *Management Discussion and Analysis of Financial Condition and Results of Operations* above. The contribution from working capital to net cash provided by operating activities remained relatively flat year over year, however, we do not expect our working capital to continue to decrease in 2018.

Net cash used in investing activities for the year ended December 31, 2017 increased \$35 million from the prior year period. The net increase in cash used was principally attributable to reduced proceeds from asset sales of \$105 million related to the sale of our China assets in 2016 and an increase in acquisition spending of \$7 million, offset by reduced purchases of property, plant and equipment of \$82 million, which reflects a lower rate of spend for construction of the Dublin EfW facility as it transitioned from construction to operations.

Net cash provided by financing activities for the year ended December 31, 2017 increased \$47 million from the prior year period primarily due to higher net borrowings under our Revolving Credit Facility of \$107 million, increased net borrowings under the refinanced Dublin financing arrangement totaling \$105 million partially offset by the repayment in full of the Dublin Convertible Preferred debt for \$132 million and the settlement payment relating to the termination of the original Dublin interest rate swap totaling \$17 million, all of which were related to the comprehensive refinancing of the Dublin project debt, see *Item 8. Financial Statements And Supplementary Data - Note 10. Consolidated Debt.*

Year Ended December 31, 2016 vs. Year Ended December 31, 2015

Net cash provided by operating activities for the year ended December 31, 2016 increased \$32 million from the prior year period. The increase was primarily due to lower employee bonus payments paid in 2016 related to 2015 company performance.

Net cash used in investing activities for the year ended December 31, 2016 decreased \$194 million from the prior year period. The net decrease was primarily due to proceeds received from the sale of our interests in China of \$105 million in 2016, as well as reduced acquisition activity by \$63 million as compared to the prior year.

Net cash provided by financing activities for the year ended December 31, 2016 increased \$247 million from the prior year period primarily due to a reduction in net direct borrowings under our Revolving Credit Facility totaling \$208 million, and a reduction in net proceeds from long-term debt borrowings totaling \$97 million, partially offset by increased borrowings under Dublin project financing of \$73 million as compared to the prior year.

Supplementary Financial Information — Free Cash Flow and Free Cash Flow Before Working Capital (Non-GAAP Discussion)

To supplement our results prepared in accordance with GAAP, we use the measures of Free Cash Flow and Free Cash Flow Before Working Capital, which are non-GAAP measures as defined by the SEC. These non-GAAP financial measures are not intended as a substitute and should not be considered in isolation from measures of liquidity prepared in accordance with GAAP. In addition, our use of Free Cash Flow and Free Cash Flow Before Working Capital may be different from similarly identified non-GAAP measures used by other companies, limiting its usefulness for comparison purposes. The presentation of Free Cash Flow and Free Cash Flow Before Working Capital is intended to enhance the usefulness of our financial information by providing measures which management internally uses to assess and evaluate the overall performance of its business and those of possible acquisition candidates, and highlight trends in the overall business.

We use the non-GAAP financial measures of Free Cash Flow and Free Cash Flow Before Working Capital as criteria of liquidity and performance-based components of employee compensation. Free Cash Flow is defined as cash flow provided by operating activities, less maintenance capital expenditures, which are capital expenditures primarily to maintain our existing facilities. Free Cash Flow Before Changes in Working Capital is defined as Free Cash Flow excluding changes in working capital. We use Free Cash Flow and Free Cash Flow Before Working Capital as measures of liquidity to determine amounts we can reinvest in our core businesses, such as amounts available to make acquisitions, invest in construction of new projects, make principal payments on debt, or return capital to our shareholders through dividends and/or stock repurchases. For additional discussion related to

management's use of non-GAAP measures, see *Results of Operations — Supplementary Financial Information — Adjusted EBITDA (Non-GAAP Discussion)* above.

In order to provide a meaningful basis for comparison, we are providing information with respect to our Free Cash Flow and Free Cash Flow Before Working Capital for the years ended December 31, 2017, 2016 and 2015, reconciled for each such period to cash flow provided by operating activities, which we believe to be the most directly comparable measure under GAAP.

The following is a reconciliation of Free Cash Flow and Free Cash Flow Before Working Capital (in millions):

	Year Ended December 31,		
	2017	2016	2015
Net cash provided by operating activities	\$ 243	\$ 286	\$ 254
Less: Maintenance capital expenditures ^(a)	(111)	(110)	(102)
Free Cash Flow	\$ 132	\$ 176	\$ 152
Less: Changes in working capital	(44)	(41)	21
Free Cash Flow Before Working Capital	\$ 88	\$ 135	\$ 173

- (a) Purchases of property, plant and equipment are also referred to as capital expenditures. Capital expenditures that primarily maintain existing facilities are classified as maintenance capital expenditures. Maintenance capital expenditures in 2017 include amounts incurred but not paid as of December 31, 2017. The following table provides the components of total purchases of property, plant and equipment:

	Year Ended December 31,		
	2017	2016	2015
Maintenance capital expenditures	\$ (111)	\$ (110)	\$ (102)
Maintenance capital expenditures incurred but not yet paid	5	—	—
Capital expenditures associated with construction of Dublin EfW facility	(117)	(162)	(184)
Capital expenditures associated with organic growth initiatives	(33)	(46)	(34)
Capital expenditures associated with the New York City MTS contract	—	(3)	(30)
Capital expenditures associated with Essex County EfW emissions control system	(4)	(33)	(26)
Total capital expenditures associated with growth investments	(154)	(244)	(274)
Capital expenditures associated with property insurance events	(17)	(5)	—
Total purchases of property, plant and equipment	\$ (277)	\$ (359)	\$ (376)

Available Sources of Liquidity

Cash and Cash Equivalents

Cash and cash equivalents include all cash balances and highly liquid investments having maturities of three months or less from the date of purchase. These short-term investments are stated at cost, which approximates fair value. Balances held by our international subsidiaries are not generally available for near-term liquidity in our domestic operations.

	As of December 31,	
	2017	2016
	(in millions)	
Domestic	\$ 11	\$ 18
International	35	66
Total Cash and Cash Equivalents	\$ 46	\$ 84

Credit Facilities

Covanta Energy's senior secured credit facilities consist of a \$1.0 billion revolving credit facility, expiring 2019 through 2020, (the "Revolving Credit Facility") and a \$191 million term loan due 2020 (the "Term Loan") (collectively referred to as the "Credit Facilities"). For a detailed description of the terms of the Credit Facilities, see *Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt*.

Consolidated Debt

The face value of our consolidated debt is as follows (in millions):

	As of December 31,	
	2017	2016
Corporate Debt:		
Revolving Credit Facility	\$ 445	\$ 343
Term Loan due 2019	191	196
7.25% Senior Notes due 2020	—	400
6.375% Senior Notes due 2022	400	400
5.875% Senior Notes due 2024	400	400
5.875% Senior Notes due 2025	400	—
4.00% - 5.25% Tax-Exempt Bonds due 2024 - 2045	464	464
3.48% - 6.61% Equipment financing capital leases due 2024 through 2028	69	69
Total corporate debt (including current portion)	<u>\$ 2,369</u>	<u>\$ 2,272</u>
Project Debt:		
Domestic project debt - service fee facilities	\$ 68	\$ 78
Domestic project debt - tip fee facilities	9	16
Union County EfW facility capital lease	94	99
Dublin Senior Term Loan due 2021	—	155
Dublin Junior Term Loan due 2022	—	58
Total project debt (including current portion)	<u>\$ 171</u>	<u>\$ 406</u>
Total Debt Outstanding	<u><u>\$ 2,540</u></u>	<u><u>\$ 2,678</u></u>

As of December 31, 2017, the maturities of debt, excluding premiums and deferred financing costs are as follows (in millions):

	2018	2019	2020	2021	2022	Thereafter	Total
Revolving Credit Facility	\$ —	\$ —	\$ 445	\$ —	\$ —	\$ —	\$ 445
Term Loan	5	5	181	—	—	—	191
Senior Notes	—	—	—	—	400	800	1,200
Tax-Exempt Bonds	—	—	—	—	—	464	464
Equipment Leases	5	6	6	6	6	40	69
Project Debt	23	18	8	8	8	106	171
Total	<u>\$ 33</u>	<u>\$ 29</u>	<u>\$ 640</u>	<u>\$ 14</u>	<u>\$ 414</u>	<u>\$ 1,410</u>	<u>\$ 2,540</u>

For a detailed description of the terms of the debt instruments noted in the table above, see *Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt*. The loan documentation governing the Credit Facilities contains various affirmative and negative covenants, as well as financial maintenance covenants, that limit our ability to engage in certain types of transactions. We were in compliance with all of the affirmative and negative covenants under the Credit Facilities as of December 31, 2017.

Capital Requirements

The following table summarizes our gross contractual obligations including project debt, leases and other obligations as of December 31, 2017. This summary excludes obligations of our senior and junior loans related to the Dublin EfW facility of \$474 million and \$60 million, respectively, which are classified as "Liabilities held for sale" on our consolidated balance sheet as of December 31, 2017. Please see *Item 8. Financial Statements And Supplementary Data — Note 4. Dispositions and Assets Held for Sale, Note 10. Consolidated Debt.- Dublin Project Financing and Note 18. Subsequent Events.*

(In millions)	Total	Payments Due by Period			
		2018	2019 and 2020	2021 and 2022	2023 and Beyond
RECORDED LIABILITIES:					
Project debt	\$ 171	\$ 23	\$ 26	\$ 16	\$ 106
Term Loan ⁽¹⁾	191	5	186	—	—
Revolving Credit Facility ⁽¹⁾	445	—	445	—	—
6.375% Senior Notes ⁽²⁾	400	—	—	400	—
5.875% Senior Notes due 2024 ⁽³⁾	400	—	—	—	400
5.875 Senior Notes due 2025 ⁽⁴⁾	400	—	—	—	400
Tax-exempt bonds due 2024-2045 ⁽⁵⁾	464	—	—	—	464
Equipment leases ⁽⁶⁾	69	5	12	12	40
Total debt obligations	\$ 2,540	\$ 33	\$ 669	\$ 428	\$ 1,410
Less: Non-recourse debt ⁽⁷⁾	(240)	(28)	(38)	(28)	(146)
Total recourse debt	\$ 2,300	\$ 5	\$ 631	\$ 400	\$ 1,264
Uncertainty in income tax obligations ⁽⁸⁾	\$ 48	\$ 3	\$ 9	\$ 1	\$ 35
OTHER:					
Interest payments ⁽⁹⁾	\$ 1,323	\$ 145	\$ 263	\$ 211	\$ 704
Less: Non-recourse interest payments	(214)	(11)	(19)	(18)	(166)
Total recourse interest payments	\$ 1,109	\$ 134	\$ 244	\$ 193	\$ 538
Purchase obligations ⁽¹⁰⁾	30	—	30	—	—
Operating leases	71	9	17	14	31
Retirement plan obligations ⁽¹¹⁾	3	—	—	1	2
Total obligations	\$ 3,561	\$ 151	\$ 931	\$ 609	\$ 1,870

- (1) Interest payments on the Term Loan and letter of credit fees are estimated based on current LIBOR rates and are estimated assuming scheduled principal repayments. *See Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt.*
- (2) Interest on the 6.375% Senior Notes is payable semi-annually in arrears on April 1 and October 1 of each year, and will mature on October 1, 2022 unless earlier redeemed or repurchased. *See Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt.*
- (3) Interest on the 5.875% Senior Notes due 2024 is payable semi-annually in arrears on March 1 and September 1 of each year and will mature on March 21, 2024 unless earlier redeemed or repurchased. *See Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt.*
- (4) Interest on the 5.875% Senior Notes due 2025 is payable semi-annually on January 1 and July 1 of each year, commencing on July 1, 2017, and will mature on July 1, 2025 unless earlier redeemed or repurchased. *See Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt.*
- (5) The tax-exempt bonds bear interest between 4% and 5.25%. Interest on the \$335 million of tax-exempt bonds issued in 2012, is payable semi-annually on May 1 and November 1 of each year. Interest on the \$130 million of tax-exempt bonds issued in 2015, is payable semi-annually on January 1 and July 1 of each year. For a detailed description of the terms of the Tax-Exempt bonds, see *Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt.*
- (6) The original lease terms range from 10 years to 12 years and the fixed interest rates range from 3.48% to 6.61%.
- (7) Payment obligations for the project debt and equipment leases associated with owned energy-from-waste facilities are limited recourse to operating subsidiaries and non-recourse to us, subject to operating performance guarantees and commitments.
- (8) Accounting for uncertainty in income tax obligations is based upon the expected date of settlement taking into account all of our administrative rights including possible litigation.
- (9) Interest payments represent accruals for cash interest payments.

- (10) Purchase obligations relate to capital commitments related to our New York City waste transport and disposal contract. See *Item 8. Financial Statements And Supplementary Data — Note 3. New Business and Asset Management* for additional information.
- (11) Retirement plan obligations are based on actuarial estimates for our non-qualified pension plan obligations and post-retirement plan obligations only as of December 31, 2017.

Other Commitments

Other commitments as of December 31, 2017 were as follows (in millions):

	Commitments Expiring by Period		
	Total	Less Than One Year	More Than One Year
Letters of credit issued under the Revolving Credit Facility	\$ 192	\$ 20	\$ 172
Letters of credit - other	70	70	—
Surety bonds	196	—	196
Total other commitments — net	<u>\$ 458</u>	<u>\$ 90</u>	<u>\$ 368</u>

For additional information on other commitments, see *Item 8. Financial Statements And Supplementary Data — Note 16. Commitments and Contingencies - Other Matters*.

New York City Waste Transport and Disposal Contract

In August 2013, New York City awarded us a contract to handle waste transport and disposal from two marine transfer stations located in Queens and Manhattan. Service for the Queens marine transfer station began in early 2015 and service for the Manhattan marine transfer station is expected to follow pending notice to proceed to be issued by New York City, which is anticipated in 2018. We expect to incur approximately \$30 million of additional capital expenditures, primarily for the purchase of transportation equipment, following receipt of notice to proceed.

Other Factors Affecting Liquidity

We may from time to time engage in construction activity for public sector clients, either for new projects or expansions of existing projects. We historically receive payments for this activity based upon completion of milestones as set forth in the applicable contracts, and the timing and size of these milestone payments can result in material working capital variability between periods. This variability can in turn result in meaningful swings between periods in our Cash Flow from Operations and Free Cash Flow (which we use as a non-GAAP liquidity measure). For additional information related to Cash Flow from Operations see *Liquidity and Capital Resources — Sources and Uses of Cash Flow and Liquidity and Capital Resources — Supplementary Financial Information — Free Cash Flow (Non-GAAP Discussion)* above.

Our capital structure includes multiple debt securities and credit facilities, each with different maturity dates. As and when we refinance each element of our capital structure, we may consider utilizing the same or different types of debt securities and credit facilities, depending upon market conditions and general business requirements. Our selection of the same or different refinancing structures could materially increase or decrease our annual cash interest expense in future periods.

A substantial rise in the price of power may require us to post additional collateral, in the form of cash or letters of credit, to support hedging arrangements entered into under our energy risk management program. Such collateral posting requirements have been immaterial to date. We only enter into hedging transactions related to physical power generation, therefore we expect that any increase in obligations to hedge counterparties resulting from a rise in power prices would effectively be offset by corresponding increases in physical power sales, and as such we believe that any resulting collateral requirements would not have a material effect on our financial condition.

Insurance Coverage

We periodically review our insurance programs to ensure that our coverage is appropriate for the risks attendant to our business. We have obtained insurance for our employees, assets and operations that provide coverage for what we believe are probable maximum losses, subject to self-insured retentions, policy limits and premium costs which we believe to be appropriate. However, the insurance obtained does not cover us for all possible losses, and coverage available in the market may change over time.

In February 2017, our Fairfax County EfW facility experienced a fire in the front-end receiving portion of the facility. We resumed operations in December 2017. For additional information, see *Item 1. Financial Statements - Note 13. Supplemental Information - Insurance Recoveries*.

Off-Balance Sheet Arrangements

We are party to a lease arrangement at our Union County, New Jersey energy-from-waste facility in which we lease the facility from the Union County Utilities Authority, referred to as the “UCUA.” We guarantee senior rent due under the lease, which is sufficient for part of the debt service payments required to be made by the UCUA on the tax exempt bonds issued by it to finance the construction of the facility and which are scheduled to mature in 2031.

We are also a party to various lease arrangements pursuant to which we lease rolling stock in connection with our operating activities, as well as lease certain office space and equipment. Rent payable under these arrangements is not material to our financial position. We generally use operating lease treatment for all of the foregoing arrangements. A summary of our operating lease obligations is contained in *Item 8. Financial Statements And Supplementary Data — Note 9. Operating Leases*.

As described above under *Other Commitments*, we have issued or are party to performance guarantees and related contractual obligations undertaken mainly pursuant to agreements to construct and/or operate certain energy-from-waste facilities. To date, we have not incurred material liabilities under our guarantees.

We have investments in several investees and joint ventures that are accounted for under the equity and cost methods and therefore we do not consolidate the financial information of those companies.

On February 12, 2018 as part of our partnership with GIG to develop, fund and own EfW projects in the U.K. and Ireland, GIG purchased a 50% indirect interest in our Dublin EfW project. For additional information on the transaction see *Item 8. Financial Statements And Supplementary Data — Note 3. New Business and Asset Management* and *Note 4. Dispositions and Assets Held for Sale*.

DISCUSSION OF CRITICAL ACCOUNTING POLICIES AND ESTIMATES

In preparing our consolidated financial statements in accordance with GAAP, we are required to use judgment in making estimates and assumptions that affect the amounts reported in our consolidated financial statements and related notes. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances. These estimates form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Many of our critical accounting policies are subject to significant judgments and uncertainties that could potentially result in materially different results under different conditions and assumptions. Future events rarely develop exactly as forecast, and the best estimates routinely require adjustment.

Policy	Judgments and estimates	Effect if actual results differ from assumptions
<p>Revenue and Expense Recognition (Construction Contracts) Construction contracts are typically signed in conjunction with agreements to operate a newly constructed project. Upon completion of the construction element of these contracts, we recognize service revenue over the term of the service element of the contract.</p> <p>Revenue under existing fixed-price construction contracts are recognized using the percentage-of-completion method, measured by the cost-to-cost method.</p> <p>If we enter new contracts that contain multiple element arrangements, the revenue will be allocated between construction revenue and other project revenue (waste disposal revenue and electricity and steam sales) based on the relative fair value of each element provided the delivered elements have value to customers on a standalone basis. Amounts allocated to each element are based on its objectively determined fair value, such as the sales price for the product or service when it is sold separately or competitor prices for similar products or services.</p>	<p>We estimate our total construction costs for the contract throughout the project. As the project progresses, revisions to our estimated costs may be necessary.</p> <p>Given the unique nature of our business, we are likely to use our best estimate of selling price in allocating revenue between construction, and other project revenue (waste and service revenue, and electricity and steam sales). This allocation would be performed at the inception of the new contracts and when a material modification occurs.</p>	<p>If a revision to our estimated construction costs is required, the amount of revenue and the related operating income recognized will also fluctuate.</p> <p>The allocation of revenue will impact the timing of revenue recognized for each unit, where the amount allocated to construction will be recognized in earlier periods followed by the remainder over the service period. Any subsequent modification to the contracts that are considered material could result in a change in the amount and timing of revenue to be recognized.</p>
<p>Purchase Accounting We allocate acquisition purchase prices to identified tangible and intangible assets acquired and liabilities assumed based on their estimated fair values at the dates of acquisition, with any residual amounts allocated to goodwill. The fair value estimates used reflect our best estimates for the highest and best use by market participants.</p>	<p>These estimates are subject to uncertainties and contingencies. For example, we used the discounted cash flow method to estimate the value of many of our assets, which entailed developing projections of future cash flows.</p>	<p>If the cash flows from the acquired net assets differ significantly from our estimates, the amounts recorded could be subject to impairments. Furthermore, to the extent we change our initial estimates of the remaining useful life of the assets or liabilities, future depreciation and amortization expense could be impacted.</p>

Policy	Judgments and estimates	Effect if actual results differ from assumptions
<p>Long-lived Assets and Intangible Assets Our long-lived assets include property, plant and equipment; waste, service and energy contracts; amortizable intangible assets; and other assets. We evaluate the recoverability of the long-lived assets when there are indicators of possible impairment. Such indicators may include a decline in market, new regulation, recurring or expected operating losses, change in business strategy, or other changes that would impact the use or benefit received from the assets. The assessment is performed by grouping the long-lived assets at the lowest level of identifiable cash flows for the related assets or group of assets (such as the facility level). Initially the carrying value of the asset or asset group is compared to its undiscounted expected future cash flows. If the carrying value is in excess of the undiscounted cash flows, the carrying value is then compared to the fair value. Fair value may be estimated based upon the discounted cash flows, market or replacement cost methods based on the assumptions of a third-party market participant. Impairment is recognized if the fair value is less than the carrying value.</p>	<p>Our judgments regarding the existence of impairment indicators are based on regulatory factors, market conditions, anticipated cash flows and operational performance of our assets.</p> <p>When determining the fair value of our asset groupings and intangible assets for impairment assessments, we make assumptions regarding their fair values which are dependent on estimates of future cash flows, discount rates, and other factors.</p>	<p>Future events or change in circumstances may occur that require another assessment in future periods based on cash flows and discount rates in effect at that time.</p>
<p>Goodwill As of December 31, 2017, we had \$313 million of goodwill recorded in our North America reportable segment, which is comprised of two reporting units (see <i>Note 8. Other Intangible Assets and Goodwill</i>). We evaluate our goodwill annually and when an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value.</p> <p>We have the option to perform our initial assessment over the possible impairment of goodwill either qualitatively or quantitatively. Under the qualitative assessment, consideration is given to both external factors (including macroeconomic and industry conditions) and our own internal factors (including internal costs, recent financial performance, management, business strategy, customers, and stock price). During the fourth quarter of 2017 we performed the required annual impairment review of our recorded goodwill and determined that there was no indication of impairment as the fair value of our reporting units exceeded their carrying values.</p>	<p>Our judgments regarding the existence of impairment indicators are based on regulatory factors, market conditions, anticipated cash flows and operational performance of our assets.</p> <p>When determining the fair value of our reporting unit for impairment assessments, we make assumptions regarding the fair value which is dependent on estimates of future cash flows, discount rates, and other factors.</p>	<p>The impairment assessment of goodwill performed in the periods presented resulted in the conclusion that the fair value was not less than the carrying value.</p> <p>In future years, if there is a significant change in the estimated cash flows, discount rates or other factors that cause the fair values to significantly decrease, there could be impairments which could materially impact our results of operations.</p>

Policy	Judgments and estimates	Effect if actual results differ from assumptions
<p>Insurance Reserves and Self-Insurance for Employee Benefit Plans</p> <p>We retain a substantial portion of the risk related to certain general liability, workers' compensation and medical claims. However, we maintain stop-loss coverage to limit the exposure related to employee benefit plans and liability insurance over retained risks. Liabilities associated with these losses include estimates of both claims filed and losses incurred but not yet reported ("IBNR"). We use actuarial methods which consider a number of factors to estimate our ultimate cost of losses. Our insurance reserves and medical liability accrual was \$16 million as of December 31, 2017 and 2016.</p>	<p>We believe that the amounts accrued are adequate; however, our liabilities could be significantly affected if future occurrences or loss developments differ from our estimates of both claims filed and losses incurred but not yet reported.</p>	<p>A 1% change in average claim costs would impact our self-insurance expense by less than \$1 million.</p>
<p>Deferred Tax Assets</p> <p>As described in <i>Item 8. Financial Statements And Supplementary Data — Note 14. Income Taxes</i>, we have recorded a deferred tax asset related to our NOLs.</p> <p>The NOLs will expire in various amounts beginning on December 31, 2028 through December 31, 2033, if not used.</p> <p>Deferred tax assets are reduced by a valuation allowance if, based on available evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized.</p>	<p>We estimated that we had gross NOLs of approximately \$240 million for U.S. federal income tax purposes, \$389 million for state income tax purposes and \$287 for foreign tax purposes as of December 31, 2017. We estimated our tax credits to be approximately \$48 million and our deferred tax assets are offset by a valuation allowance of approximately \$77 million.</p> <p>The amount recorded was calculated based upon future taxable income arising from (a) the reversal of temporary differences during the period the NOLs are available and (b) future operating income expected, to the extent it is reasonably predictable. Judgment is involved in assessing whether a valuation allowance is required on our deferred tax assets.</p>	<p>The Tax Cuts and Jobs Act ("the Act") was enacted on December 22, 2017. The Act reduces the U.S. federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred and creates new taxes on certain foreign sourced earnings. At December 31, 2017, we have not completed our accounting for the tax effects of enactment of the Act; however, in certain cases, as described below, we have made a reasonable estimate of the effects on our existing deferred tax balances and the one-time transition tax.</p> <p>We re-measured our US deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future, which is generally 21%. However, we are still analyzing certain aspects of the Act and refining our calculations, which could potentially affect the measurement of these balances or potentially give rise to new deferred tax amounts. The provisional amount recorded related to the re-measurement of our deferred tax balance was \$204 million of tax benefit.</p> <p>To the extent our estimation of the reversal of temporary differences and operating income generated differs from actual results, we could be required to adjust the carrying amount of the deferred tax assets.</p> <p>For the transition tax for which we were able to determine a reasonable estimate, we recognized a provisional amount of \$21 million, which is included as a component of income tax expense from continuing operations with a corresponding reduction of deferred tax asset related to the utilization of gross NOL of approximately \$59 million.</p>

RECENT ACCOUNTING PRONOUNCEMENTS

See *Item 8. Financial Statements And Supplementary Data — Note 2. Recent Accounting Pronouncements* for a summary of new accounting pronouncements.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

In the normal course of business, our subsidiaries are party to financial instruments that are subject to market risks arising from changes in commodity prices, interest rates, foreign currency exchange rates, and derivative instruments. Our use of derivative instruments is very limited and we do not enter into derivative instruments for trading purposes. The following analysis provides quantitative information regarding our exposure to financial instruments with market risks. We use a sensitivity model to evaluate the fair value or cash flows of financial instruments with exposure to market risk that assumes instantaneous, parallel shifts in exchange rates and interest rate yield curves. There are certain limitations inherent in the sensitivity analysis presented, primarily due to the assumption that exchange rates change in a parallel manner and that interest rates change instantaneously. In addition, the fair value estimates presented herein are based on pertinent information available to us as of December 31, 2017. Further information is included in *Item 8. Financial Statements And Supplementary Data — Note 11. Financial Instruments* and *Note 12. Derivative Instruments*.

Commodity Price Risk

Energy Price Risk

In contrast to our waste disposal agreements, as a result of structural and regulatory changes in the energy markets over time, we expect that multi-year contracts for energy sales will generally be less available than in the past, thereby increasing our exposure to energy market price volatility upon expiration. As our historic energy contracts have expired and our service fee contracts have transitioned to tip fee contracts, our exposure to market energy prices has increased. We expect this trend to continue. In order to mitigate our exposure to near-term (one to three years) revenue fluctuations in energy markets, we enter into hedging arrangements and we expect to do so in the future. Our efforts in this regard will involve only mitigation of price volatility for the energy we produce, and will not involve speculative energy trading. In connection with this hedging strategy, we have entered into swap agreements with various financial institutions to hedge our exposure to market risk. As of December 31, 2017, the net fair value of the energy derivatives of \$5 million pre-tax, was recorded as a \$4 million current liability and a \$1 million non-current liability and as a component of Accumulated Other Comprehensive Income (“AOCI”).

Recycled Metals Price Risk

We recover and sell ferrous and non-ferrous metals, with pricing linked to related commodity indices. Therefore, our metals revenue is completely exposed to market price fluctuations. A 10% change in the current market rates would impact recycled metals revenue by approximately \$4 million and \$5 million for ferrous and non-ferrous, respectively. We are currently unable to mitigate this exposure effectively either via long-term pricing contracts or with hedging instruments as there are limited options to enter into such arrangements for this segment of the market.

Waste Price Risk

We have some protection against fluctuations in fuel (municipal waste) price risk in our North America segment energy-from-waste business because approximately 76% of our municipal waste is provided under multi-year contracts where we are paid for our fuel at fixed rates. At our tip fee energy-from-waste facilities, differing amounts of waste processing capacity are not subject to long-term contracts and, therefore, we are partially exposed to the risk of market fluctuations in the waste disposal fees we may charge for fuel. At service fee facilities, waste disposal fees generally increase annually due to annual contract price escalations intended to reflect changes in our costs. Declines in waste disposal fees at our energy-from-waste facilities are mitigated through internalizing waste disposal by utilizing our network of transfer stations located throughout the northeast United States and by increasing our profiled waste volumes, which we can sell at a higher price than municipal solid waste.

We expect that multi-year contracts for waste supply at facilities we own or lease will continue to be available on acceptable terms in the marketplace, at least for a substantial portion of facility capacity, as municipalities continue to value long-term committed and sustainable waste disposal capacity. We also expect that an increasing portion of system capacity will be contracted on a shorter-term basis, and so we will have more frequent exposure to waste market risk.

Interest Rate Risk

Borrowings under the Credit Facilities bear interest, at our option, at either a base rate or a Eurodollar rate plus an applicable margin determined by a pricing grid based on Covanta Energy's leverage ratio. Base rate is defined as the higher of (i) the Federal Funds Effective Rate plus 0.50%, (ii) the rate the administrative agent announces from time to time as its per annum "prime rate" or (iii) the London Interbank Offered Rate ("LIBOR"), or a comparable or successor rate, plus 1.00%. For details as to the various election options under the Credit Facility, see *Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt*. As of December 31, 2017, the outstanding balance of the Term Loan and the Revolving Credit Facility was \$191 million and \$445 million, respectively. We have not entered into any interest rate hedging arrangements against these balances. A hypothetical increase of 1% in the underlying December 31, 2017 market interest rates would result in a potential reduction to twelve-month future pre-tax earnings and cash provided by operations of approximately \$6 million, based on balances outstanding as of December 31, 2017. For details, see *Item 8. Financial Statements And Supplementary Data — Note 10. Consolidated Debt*.

In order to hedge the risk of adverse variable interest rate fluctuations associated with the Dublin Senior Loan, we have entered into floating to fixed rate swap agreements, denominated in Euros for the full €135 million loan amount with various financial institutions that terminate between 2018 and 2032. This interest rate swap is designated as a cash flow hedge, which is recorded at fair value as a noncurrent liability with changes in fair value recorded as a component of AOCI. As of December 31, 2017, the fair value of the interest rate swap derivative of \$7 million pre-tax, was recorded as a noncurrent liability within "Liabilities held for sale" on our consolidated balance sheet. For additional information, see *Item 8. Financial Statements And Supplementary Data — Note 12. Derivative Instruments*.

Foreign Currency Exchange Rate Risk

We have operations in various foreign markets, including Canada, Ireland and Italy. As and to the extent we grow our international business, we expect to invest in foreign currencies to pay either for the construction costs of facilities we develop, or for the cost to acquire existing businesses or assets. Currency volatility in those markets, as well as the effectiveness of any currency hedging strategies we may implement, may impact both the amount we are required to invest in new projects as well as our financial returns on these projects and our reported results. We have mitigated our currency risks in certain cases by structuring our project contracts so that our revenue adjust in line with corresponding changes in the relevant currency rates. In such cases, only that portion of our working capital investment and associated project debt, if any, that are denominated in a currency other than the project entity's functional currency are exposed to currency risks. As of December 31, 2017, the fair value of the foreign currency derivatives is zero on our consolidated balance sheet. For additional information, see *Item 8. Financial Statements And Supplementary Data — Note 12. Derivative Instruments*.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

	Page
Report of Independent Registered Public Accounting Firm	57
Consolidated Statements of Operations for the Years Ended December 31, 2017, 2016, and 2015	58
Consolidated Statements of Comprehensive Income (Loss) for the Years Ended December 31, 2017, 2016, and 2015	59
Consolidated Balance Sheets as of December 31, 2017 and 2016	60
Consolidated Statements of Cash Flow for the Years Ended December 31, 2017, 2016, and 2015	61
Consolidated Statements of Equity for the Years Ended December 31, 2017, 2016 and 2015	63
Notes to Consolidated Financial Statements	64
Note 1. Organization and Summary of Significant Accounting Policies	64
Note 2. Recent Accounting Pronouncements	70
Note 3. New Business and Asset Management	71
Note 4. Dispositions and Assets Held for Sale	72
Note 5. Equity and Earnings Per Share ("EPS")	73
Note 6. Financial Information by Business Segments	75
Note 7. Amortization of Waste, Service and Energy Contracts	76
Note 8. Other Intangible Assets and Goodwill	76
Note 9. Operating Leases	77
Note 10. Consolidated Debt	78
Note 11. Financial Instruments	85
Note 12. Derivative Instruments	87
Note 13. Supplementary Information	88
Note 14. Income Taxes	90
Note 15. Stock-Based Award Plans	94
Note 16. Commitments and Contingencies	97
Note 17. Quarterly Data (Unaudited)	99
Note 18. Subsequent Events	99
Financial Statement Schedule:	100
Schedule II Valuation and Qualifying Accounts	100

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Covanta Holding Corporation

Opinion on Financial Statements

We have audited the accompanying consolidated balance sheets of Covanta Holding Corporation (the “Company”) as of December 31, 2017 and 2016, and the related consolidated statements of operations, comprehensive income (loss), equity, and cash flows for each of the three years in the period ended December 31, 2017, and the related notes and financial statement schedule listed in the Index at Item 8 (collectively referred to as the “financial statements”). In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company at December 31, 2017 and 2016, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2017, based on the criteria establishes in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 26, 2018, expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 2002.

Iselin, New Jersey
February 26, 2018

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	For the Year Ended December 31,		
	2017	2016	2015
	(In millions, except per share amounts)		
OPERATING REVENUE:			
Waste and service revenue	\$ 1,231	\$ 1,187	\$ 1,104
Energy revenue	334	370	421
Recycled metals revenue	82	61	61
Other operating revenue	105	81	59
Total operating revenue	<u>1,752</u>	<u>1,699</u>	<u>1,645</u>
OPERATING EXPENSE:			
Plant operating expense	1,271	1,177	1,129
Other operating expense, net	51	86	73
General and administrative expense	112	100	93
Depreciation and amortization expense	215	207	198
Impairment charges	2	20	43
Total operating expense	<u>1,651</u>	<u>1,590</u>	<u>1,536</u>
Operating income	<u>101</u>	<u>109</u>	<u>109</u>
OTHER INCOME (EXPENSE)			
Interest expense, net	(147)	(138)	(134)
(Loss) gain on asset sales	(6)	44	—
Loss on extinguishment of debt	(84)	—	(2)
Other expense, net	1	(1)	(1)
Total other expense	<u>(236)</u>	<u>(95)</u>	<u>(137)</u>
(Loss) income before income tax benefit (expense) and equity in net income from unconsolidated investments	(135)	14	(28)
Income tax benefit (expense) (Note 14)	191	(22)	84
Equity in net income from unconsolidated investments	1	4	13
NET INCOME (LOSS)	<u>57</u>	<u>(4)</u>	<u>69</u>
Less: Net income attributable to noncontrolling interests in subsidiaries	—	—	1
NET INCOME (LOSS) ATTRIBUTABLE TO COVANTA HOLDING CORPORATION	<u>\$ 57</u>	<u>\$ (4)</u>	<u>\$ 68</u>
Weighted Average Common Shares Outstanding:			
Basic	<u>130</u>	<u>129</u>	<u>132</u>
Diluted	<u>131</u>	<u>129</u>	<u>133</u>
Earnings (Loss) Per Share Attributable to Covanta Holding Corporation Stockholders:			
Basic	<u>\$ 0.44</u>	<u>\$ (0.03)</u>	<u>\$ 0.52</u>
Diluted	<u>\$ 0.44</u>	<u>\$ (0.03)</u>	<u>\$ 0.51</u>
Cash Dividend Declared Per Share:	<u>\$ 1.00</u>	<u>\$ 1.00</u>	<u>\$ 1.00</u>

The accompanying notes are an integral part of the consolidated financial statements.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	For the Year Ended December 31,		
	2017	2016	2015
	(In millions)		
Net income (loss)	\$ 57	\$ (4)	\$ 69
Foreign currency translation	17	(7)	(22)
Net unrealized (loss) gain on derivative instruments, net of tax (benefit) expense of \$0, (\$8) and \$7, respectively	(10)	(21)	10
Other comprehensive income (loss) attributable to Covanta Holding	7	(28)	(12)
Comprehensive income (loss)	64	(32)	57
Less: Net income attributable to noncontrolling interests in subsidiaries	—	—	1
Comprehensive income (loss) attributable to Covanta Holding Corporation	\$ 64	\$ (32)	\$ 56

The accompanying notes are an integral part of the consolidated financial statements.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	As of December 31,	
	2017	2016
	(In millions, except per share amounts)	
ASSETS		
Current:		
Cash and cash equivalents	\$ 46	\$ 84
Restricted funds held in trust	43	56
Receivables (less allowances of \$14 million and \$9 million, respectively)	341	332
Prepaid expenses and other current assets	73	72
Assets held for sale	653	—
Total Current Assets	1,156	544
Property, plant and equipment, net	2,606	3,024
Restricted funds held in trust	28	54
Waste, service and energy contracts, net	251	263
Other intangible assets, net	36	34
Goodwill	313	302
Other assets	51	63
Total Assets	\$ 4,441	\$ 4,284
LIABILITIES AND EQUITY		
Current:		
Current portion of long-term debt	\$ 10	\$ 9
Current portion of project debt	23	22
Accounts payable	151	98
Accrued expenses and other current liabilities	313	289
Liabilities held for sale	540	—
Total Current Liabilities	1,037	418
Long-term debt	2,339	2,243
Project debt	151	361
Deferred income taxes	412	617
Other liabilities	75	176
Total Liabilities	4,014	3,815
Commitments and Contingencies (Note 16)		
Equity:		
Preferred stock (\$0.10 par value; authorized 10 shares; none issued and outstanding)	—	—
Common stock (\$0.10 par value; authorized 250 shares; issued 136 shares, outstanding 131 and 130, respectively)	14	14
Additional paid-in capital	822	807
Accumulated other comprehensive loss	(55)	(62)
Accumulated deficit	(353)	(289)
Treasury stock, at par	(1)	(1)
Total Equity	427	469
Total Liabilities and Equity	\$ 4,441	\$ 4,284

The accompanying notes are an integral part of the consolidated financial statements.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOW

	For the Year Ended December 31,		
	2017	2016	2015
	(In millions)		
OPERATING ACTIVITIES:			
Net income (loss)	\$ 57	\$ (4)	\$ 69
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization expense	215	207	198
Amortization of long-term debt deferred financing costs	7	6	8
Loss (gain) on asset sales	6	(44)	—
Impairment charges	2	20	43
Loss on extinguishment of debt	84	—	2
Provision for doubtful accounts	9	2	1
Stock-based compensation expense	18	16	18
Equity in net income from unconsolidated investments	(1)	(4)	(13)
Deferred income taxes	(193)	21	(11)
IRS audit settlement	—	—	(93)
Change in restricted funds held in trust	1	22	28
Dividends from unconsolidated investments	2	2	5
Other, net	(13)	(1)	21
Change in working capital, net of effects of acquisitions:			
Receivables	(27)	(19)	(12)
Debt services billings in excess of revenue recognized	5	(1)	5
Prepaid and other current assets	—	18	(1)
Accounts payable and accrued expenses	59	45	(8)
Deferred revenue	7	(2)	(5)
Changes in noncurrent assets and liabilities, net	5	2	(1)
Net cash provided by operating activities	<u>243</u>	<u>286</u>	<u>254</u>
INVESTING ACTIVITIES:			
Purchase of property, plant and equipment	(277)	(359)	(376)
Acquisition of businesses, net of cash acquired	(16)	(9)	(72)
Proceeds from asset sales	4	109	—
Property insurance proceeds	8	3	1
Other, net	(8)	2	(1)
Net cash used in investing activities	<u>(289)</u>	<u>(254)</u>	<u>(448)</u>

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOW – (Continued)

	For the Year Ended December 31,		
	2017	2016	2015
	(In millions)		
FINANCING ACTIVITIES:			
Proceeds from borrowings on long-term debt	400	—	294
Proceeds from borrowings on revolving credit facility	952	744	895
Payments of equipment financing capital lease	(5)	(4)	(4)
Proceeds from borrowings on project debt	—	—	59
Proceeds from borrowings on Dublin project financing	643	159	86
Payment related to Dublin interest rate swap	(17)	—	—
Payments on the Dublin Convertible Preferred	(132)	—	—
Principal payments on long-term debt	(415)	(4)	(196)
Payments of borrowings on revolving credit facility	(850)	(749)	(692)
Proceeds from equipment financing capital lease	—	—	15
Principal payments on project debt	(382)	(51)	(85)
Payments of deferred financing costs	(21)	(6)	(11)
Payment of Dublin financing costs	(19)	—	—
Cash dividends paid to stockholders	(131)	(131)	(133)
Common stock repurchased	—	(20)	(30)
Financing of insurance premiums, net	20	—	—
Change in restricted funds held in trust	(37)	28	5
Other, net	(3)	(10)	—
Net cash provided by (used in) financing activities	<u>3</u>	<u>(44)</u>	<u>203</u>
Effect of exchange rate changes on cash and cash equivalents	5	—	(4)
Net (decrease) increase in cash and cash equivalents	(38)	(12)	5
Cash and cash equivalents at beginning of period	84	96	91
Cash and cash equivalents at end of period	46	84	96
Less: Cash and cash equivalents of assets held for sale at end of period	—	—	2
Cash and cash equivalents of continuing operations at end of period	<u>\$ 46</u>	<u>\$ 84</u>	<u>\$ 94</u>
 Cash Paid for Interest and Income Taxes:			
Interest	\$ 149	\$ 150	\$ 141
Income taxes, net of refunds	\$ —	\$ 6	\$ 2

The accompanying notes are an integral part of the consolidated financial statements.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY

Covanta Holding Corporation Stockholders' Equity										
	<u>Common Stock</u>		<u>Additional Paid-In Capital</u>	<u>Accumulated Other Comprehensive Loss</u>	<u>Accumulated Earnings (Deficit)</u>	<u>Treasury Stock</u>		<u>Noncontrolling Interests in Subsidiaries</u>	<u>Total</u>	
	<u>Shares</u>	<u>Amount</u>				<u>Shares</u>	<u>Amount</u>			
(In millions)										
Balance as of December 31, 2014	136	\$ 14	\$ 805	\$ (22)	\$ (15)	3	\$ —	\$ 2	\$ 784	
Opening retained earnings adjustment	—	—	—	—	(45)	—	—	—	(45)	
Stock-based compensation expense	—	—	18	—	—	—	—	—	18	
Dividend declared	—	—	—	—	(133)	—	—	—	(133)	
Common stock repurchased	—	—	(13)	—	(19)	2	—	—	(32)	
Shares repurchased for tax withholdings for vested stock awards	—	—	(5)	—	—	—	—	—	(5)	
Distribution to partners of noncontrolling interest of subsidiaries	—	—	—	—	—	—	—	(1)	(1)	
Other	—	—	—	—	1	—	—	—	1	
Acquisition of noncontrolling interests in subsidiaries	—	—	(4)	—	—	—	—	—	(4)	
Comprehensive (loss) income, net of income taxes	—	—	—	(12)	68	—	—	1	57	
Balance as of December 31, 2015	136	\$ 14	\$ 801	\$ (34)	\$ (143)	5	\$ —	\$ 2	\$ 640	
Stock-based compensation expense	—	—	16	—	—	—	—	—	16	
Dividend declared	—	—	—	—	(132)	—	—	—	(132)	
Common stock repurchased	—	—	(6)	—	(11)	1	(1)	—	(18)	
Shares repurchased for tax withholdings for vested stock awards	—	—	(4)	—	—	—	—	—	(4)	
Exchange of China equity investments	—	—	—	—	—	—	—	(2)	(2)	
Other	—	—	—	—	1	—	—	—	1	
Comprehensive (loss) income, net of income taxes	—	—	—	(28)	(4)	—	—	—	(32)	
Balance as of December 31, 2016	136	\$ 14	\$ 807	\$ (62)	\$ (289)	6	\$ (1)	\$ —	\$ 469	
Cumulative effect change in accounting for share based payments (Note 1)	—	—	1	—	10	—	—	—	11	
Stock-based compensation expense	—	—	18	—	—	—	—	—	18	
Dividend declared	—	—	—	—	(132)	—	—	—	(132)	
Shares issued in non-vested stock award	—	—	—	—	—	(1)	—	—	—	
Shares repurchased for tax withholdings for vested stock awards	—	—	(4)	—	—	—	—	—	(4)	
Other	—	—	—	—	1	—	—	—	1	
Comprehensive loss, net of income taxes	—	—	—	7	57	—	—	—	64	
Balance as of December 31, 2017	136	\$ 14	\$ 822	\$ (55)	\$ (353)	5	\$ (1)	\$ —	\$ 427	

The accompanying notes are an integral part of the consolidated financial statements.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The terms “we,” “our,” “ours,” “us” and “Company” refer to Covanta Holding Corporation and its subsidiaries; the term “Covanta Energy” refers to our subsidiary Covanta Energy, LLC and its subsidiaries.

Organization

Covanta is one of the world’s largest owners and operators of infrastructure for the conversion of waste to energy (known as “energy-from-waste” or “EfW”), and also owns and operates related waste transport and disposal and other renewable energy production businesses. EfW serves two key markets as both a sustainable waste management solution that is environmentally superior to landfilling and as a source of clean energy that reduces overall greenhouse gas emissions and is considered renewable under the laws of many states and under federal law. Our facilities are critical infrastructure assets that allow our customers, which are principally municipal entities, to provide an essential public service.

Our EfW facilities earn revenue from both the disposal of waste and the generation of electricity and/or steam, generally under contracts, as well as from the sale of metal recovered during the EfW process. We process approximately 20 million tons of solid waste annually. We operate and/or have ownership positions in 43 energy-from-waste facilities, which are primarily located in North America, and five additional energy generation facilities, including other renewable energy production facilities in North America (wood biomass and hydroelectric). In total, these assets produce approximately 10 million megawatt hours (“MWh”) of baseload electricity annually. We also operate a waste management infrastructure that is complementary to our core EfW business.

We have one reportable segment, North America, which is comprised of waste and energy services operations located primarily in the United States and Canada. Outside of North America, we currently operate an energy-from-waste facility in Dublin, Ireland. We hold interests in energy-from-waste facilities in Ireland and Italy. For additional information on our reportable segment, see *Note 6. Financial Information by Business Segments*.

Summary of Significant Accounting Policies

The financial statements and accompanying notes are prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”). The following is a description of our significant accounting policies.

Principles of Consolidation

The consolidated financial statements reflect the results of our operations, cash flows and financial position of our majority-owned or controlled subsidiaries. All intercompany accounts and transactions have been eliminated.

Equity and Cost Method Investments

Investments in unconsolidated entities over which we have significant influence are accounted for under the equity method of accounting. Investments in entities in which we do not have the ability to exert significant influence over the investees’ operating and financing activities are accounted for under the cost method of accounting. Cost-method investments are carried at historical cost unless indicators of impairment are identified. We monitor investments for other-than-temporary declines in value and make reductions when appropriate. For additional information on our cost method investment in China, see *Note 4. Dispositions and Assets Held for Sale and Note 18. Subsequent Events*.

Revenue Recognition

Our revenue is generated from the fees we earn for: waste disposal, operating energy-from-waste and independent power facilities, servicing project debt, and for waste transportation and processing; from the sale of electricity and steam; from the sale of recycled ferrous and non-ferrous metal; and from construction services. The fees charged for our services are generally defined in our service agreements and vary based on contract-specific terms. We generally recognize revenue as services are performed or products are delivered. For example, revenue typically is recognized as waste is received or processed at our facilities, metals are shipped from our sites or as kilowatts are delivered to a customer by an EfW facility or independent power production plant.

Revenue under existing fixed-price or cost-plus construction contracts is recognized using the percentage-of-completion method, measured by the cost-to-cost method. If an arrangement involves multiple deliverables, the delivered items are considered separate units of accounting if the items have value on a stand-alone basis. Amounts allocated to each element are based on its objectively determined fair value, such as the sales price for the product or service when it is sold separately or competitor prices for similar products or services.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Plant Operating Expense

Plant operating expense includes facility employee costs, expense for materials and parts for facility scheduled and unscheduled maintenance and repair expense, which includes costs related to our internal maintenance team and non-facility employee costs. Plant operating expense also includes hauling and disposal expenses, fuel costs, chemicals and reagents, operating lease expense, and other facility operating related expense.

Pass Through Costs

Pass through costs are costs for which we receive a direct contractually committed reimbursement from the public sector client that sponsors an EfW project. These costs generally include utility charges, insurance premiums, ash residue transportation and disposal, and certain chemical costs. These costs are recorded net of public sector client reimbursements in our consolidated financial statements.

Pass through costs were as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
Pass through costs	\$ 59	\$ 41	\$ 52

Income Taxes

Deferred income taxes are based on the difference between the financial reporting and tax basis of assets and liabilities. The deferred income tax provision represents the change during the reporting period in the deferred tax assets and deferred tax liabilities, net of the effect of acquisitions and dispositions. Deferred tax assets include tax losses and credit carryforwards and are reduced by a valuation allowance if, based on available evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized.

We file a consolidated federal income tax return for each of the periods covered by the consolidated financial statements, which include all eligible United States subsidiary companies. Foreign subsidiaries are taxed according to regulations existing in the countries in which they do business. Our federal consolidated income tax return also includes the taxable results of certain grantor trusts, which are excluded from our consolidated financial statements; however, certain related tax attributes are recorded in our consolidated financial statements since they are part of our federal tax return. The Tax Cuts and Jobs Act, which was enacted in December 2017, had a substantial impact on our income tax benefit for the year ended December 31, 2017. For additional information, see *Note 14. Income Taxes*.

Stock-Based Compensation

Stock-based compensation for share-based awards to employees is accounted for as compensation expense based on their grant date fair values. For additional information, see *Note 15. Stock-Based Award Plans* and *Note 1. Organization and Summary of Significant Accounting Policies - Accounting Pronouncements Recently Adopted*.

Cash and Cash Equivalents

Cash and cash equivalents include all cash balances and highly liquid investments having maturities of three months or less from the date of purchase. These short-term investments are stated at cost, which approximates fair value. Balances held by our international subsidiaries are not generally available for near-term liquidity in our domestic operations.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable consist of amounts due to us from normal business activities. Allowances for doubtful accounts are the estimated losses from the inability of customers to make required payments. We use historical experience, as well as current market information, in determining the estimate.

Restricted Funds Held in Trust

Restricted funds held in trust are primarily amounts received and held by third party trustees relating to certain projects we own. We generally do not control these accounts and these funds may be used only for specified purposes. These funds include debt service reserves for payment of principal and interest on project debt. Revenue funds are comprised of deposits of revenue received with respect to projects prior to their disbursement. Other funds include escrowed debt proceeds, amounts held in trust for operations, maintenance, environmental obligations, operating lease reserves in accordance with agreements with our clients, and amounts held for future scheduled distributions. Such funds are invested principally in money market funds, bank deposits and certificates of deposit, United States treasury bills and notes, United States government agency securities, and high-quality municipal bonds.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Restricted fund balances are as follows (in millions):

	As of December 31,			
	2017		2016	
	Current	Noncurrent	Current	Noncurrent
Debt service funds - principal	\$ 10	\$ 8	\$ 10	\$ 7
Debt service funds - interest	—	—	1	—
Total debt service funds	10	8	11	7
Revenue funds	4	—	3	—
Other funds	29	20	42	47
Total	<u>\$ 43</u>	<u>\$ 28</u>	<u>\$ 56</u>	<u>\$ 54</u>

Deferred Revenue

As of December 31, 2017 and 2016 deferred revenue included in "Accrued expenses and other current liabilities" on our consolidated balance sheet totaled \$14 million and \$16 million, respectively.

Property, Plant and Equipment

Property, plant, and equipment acquired in business acquisitions is recorded at our estimate of fair value on the date of the acquisition. Additions, improvements and major expenditures are capitalized if they increase the original capacity or extend the remaining useful life of the original asset more than one year. Maintenance repairs and minor expenditures are expensed in the period incurred. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, which generally range from three years for computer equipment to 50 years for certain infrastructure components of energy-from-waste facilities. Property, plant and equipment at our service fee operated facilities are not recognized on our balance sheet and any additions, improvements and major expenditures for which we are responsible at our service fee operated facilities are expensed in the period incurred. Our leasehold improvements are depreciated over the life of the lease term or the asset life, whichever is shorter. Upon retirement or disposal of assets, the cost and related accumulated depreciation are removed from the consolidated balance sheets and any gain or loss is reflected in the consolidated statements of operations.

Property, plant and equipment consisted of the following (in millions):

	As of December 31,	
	2017	2016
Land	\$ 25	\$ 29
Facilities and equipment	4,312	4,188
Landfills (primarily for ash disposal)	67	63
Construction in progress	54	433
Total	<u>4,458</u>	<u>4,713</u>
Less: accumulated depreciation and amortization	<u>(1,852)</u>	<u>(1,689)</u>
Property, plant, and equipment — net	<u>\$ 2,606</u>	<u>\$ 3,024</u>

Depreciation and amortization expense related to property, plant and equipment was \$197 million, \$185 million, and \$177 million, for the years ended December 31, 2017, 2016 and 2015, respectively. Non-cash investing activities related to capital expenditures totaled \$18 million and \$41 million as of December 31, 2017 and 2016, respectively, and were recorded in "Accrued expenses and other current liabilities" on our consolidated balance sheet.

Property, plant and equipment is evaluated for impairment whenever events or changes in circumstances indicate their carrying value may not be recoverable over their estimated useful life. In reviewing for recoverability, we compare the carrying amount of the relevant assets to their estimated undiscounted future cash flows. When the estimated undiscounted future cash flows are less than the assets carrying amount, the carrying amount is compared to the assets fair value. If the assets fair value is less than the carrying amount an impairment charge is recognized to reduce the assets carrying amount to its fair value. For additional information, see *Note 13. Supplementary Information - Impairment Charges*.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Asset Retirement Obligations

We recognize a liability for asset retirement obligations when it is incurred, which is generally upon acquisition, construction, or development. Our liabilities include closure and post-closure costs for landfill cells and site restoration for certain energy-from-waste and power producing sites. We principally determine the liability using internal estimates of the costs using current information, assumptions, and interest rates, but also use independent appraisals as appropriate to estimate costs. When a new liability for asset retirement obligation is recorded, we capitalize the cost 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. We recognize period-to-period changes in the liability resulting from revisions to the timing or the amount of the original estimate of the undiscounted cash flows.

Current and noncurrent asset retirement obligations are included in "Accrued expenses and other current liabilities" and "Other liabilities", respectively, on our consolidated balance sheet. Our asset retirement obligation is presented as follows (in millions):

	As of December 31,	
	2017	2016
Beginning of period asset retirement obligation	\$ 25	\$ 30
Accretion expense	2	2
Net change ⁽¹⁾	(1)	(7)
End of period asset retirement obligation	26	25
Less: current portion	(2)	—
Noncurrent asset retirement obligation	\$ 24	\$ 25

(1) Comprised primarily of expenditures and settlements of the asset retirement obligation liability, net revisions based on current estimates of the liability and revised expected cash flows and life of the liability.

Intangible Assets and Liabilities

Our waste, service and energy contracts are intangible assets related to long-term operating contracts at acquired facilities. These intangible assets and liabilities, as well as lease interest and other finite and indefinite-lived intangible assets, are recorded at their estimated fair market values upon acquisition based primarily upon discounted cash flows in accordance with accounting standards related to business combinations. See *Note 7. Amortization of Waste, Service and Energy Contracts* and *Note 8. Other Intangible Assets and Goodwill*.

Intangible assets with finite lives are evaluated for impairment whenever events or changes in circumstances indicate their carrying value may not be recoverable over their estimated useful life. In reviewing for recoverability, we compare the carrying amount of the relevant assets to their estimated undiscounted future cash flows. When the estimated undiscounted future cash flows are less than the assets carrying amount, the carrying amount is compared to the assets fair value. If the assets fair value is less than the carrying amount an impairment charge is recognized to reduce the assets carrying amount to its fair value. As of December 31, 2017, there were no indicators of impairment identified.

Goodwill

Goodwill is the excess of our purchase cost over the fair value of the net assets of acquired businesses. We do not amortize goodwill, but we assess our goodwill for impairment at least annually. We assess whether a goodwill impairment exists using both qualitative and quantitative assessments. When we elect to perform a qualitative assessment, it involves determining whether events or circumstances exist that indicate it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. If based on this qualitative assessment we determine it is more likely than not that the fair value of a reporting unit is less than its carrying amount, or if we did not elect to perform the qualitative assessment we will perform a quantitative assessment.

A quantitative assessment of goodwill requires a comparison of the estimated fair value of the reporting unit to which the goodwill has been assigned to its carrying value. All goodwill is related to the North America reportable segment, which is comprised of two reporting units. A reporting unit is defined as an operating segment or a component of an operating segment to the extent discrete financial information is available that is reviewed by segment management. If the carrying value of the reporting unit exceeds the fair value, the reporting unit's goodwill is compared to its implied value of goodwill. If the carrying value of the reporting unit's goodwill exceeds the implied value, an impairment charge is recognized to reduce the carrying value to the implied value.

There were no impairment charges recognized related to our evaluation of goodwill for the years ended December 31, 2017, 2016 and 2015.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Business Combinations

We recognize the assets acquired and liabilities assumed in a business combination at fair value including any noncontrolling interest of the acquired entity; recognize any goodwill acquired; establish the acquisition-date fair value based on the highest and best use by market participants for the asset as the measurement objective; and disclose information needed to evaluate and understand the nature and financial effect of the business combination. We expense transaction costs directly associated to the acquisition as incurred; capitalize in-process research and development costs, if any; and record a liability for contingent consideration at the measurement date with subsequent remeasurement recognized in the results of operations. Any costs for business restructuring and exit activities related to the acquired company are included in the post-combination results of operations. Tax adjustments related to previously recorded business combinations, if any, are recognized in the results of operations.

Accumulated Other Comprehensive Income ("AOCI")

The changes in accumulated other comprehensive (loss) income are as follows (in millions):

	Foreign Currency Translation	Pension and Other Postretirement Plan Unrecognized Net Gain	Net Unrealized Loss on Derivatives	Total
Balance at December 31, 2015	\$ (34)	\$ 2	\$ (2)	\$ (34)
Other comprehensive loss before reclassifications	(2)	—	(21)	(23)
Amounts reclassified from accumulated other comprehensive loss	(5)	—	—	(5)
Net current period comprehensive loss	(7)	—	(21)	(28)
Balance at December 31, 2016	\$ (41)	\$ 2	\$ (23)	\$ (62)
Net current period comprehensive income (loss)	17	—	(10)	7
Balance at December 31, 2017	\$ (24)	\$ 2	\$ (33)	\$ (55)

Amounts reclassified from accumulated other comprehensive (loss) income for the year ended December 31, 2016 consisted of foreign currency translation of \$5 million, net of tax benefit of zero, which was reclassified to "Gain on asset sales" in the consolidated statement of operations. For additional information, *Note 4. Dispositions and Assets Held for Sale - China Investments*.

Derivative Instruments

We recognize derivative instruments on the balance sheet at their fair value. We have entered into swap agreements with various financial institutions to hedge our exposure to energy price risk and interest rate risk. Changes in the fair value of the energy derivatives and the interest rate swap are recognized as a component of AOCI. For additional information, see *Note 12. Derivative Instruments*. The portion of Net Unrealized Loss on Derivatives balance in AOCI at December 31, 2017 related to interest rate swaps will be recognized within the anticipated net gain on sale of assets in our first quarter 2018 consolidated statement of operations, resulting from the joint venture transaction with GIG. For additional information see *Note 4. Dispositions and Assets Held for Sale* and *Note 18. Subsequent Events*.

Foreign Currency Translation

For foreign operations, assets and liabilities are translated at year-end exchange rates and revenue and expense are translated at the average exchange rates during the year. Unrealized gains and losses resulting from foreign currency translation are included in the consolidated statements of equity as a component of AOCI. Currency transaction gains and losses are recorded in other operating expense in the consolidated statements of operations.

Defined Contribution Plans

Substantially all of our employees in the United States are eligible to participate in the defined contribution plans we sponsor. The defined contribution plans allow employees to contribute a portion of their compensation on a pre-tax basis in accordance with specified guidelines. We match a percentage of employee contributions up to certain limits. We also provide a company contribution to the defined contribution plans for eligible employees. Our costs related to defined contribution plans were \$18 million, \$17 million and \$16 million for the years ended December 31, 2017, 2016 and 2015, respectively.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Share Repurchases

Under our share repurchase program, common stock repurchases may be made, from time to time, in the open market, in privately negotiated transactions, or by other available methods, at management's discretion and in accordance with applicable federal securities laws. The timing and amounts of any repurchases will depend on many factors, including our capital structure, the market price of our common stock and overall market conditions, and whether any restrictions then exist under our policies relating to trading in compliance with securities laws. Purchase price over par value for share repurchases are allocated to additional paid-in capital up to the weighted average amount per share recorded at the time of initial issuance of our common stock, with any excess recorded as a reduction to retained earnings. For additional information, see *Note 5. Equity and Earnings Per Share ("EPS")*.

Use of Estimates

The preparation of financial statements requires us to make estimates and assumptions that affect the reported amounts of assets or liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expense during the reporting period. Actual results could differ from those estimates. Significant estimates include: useful lives of long-lived assets, asset retirement obligations, construction expense estimates, unbilled service receivables, fair value of financial instruments, fair value of the reporting units for goodwill impairment analysis, fair value of long-lived assets for impairment analysis, renewable energy credits, stock-based compensation, purchase accounting allocations, cash flows and taxable income from future operations, deferred taxes, allowances for uncollectible receivables, and liabilities related to employee medical benefit obligations, workers' compensation, severance and certain litigation.

Reclassifications

As more fully described in *Note 4. Dispositions and Assets Held for Sale*, during the quarter ended December 31, 2017, we determined that the assets and liabilities associated with our Dublin EfW facility met the criteria for classification as assets held for sale. The assets and liabilities associated with these assets are presented in our consolidated balance sheets as current "Assets held for sale" and current "Liabilities held for sale" as of December 31, 2017.

Certain other amounts have been reclassified in our prior period consolidated statement of operations and consolidated balance sheet to conform to current year presentation and such amounts were not material to current and prior periods.

Accounting Pronouncements Recently Adopted

In March 2016, the Financial Accounting Standards Board ("FASB") issued accounting standards update ("ASU") 2016-09 Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting to simplify the accounting for employee share-based payments, including income tax impacts, classification on the statement of cash flows, and forfeitures. We adopted this guidance effective January 1, 2017. The new guidance requires excess tax benefits to be recognized in the statement of operations rather than in additional paid-in capital on the balance sheet. As a result of applying this change prospectively, we recognized \$1 million of tax expense in our provision for income taxes during the year ended December 31, 2017. In addition, adoption of the new guidance resulted in a \$11 million decrease to Accumulated deficit as of January 1, 2017 to recognize the cumulative effect of deferred income taxes for U.S. Federal net operating loss and other carryforwards attributable to excess tax benefits. Excess tax benefits were not recognized for financial reporting purposes in the prior periods. We prospectively applied the guidance which requires presentation of excess tax benefits as an operating activity on the statement of cash flows rather than as a financing activity. Cash paid on employees' behalf related to shares withheld for tax purposes was retrospectively applied and required reclassifying \$4 million and \$5 million from "Net cash provided by operating activities" to "Net cash provided by financing activities" on our consolidated statement of cash flows as of December 31, 2016 and 2015, respectively. We have elected to account for forfeitures as they occur, rather than to estimate them; adoption of this accounting policy election resulted in a \$1 million increase to Accumulated deficit as of January 1, 2017 to recognize the cumulative-effect of removing the forfeiture estimate.

In the fourth quarter of 2017, we made a correction to the cumulative effect adjustment as of January 1, 2017, which is referred to in the paragraph above, of \$2 million to account for certain amendments relating to prior years' net operating losses attributable to excess tax benefits. We do not believe that this adjustment is material to our financial statements and had no impact for any periods prior to the year ended December 31, 2017.

In January 2017, the FASB issued ASU 2017-01—Business Combinations (Topic 805): Clarifying the Definition of a Business, which updated guidance regarding business combinations, specifically on clarifying the definition of a business and provided a screen to determine whether or not an integrated set of assets and activities constitutes a business. We are required to adopt the updates in this standard in the first quarter of 2018. The standard must be applied prospectively on or after the effective date, and no disclosures for a change in accounting principle are required at transition. Early adoption is permitted for transactions (i.e., acquisitions or dispositions) that occurred before the issuance date or effective date of the standard if the transactions were not reported in financial statements that have been issued or made available for issuance. We early adopted this guidance as of January 1, 2017. The adoption of this guidance did not have a material impact on our consolidated financial statements.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

NOTE 2. RECENT ACCOUNTING PRONOUNCEMENTS

The following table summarizes recent Accounting Standards Updates ("ASU's") issued by the Financial Accounting Standards Board ("FASB") that could have an impact on our consolidated financial statements.

Standard	Description	Effective Date	Effect on the financial statements or other significant matters
ASU 2017-12 Derivatives and Hedging (Topic 815)	The amendments expand an entity's ability to apply hedge accounting for nonfinancial and financial risk components and allow for a simplified approach for fair value hedging of interest rate risk. The guidance eliminates the need to separately measure and report hedge ineffectiveness and generally requires the entire change in fair value of a hedging instrument to be presented in the same income statement line as the hedged item. Additionally, ASU 2017-12 simplifies the hedge documentation and effectiveness assessment requirements under the previous guidance. For cash flow and net investment hedges existing at the date of adoption, a cumulative-effect adjustment related to eliminating the separate measurement of ineffectiveness to accumulated other comprehensive income with a corresponding adjustment to the opening balance of retained earnings is required as of the beginning of the year of adoption. The amended presentation and disclosure guidance is required only prospectively.	First quarter of 2019, early adoption is permitted.	We are currently evaluating the impact this guidance will have on our consolidated financial statements and related disclosures.
ASU 2017-10 Service Concession Arrangements (Topic 853): Determining the Customer of the Operation Services (a consensus of the FASB Emerging Issues Task Force)	The guidance provides clarity on determining the customer in a service concession arrangement.	First quarter of 2018, early adoption is permitted.	This guidance is not expected to have a material impact on our consolidated financial statements.
ASU 2017-09 Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting	Provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. The amendments in this update should be applied prospectively to an award modified on or after the adoption date.	First quarter of 2018, early adoption is permitted.	This guidance is not expected to have a material impact on our consolidated financial statements.
ASU 2017-05, Other Income: Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sales of Nonfinancial Assets	The ASU provides guidance for recognizing gains and losses from the transfer of nonfinancial assets in contracts with noncustomers. Specifically, the ASU clarifies the scope of an "in substance nonfinancial asset", clarifies the treatment of partial sales of nonfinancial assets and clarifies guidance on accounting for contributions of nonfinancial assets to joint ventures and equity method investees. The ASU may be applied by either a full or modified retrospective approach.	First quarter of 2018, early adoption is permitted.	This guidance is not expected to have a material impact on our consolidated financial statements.
ASU 2017-04 Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment	The standard updated guidance to eliminate the requirement to calculate the implied fair value of goodwill to measure a goodwill impairment charge (referred to as Step 2). As a result, an impairment charge will equal the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the amount of goodwill allocated to the reporting unit. An entity still has the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary. The amendment should be applied on a prospective basis.	First quarter of 2020, early adoption is permitted.	The impact of this guidance for the Company will depend on the outcomes of future goodwill impairment tests.
ASU 2017-03 Accounting Changes and Error Corrections (Topic 250) and Investments-Equity Method and Joint Ventures (Topic 323)	The portion of this ASU related to Topic 250 states that when a registrant does not know or cannot reasonably estimate the impact that future adoption of certain new accounting standards are expected to have on the financial statements, then in addition to making a statement to that effect, that registrant should consider additional qualitative financial statement disclosures addressing the significance of the impact the standard will have on the financial statements when adopted.	Effective upon issuance	We have included such disclosures for ASU 2014-09 and ASU 2018-01 but not for ASU 2016-02 since we have not yet performed sufficient analysis on future effects upon implementation of the new standards. We have concluded that the portion of this ASU related to Topic 323 is not applicable and, therefore, does not have a material impact on our consolidated financial statements.
ASU 2016-18 Statement of Cash Flows (Topic 230): Restricted Cash	The standard requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. The standard requires a retrospective adoption method.	First quarter of 2018, early adoption is permitted.	Adoption of this guidance will eliminate the disclosure of "Change in restricted funds held in trust", which we currently include in "Net cash provided by operating activities" and "Net cash provided by financing activities" on our consolidated statement of cash flows.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Standard	Description	Effective Date	Effect on the financial statements or other significant matters
ASU 2016-16 Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory	The standard requires comprehensive recognition of current and deferred income taxes on intra-entity asset transfers other than inventory, which was previously prohibited. The guidance now requires us to recognize the tax expense from the intra-entity transfer of an asset when the transfer occurs, even though the pre-tax effects of that transaction are eliminated in consolidation. The standard requires a modified retrospective basis adoption through a cumulative-effect adjustment to retained earnings as of the beginning of the period of adoption.	First quarter of 2018, early adoption is permitted.	This guidance is not expected to have a material impact on our consolidated financial statements.
ASU 2016-15 Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments	The standard updated guidance on eight specific cash flow issues with regard to how cash receipts and cash payments are presented and classified in the statement of cash flows in order to clarify existing guidance and reduce diversity in practice. The standard requires a retrospective basis, unless it is impracticable to apply, in which case it should be applied prospectively as of the earliest date practicable.	First quarter of 2018, early adoption is permitted.	This guidance is not expected to have a material impact on our consolidated financial statements.
ASU 2016-13 Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments	The standard amends guidance on the impairment of financial instruments. The ASU estimates credit losses based on expected losses and provides for a simplified accounting model for purchased financial assets with credit deterioration. The standard requires a modified retrospective basis adoption through a cumulative-effect adjustment to retained earnings as of the beginning of the period of adoption.	First quarter of 2020, early adoption is permitted.	We are currently evaluating the impact this guidance will have on our consolidated financial statements.
ASU 2016-02 Leases (Topic 842) as amended by ASU 2018-01	These standards amended guidance for lease arrangements in order to increase transparency and comparability by providing additional information to users of financial statements regarding an entity's leasing activities. The revised guidance seeks to achieve this objective by requiring reporting entities to recognize lease assets and lease liabilities on the balance sheet for substantially all lease arrangements. The standard requires a modified retrospective basis adoption. The amendment permits an entity to elect an optional transition practical expedient to not evaluate land easements that exist or expired before the entity's adoption of Topic 842 and that were not previously accounted for as leases under Topic 840.	First quarter of 2019, early adoption is permitted.	We are currently evaluating the guidance and its impact on our consolidated financial statements, but expect that it will result in a significant increase to our long-term assets and liabilities. We are also analyzing the impact of the new standard on our current accounting policies and internal controls.
ASU 2016-01 Financial Instruments—Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities	The standard requires equity investments not accounted for as an equity method investment or that result in consolidation to be recorded at their fair value with changes in fair value recognized in our consolidated statements of operations. Those equity investments that do not have a readily determinable fair value may be measured at cost less impairment, if any, plus or minus changes resulting from observable price changes. The standard requires a cumulative-effect adjustment to the balance sheet as of the beginning of the year of adoption. The amendments related to equity securities without readily determinable fair values should be applied prospectively.	First quarter of 2018, early adoption is prohibited.	This guidance is not expected to have a material impact on our consolidated financial statements.
ASU 2014-09 Revenue from Contracts with Customers	The standard is based on the principle that revenue is recognized in an amount expected to be collected and to which the entity expects to be entitled in exchange for the transfer of goods or services. In addition, the standard requires disclosure of the nature, amount, timing, and certainty of revenue arising from contracts with customers. In August 2015, the FASB deferred the effective date by one year to January 1, 2018. The standard can be adopted using either a full retrospective or modified retrospective approach as of the date of adoption.	First quarter of 2018, early adoption is permitted.	We will adopt the standard using a modified retrospective approach, on January 1, 2018, which will result in an immaterial cumulative effect adjustment to the opening balance of retained earnings. Our implementation approach included performing a detailed review of key contracts representative of the services that we provide and assessing the conformance of historical accounting policies and practices with the standard. Adoption of the standard will not have a material effect on our consolidated financial statements.

NOTE 3. NEW BUSINESS AND ASSET MANAGEMENT

The acquisitions in the section below are not material to our consolidated financial statements individually or in the aggregate and therefore, disclosures of pro forma financial information have not been presented. The results of operations reflect the period of ownership of the acquired businesses, business development projects and dispositions.

Environmental Services Acquisitions

During 2017, we acquired three environmental services businesses (one of which was accounted for as an asset purchase), in separate transactions, for approximately \$17 million. During 2016, we acquired two environmental services business, in separate transactions, for a total of \$9 million. During 2015, we acquired four environmental services businesses (one of which was accounted for as an asset purchase), in separate transactions, for a total of \$69 million.

These acquisitions expanded our Covanta Environmental Solutions capabilities and client service offerings, and allow us to direct additional non-hazardous profiled waste volumes into our EfW facilities, and therefore are highly synergistic with our existing business.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Dublin EfW Facility

During 2017, we completed construction of the Dublin EfW facility, a 600,000 metric ton-per-year, 58 megawatt facility in Dublin, Ireland. Operational commencement began in October 2017. For additional information see *Green Investment Group Limited ("GIG") Joint Venture* discussion below.

Green Investment Group Limited ("GIG") Joint Venture

In December 2017, we entered into a strategic partnership with Green Investment Group Limited ("GIG"), a subsidiary of Macquarie Group Limited, to develop, fund and own EfW projects in the U.K. and Ireland. This partnership is structured as a 50/50 joint venture ("JV") between Covanta and GIG and creates a platform to develop waste infrastructure projects and pursue new opportunities for EfW project development or acquisitions. As an initial step, GIG invested in our Dublin EfW facility, which began commercial operations in October 2017, acquiring 50% ownership through the JV for €136 million, while we retained a 50% equity interest in the project and retained our role as operations and maintenance ("O&M") service provider. GIG's investment in the Dublin EfW project closed on February 12, 2018, and we used proceeds from the transaction to repay borrowings under our Revolving Credit Facility. As development projects in the the JV's pipeline reach financial close and move into the construction phase, the JV will acquire the available ownership in each project, with a premium payable to the partner that originally developed and contributed the project to the JV. We will serve as the preferred O&M service provider for all JV projects on market competitive terms. For additional information see *Note 4. Dispositions and Assets Held for Sale* and *Note 18. Subsequent Events*.

New York City Waste Transport and Disposal Contract

In 2013, New York City's Department of Sanitation awarded us a contract to handle waste transport and disposal from two marine transfer stations located in Queens and Manhattan. We are utilizing capacity at existing facilities for the disposal of an estimated 800,000 tons per year of municipal solid waste. Service for the Queens marine transfer station began in early 2015, with service for the Manhattan marine transfer station expected to follow pending notice to proceed to be issued by New York City, which is anticipated in 2018. The contract is for 20 years, effective from the commencement of operations at the Queens marine transfer station in March 2015, with options for New York City to extend the term for two additional five-year periods, and requires waste to be transported using a multi-modal approach. We have acquired equipment, including barges, railcars, containers, and intermodal equipment to support this contract. We expect that our total initial investment will be approximately \$150 million, including the cost to acquire equipment of approximately \$114 million and approximately \$36 million of enhancements to existing facilities that will be part of the network of assets supporting this contract. During the years ended December 31, 2017, 2016 and 2015, we invested \$0, \$3 million and \$31 million, respectively, in property, plant and equipment relating to this contract. Since 2013, we have invested a total of \$115 million in property, plant and equipment relating to this contract.

NOTE 4. DISPOSITIONS AND ASSETS HELD FOR SALE

Dublin EfW Project

In December 2017, as part of the joint venture transaction with GIG, we announced a plan to sell a 50% indirect interest in our Dublin project in exchange for €136 million. For additional information see *Note 3. Business Development and Asset Management - Green Investment Group Limited ("GIG") Joint Venture* and *Note 18. Subsequent Events - GIG Joint Venture*. Accordingly, during the fourth quarter of 2017, we determined that the assets and liabilities associated with our Dublin EfW facility met the criteria for classification as assets held for sale, but did not meet the criteria for classification as discontinued operations. The assets and liabilities associated with our Dublin facility are presented in our consolidated balance sheets as current "Assets held for sale" and current "Liabilities held for sale."

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The following table sets forth the assets and liabilities of the "Assets held for sale" included in our consolidated balance sheets as of December 31, 2017 (in millions):

Restricted funds held in trust	\$ 77
Receivables	10
Property, plant and equipment, net	563
Other assets	3
Assets held for sale	<u>\$ 653</u>
Accounts payable	1
Accrued expenses and other liabilities	22
Project debt ⁽¹⁾	510
Deferred income tax	7
Liabilities held for sale	<u>\$ 540</u>

(1) See Note 10. Consolidated Debt - Dublin Project Refinancing for further information.

China Investments

Prior to 2016, our interests in China included an 85% ownership of an EfW facility located in Jiangsu Province ("Taixing"), a 49% equity interest in an EfW facility located in Sichuan Province and a 40% equity interest in Chongqing Sanfeng Covanta Environmental Industry Co., a company located in the Chongqing Municipality that is engaged in the business of providing design and engineering, procurement, construction services and equipment sales for EfW facilities in China, as well as operating services for EfW facilities.

During 2016, we completed the exchange of our ownership interests in China for a 15% ownership interest in Chongqing Sanfeng Covanta Environmental Industrial Group, Co., Ltd ("Sanfeng Environment") and subsequently sold approximately 90% of the aforementioned ownership interest in Sanfeng Environment to a third-party, a subsidiary of CITIC Limited ("CITIC"), a leading Chinese industrial conglomerate and investment company, pursuant to agreements entered into in July 2015. As a result, during the year ended December 31, 2016, we recorded a pre-tax gain of \$41 million. We received pre-tax proceeds of \$105 million. The gain resulted from the excess of pre-tax proceeds over the cost-method book value of \$70 million, plus \$5 million of realized gains on the related cumulative foreign currency translation adjustment, that were reclassified out of other comprehensive income.

In 2016, in connection with these transactions, we entered into foreign currency exchange collars and forwards to hedge against rate fluctuations that impacted the cash proceeds in U.S. dollar terms. For more information, see Note 12. Derivative Instruments.

Subsequent to completing the exchange, Sanfeng Environment made certain claims for indemnification under the agreement related to the condition of the facility in Taixing. During the year ended December 31, 2017, we recorded a \$6 million charge related to these claims, which is included in "Loss on asset sales" on our consolidated statement of operations.

In September 2017, we entered into an agreement with CITIC to sell our remaining investment in Sanfeng Environment and on February 9, 2018, the transaction was completed, for further information see Note 18. Subsequent Events - Sanfeng Environment sale to CITIC. As such, our cost-method investment of \$6 million is included as a component of "Prepaid expenses and other current assets" in our consolidated balance sheet as of December 31, 2017. There were no impairment indicators related to our cost-method investment during the year ended December 31, 2017.

NOTE 5. EQUITY AND EARNINGS PER SHARE ("EPS")

Equity

In May 2014, the stockholders of the Company approved the Covanta Holding Corporation 2014 Equity Award Plan. For additional information, see Note 15. Stock-Based Award Plans.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

During the years ended December 31, 2017, 2016 and 2015 common shares repurchased and dividends declared were as follows (in millions, except per share amounts):

	Year Ended December 31,		
	2017	2016	2015
Total repurchases	\$ —	\$ 18	\$ 32
Shares repurchased	—	1.2	2.1
Weighted average cost per share	\$ —	\$ 15.29	\$ 15.33
Dividends declared	\$ 132	\$ 132	\$ 133
Per share	\$ 1.00	\$ 1.00	\$ 1.00

As of December 31, 2017, there were 136 million shares of common stock issued of which 131 million shares were outstanding; the remaining 5 million shares of common stock issued but not outstanding were held as treasury stock. As of December 31, 2017, there were 4 million shares of common stock available for future issuance under equity plans.

As of December 31, 2017, there were 10 million shares of preferred stock authorized, with none issued or outstanding. The preferred stock may be divided into a number of series as defined by our Board of Directors. The Board of Directors is authorized to fix the rights, powers, preferences, privileges and restrictions granted to and imposed upon the preferred stock upon issuance.

Earnings Per Share

We calculate basic earnings per share ("EPS") using net earnings for the period and the weighted average number of outstanding shares of our common stock, par value \$0.10 per share, during the period. Basic weighted average shares outstanding have decreased due to share repurchases. Diluted earnings per share computations, as calculated under the treasury stock method, include the weighted average number of shares of additional outstanding common stock issuable for stock options, restricted stock awards and restricted stock units whether or not currently exercisable. Diluted earnings per share does not include securities if their effect was anti-dilutive. Basic and diluted weighted average shares outstanding were as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
Basic weighted average common shares outstanding	130	129	132
Dilutive effect of restricted stock and restricted stock units ⁽¹⁾	1	—	1
Diluted weighted average common shares outstanding	131	129	133

⁽¹⁾Excludes the following securities because their inclusion would have been anti-dilutive (in millions):

	Year Ended December 31,		
	2017	2016	2015
Stock options	—	1	1
Restricted stock	—	1	1
Restricted stock units	—	1	—

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

NOTE 6. FINANCIAL INFORMATION BY BUSINESS SEGMENTS

We have one reportable segment, North America, which is comprised of waste and energy services operations located primarily in the United States and Canada. The results of our reportable segment are as follows (in millions):

	<u>North America</u>	<u>All Other ⁽¹⁾</u>	<u>Total</u>
Year Ended December 31, 2017			
Operating revenue	\$ 1,721	\$ 31	\$ 1,752
Depreciation and amortization expense	\$ 209	\$ 6	\$ 215
Impairment charges	\$ 2	\$ —	\$ 2
Operating income	\$ 95	\$ 6	\$ 101
Equity in net income from unconsolidated investments	\$ 1	\$ —	\$ 1
As of December 31, 2017			
Total assets	\$ 3,753	\$ 688	\$ 4,441
Capital additions	\$ 155	\$ 122	\$ 277
Year Ended December 31, 2016			
Operating revenue	\$ 1,692	\$ 7	\$ 1,699
Depreciation and amortization expense	\$ 207	\$ —	\$ 207
Impairment charges	\$ 20	\$ —	\$ 20
Operating income (loss)	\$ 116	\$ (7)	\$ 109
Equity in net income from unconsolidated investments	\$ 1	\$ 3	\$ 4
As of December 31, 2016			
Total assets	\$ 3,794	\$ 490	\$ 4,284
Capital additions	\$ 188	\$ 171	\$ 359
Year Ended December 31, 2015			
Operating revenue	\$ 1,607	\$ 38	\$ 1,645
Depreciation and amortization expense	\$ 197	\$ 1	\$ 198
Impairment charges	\$ 43	\$ —	\$ 43
Operating income	\$ 108	\$ 1	\$ 109
Equity in net income from unconsolidated investments	\$ —	\$ 13	\$ 13

(1) All other includes the financial results of our international assets.

Our operations are principally located in the United States. See the list of projects for the North America segment in *Item 1. Business*. A summary of operating revenue and total assets by geographic area is as follows (in millions):

	<u>United States</u>	<u>Other</u>	<u>Total</u>	
Operating Revenue:				
Year Ended December 31, 2017	\$ 1,705	\$ 47	\$ 1,752	
Year Ended December 31, 2016	\$ 1,677	\$ 22	\$ 1,699	
Year Ended December 31, 2015	\$ 1,589	\$ 56	\$ 1,645	
Total Assets:				
	<u>United States</u>	<u>Assets Held for Sale</u>	<u>Other</u>	<u>Total</u>
Year Ended December 31, 2017	\$ 3,727	\$ 653	\$ 61	\$ 4,441
Year Ended December 31, 2016	\$ 3,763	\$ —	\$ 521	\$ 4,284
Year Ended December 31, 2015	\$ 3,847	\$ 97	\$ 290	\$ 4,234

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

NOTE 7. AMORTIZATION OF WASTE, SERVICE AND ENERGY CONTRACTS

Waste, Service and Energy Contracts

Our waste, service and energy contracts are intangible assets and liabilities relating to long-term operating contracts at acquired facilities and are recorded upon acquisition at their estimated fair market values based upon discounted cash flows. Intangible assets and liabilities are amortized using the straight line method over their useful lives. Waste and service contract liabilities, net are included as a component of "Other liabilities" on our consolidated balance sheet. Waste, service and energy contracts consisted of the following (in millions):

	Remaining Weighted Average Useful Life	As of December 31, 2017			As of December 31, 2016		
		Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Waste, service and energy contracts (asset)	21 years	\$ 494	\$ 243	\$ 251	\$ 526	\$ 263	\$ 263
Waste and service contracts (liability)	3 years	\$ (66)	\$ (62)	\$ (4)	\$ (131)	\$ (124)	\$ (7)

The following table details the amount of the actual/estimated amortization expense and contra-expense associated with these intangible assets and liabilities as of December 31, 2017 included or expected to be included in our consolidated statements of operations for each of the years indicated (in millions):

	Waste, Service and Energy Contracts (Amortization Expense)	Waste and Service Contracts (Contra-Expense)
Year Ended December 31, 2015	\$ 25	\$ (6)
Year Ended December 31, 2016	\$ 21	\$ (6)
Year Ended December 31, 2017	\$ 14	\$ (2)
2018	\$ 13	\$ (2)
2019	13	(2)
2020	13	—
2021	13	—
2022	13	—
Thereafter	186	—
Total	\$ 251	\$ (4)

The weighted average number of years prior to the next renewal period for contracts that we have an intangible recorded is 5 years.

NOTE 8. OTHER INTANGIBLE ASSETS AND GOODWILL

Other Intangible Assets

Other intangible assets consisted of the following (in millions):

	Remaining Weighted Average Useful Life	As of December 31, 2017			As of December 31, 2016		
		Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Customer relationships and other	7 years	\$ 50	\$ 18	\$ 32	\$ 43	\$ 13	\$ 30
Permits	Indefinite	4	—	4	4	—	4
Other intangible assets,		\$ 54	\$ 18	\$ 36	\$ 47	\$ 13	\$ 34

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The following table details the amount of the estimated amortization expense associated with other intangible assets as of December 31, 2017 expected to be included in our consolidated statements of operations for each of the years indicated (in millions):

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>Thereafter</u>	<u>Total</u>
Annual remaining amortization	\$ 6	\$ 6	\$ 5	\$ 4	\$ 4	\$ 7	\$ 32

Amortization expense related to other intangible assets was \$6 million, \$6 million and \$2 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Goodwill

Goodwill represents the total consideration paid in excess of the fair value of the net tangible and identifiable intangible assets acquired and the liabilities assumed in acquisitions. Goodwill has an indefinite life and is not amortized but is reviewed for impairment under the provisions of accounting standards for goodwill. All goodwill is related to the North America reporting segment, which is comprised of two reporting units. We performed the required annual impairment review of our recorded goodwill for our reporting units as of October 1, 2017 and determined that the fair value of our reporting units was not less than their relative carrying values. As of December 31, 2017, goodwill of approximately \$50 million was deductible for federal income tax purposes.

The following table details the changes in carrying value of goodwill (in millions):

	<u>Total</u>
Balance at December 31, 2015	\$ 301
Goodwill related to acquisitions	1
Balance at December 31, 2016	302
Goodwill related to acquisitions	11
Balance at December 31, 2017	<u>\$ 313</u>

NOTE 9. OPERATING LEASES

Leases are primarily operating leases for leaseholds on EfW facilities, as well as for trucks and automobiles, office space and machinery and equipment. Some of these operating leases have renewal options. Expense under operating leases was \$22 million, \$19 million, and \$16 million, for the years ended December 31, 2017, 2016 and 2015, respectively.

The following is a schedule, by year, of future minimum rental payments required under operating leases that have initial or remaining non-cancelable lease terms in excess of one year as of December 31, 2017 (in millions):

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>Thereafter</u>	<u>Total</u>
Future minimum rental payments	\$ 9	\$ 9	\$ 8	\$ 7	\$ 7	\$ 31	\$ 71

COVANTA HOLDING CORPORATION AND SUBSIDIARIES

NOTE 10. CONSOLIDATED DEBT

Consolidated debt is as follows (in millions):

	December 31, 2017	December 31, 2016
LONG-TERM DEBT:		
Revolving credit facility (3.58% - 3.83%)	\$ 445	\$ 343
Term loan, net (3.12%)	191	195
<i>Credit Facilities Sub-total</i>	<u>\$ 636</u>	<u>\$ 538</u>
7.25% Senior notes due 2020	\$ —	\$ 400
6.375% Senior notes due 2022	400	400
5.875% Senior notes due 2024	400	400
5.875% Senior notes due 2025	400	—
Less: deferred financing costs related to senior notes	(15)	(14)
<i>Senior Notes Sub-total</i>	<u>\$ 1,185</u>	<u>\$ 1,186</u>
4.00% - 5.25% Tax-exempt bonds due 2024 through 2045	\$ 464	\$ 464
Less: deferred financing costs related to tax-exempt bonds	(5)	(5)
<i>Tax-Exempt Bonds Sub-total</i>	<u>\$ 459</u>	<u>\$ 459</u>
3.48% - 6.61% Equipment financing capital leases due 2024 through 2028	69	69
Total long-term debt	<u>\$ 2,349</u>	<u>\$ 2,252</u>
Less: current portion	(10)	(9)
Noncurrent long-term debt	<u>\$ 2,339</u>	<u>\$ 2,243</u>
PROJECT DEBT:		
North America project debt:		
4.00% - 5.00% project debt related to service fee structures due 2018 through 2035	\$ 68	\$ 78
5.00% Union capital lease due 2018 through 2053	94	99
5.25% - 6.20% project debt related to tip fee structures due 2018 through 2020	9	16
Unamortized debt premium, net	4	4
Less: deferred financing costs related to North America project debt	(1)	(1)
Total North America project debt	<u>\$ 174</u>	<u>\$ 196</u>
Other project debt:		
Dublin senior loan due 2021 (5.72% - 6.41%) ^{(1) (a)}	\$ —	\$ 155
Less: debt discount related to Dublin senior loan ^(a)	—	(6)
Less: deferred financing cost related to Dublin senior loan ^(a)	—	(18)
Dublin senior loan, net ^(a)	<u>\$ —</u>	<u>\$ 131</u>
Dublin junior loan due 2022 (9.23% - 9.73%) ^(a)	\$ —	\$ 58
Less: debt discount related to Dublin junior loan ^(a)	—	(1)
Less: deferred financing costs related to Dublin junior loan ^(a)	—	(1)
Dublin junior loan, net	<u>\$ —</u>	<u>\$ 56</u>
Total other project debt, net	<u>\$ —</u>	<u>\$ 187</u>
Total project debt	<u>\$ 174</u>	<u>\$ 383</u>
Less: Current portion	(23)	(22)
Noncurrent project debt	<u>\$ 151</u>	<u>\$ 361</u>
TOTAL CONSOLIDATED DEBT	<u>\$ 2,523</u>	<u>\$ 2,635</u>
Less: Current debt	(33)	(31)
TOTAL NONCURRENT CONSOLIDATED DEBT	<u>\$ 2,490</u>	<u>\$ 2,604</u>

⁽¹⁾ Reflects hedged fixed rates.

(a) During the fourth quarter of 2017 the Dublin project debt was repaid as part of a refinancing. As of December 31, 2017 the refinanced debt was classified as "Liabilities held for sale" on our consolidated balance sheet. For further information see *Note 4. Dispositions and Assets Held for Sale*, *Note 10. Consolidated Debt- Dublin Project Refinancing* and *Note 18. Subsequent Events*.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES

Credit Facilities

Our subsidiary, Covanta Energy, has \$1.2 billion in senior secured credit facilities consisting of a \$1.0 billion revolving credit facility expiring 2019 through 2020 (the “Revolving Credit Facility”) and a \$191 million term loan due 2020 (the “Term Loan”) (collectively referred to as the “Credit Facilities”).

The Revolving Credit Facility is available for the issuance of letters of credit of up to \$600 million, provides for a \$50 million sub-limit for the issuance of swing line loans (a loan that can be requested in U.S. Dollars on a same day basis for a short drawing period); and is available in U.S. Dollars, Euros, Pounds Sterling, Canadian Dollars and certain other currencies to be agreed upon, in each case for either borrowings or for the issuance of letters of credit. The proceeds under the Revolving Credit Facility are available for working capital and general corporate purposes of Covanta Energy and its subsidiaries.

We have the option to establish additional term loan commitments and/or increase the size of the Revolving Credit Facility (collectively, the “Incremental Facilities”), subject to the satisfaction of certain conditions and obtaining sufficient lender commitments, in an amount up to the greater of \$500 million and the amount that, after giving effect to the incurrence of such Incremental Facilities, would not result in a leverage ratio, as defined in the credit agreement governing our Credit Facilities (the “Credit Agreement”), exceeding 2.75:1.00.

Unutilized Capacity under Revolving Credit Facility

As of December 31, 2017, we had unutilized capacity under the Revolving Credit Facility as follows (in millions):

	<u>Total Facility Commitment</u>	<u>Expiring ⁽¹⁾</u>	<u>Direct Borrowings</u>	<u>Outstanding Letters of Credit</u>	<u>Unutilized Capacity</u>
Revolving Credit Facility	\$ 1,000	2020	\$ 445	\$ 192	\$ 363

(1) The Tranche B commitment of \$50 million expires in March 2019.

During the year ended December 31, 2017, we made aggregate cumulative direct borrowings of \$952 million under the Revolving Credit Facility, and repaid \$850 million prior to the end of the year.

Repayment Terms

As of December 31, 2017, the Term Loan has mandatory principal payments of approximately \$5 million in each year for 2018 and 2019 and \$181 million in 2020. The Credit Facilities are pre-payable at our option at any time.

Interest and Fees

Borrowings under the Credit Facilities bear interest, at our option, at either a base rate or a Eurodollar rate plus an applicable margin determined by a pricing grid based on Covanta Energy’s leverage ratio. Base rate is defined as the higher of (i) the Federal Funds Effective Rate plus 0.50%, (ii) the rate the administrative agent announces from time to time as its per annum “prime rate” or (iii) the London Interbank Offered Rate (“LIBOR”), or a comparable or successor rate, plus 1.00%. Base rate borrowings under the Revolving Credit Facility bear interest at the base rate plus an applicable margin ranging from 0.75% to 1.75%. Eurodollar borrowings under the Revolving Credit Facility bear interest at LIBOR plus an applicable margin ranging from 1.75% to 2.75%. Fees for issuances of letters of credit include fronting fees equal to 0.15% per annum and a participation fee for the lenders equal to the applicable interest margin for LIBOR rate borrowings. We will incur an unused commitment fee ranging from 0.30% to 0.50% on the unused amount of commitments under the Revolving Credit Facility.

Base rate borrowings under the Term Loan bear interest at the base rate plus an applicable margin ranging from 0.75% to 1.00%. Eurodollar borrowings under the Term Loan bear interest at LIBOR plus an applicable margin ranging from 1.75% to 2.00%.

Guarantees and Securitization

The Credit Facilities are guaranteed by us and by certain of our subsidiaries. The subsidiaries that are party to the Credit Facilities agreed to secure all of the obligations under the Credit Facilities by granting, for the benefit of secured parties, a first priority lien on substantially all of their assets, to the extent permitted by existing contractual obligations. The Credit Facilities are also secured by a pledge of substantially all of the capital stock of each of our domestic subsidiaries and 65% of substantially all the capital stock of each of our directly-owned foreign subsidiaries, in each case to the extent not otherwise pledged.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES

Credit Agreement Covenants

The loan documentation governing the Credit Facilities contains various affirmative and negative covenants, as well as financial maintenance covenants, that limit our ability to engage in certain types of transactions. We were in compliance with all of the affirmative and negative covenants under the Credit Facilities as of December 31, 2017.

The negative covenants of the Credit Facilities limit our and our restricted subsidiaries' ability to, among other things:

- incur additional indebtedness (including guarantee obligations);
- create certain liens against or security interests over certain property;
- pay dividends on, redeem, or repurchase our capital stock or make other restricted junior payments;
- enter into agreements that restrict the ability of our subsidiaries to make distributions or other payments to us;
- make investments;
- consolidate, merge or transfer all or substantially all of our assets and the assets of our subsidiaries on a consolidated basis;
- dispose of certain assets; and
- make certain acquisitions.

The financial maintenance covenants of the Credit Facilities, which are measured on a trailing four quarter period basis, include the following:

- a maximum Leverage Ratio of 4.00 to 1.00 for the trailing four quarter period, which measures the principal amount of Covanta Energy's consolidated debt less certain restricted funds dedicated to repayment of project debt principal and construction costs ("Consolidated Adjusted Debt") to its adjusted earnings before interest, taxes, depreciation and amortization, as calculated in the Credit Agreement ("Credit Agreement Adjusted EBITDA"). The definition of Credit Agreement Adjusted EBITDA in the Credit Facilities excludes certain non-recurring and non-cash charges.
- a minimum Interest Coverage Ratio of 3.00 to 1.00, which measures Covanta Energy's Credit Agreement Adjusted EBITDA to its consolidated interest expense plus certain interest expense of ours, to the extent paid by Covanta Energy as calculated in the Credit Agreement.

Senior Notes and Debentures

Redemption of 7.25% Senior Notes due 2020 (7.25% Senior Notes)

In 2010 we sold \$400 million aggregate principal amounts of 7.25% Senior Notes due 2020. On April 3, 2017, we redeemed our 7.25% Senior Notes due 2020 using the net proceeds from the issuance of the 5.875% Senior Notes due 2025 and borrowings under our Revolving Credit Facility. During the year ended December 31, 2017, as a result of the redemption, we recorded a prepayment charge of \$9 million and a write-off of the remaining deferred financing costs of \$4 million recognized in our consolidated statements of operations as a "Loss on extinguishment of debt."

6.375% Senior Notes due 2022 (the "6.375% Notes")

In March 2012, we sold \$400 million aggregate principal amount of 6.375% Senior Notes due 2022. Interest on the 6.375% Notes is payable semi-annually on April 1 and October 1 of each year, commencing on October 1, 2012, and the 6.375% Notes will mature on October 1, 2022 unless earlier redeemed or repurchased. Net proceeds from the sale of the 6.375% Notes were \$392 million, consisting of gross proceeds of \$400 million net of \$8 million in offering expenses. We used a portion of the net proceeds of the 6.375% Notes offering to repay a portion of the amounts outstanding under Covanta Energy's previously existing term loan.

At our option, the 6.375% Notes were subject to redemption at any time on or after April 1, 2017, in whole or in part, at the redemption prices set forth in the indenture, together with accrued and unpaid interest, if any, to the date of redemption. In addition, at any time prior to April 1, 2017, some or all of the 6.375% Notes were redeemable at a price equal to 100% of their principal amount, plus accrued and unpaid interest, plus a "make-whole premium".

The 6.375% Notes are senior unsecured obligations, ranking equally in right of payment with any of the future senior unsecured indebtedness of Covanta Holding Corporation. The 6.375% Notes are effectively junior to our existing and future secured indebtedness, including any guarantee of indebtedness under the Credit Facilities. The 6.375% Notes are not guaranteed by any of our subsidiaries and are effectively subordinated to all existing and future indebtedness and other liabilities of our subsidiaries.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The indenture for the 6.375% Notes may limit our ability and the ability of certain of our subsidiaries to:

- incur additional indebtedness;
- pay dividends or make other distributions or repurchase or redeem their capital stock;
- prepay, redeem or repurchase certain debt;
- make loans and investments;
- sell restricted assets;
- incur liens;
- enter into transactions with affiliates;
- alter the businesses they conduct;
- enter into agreements restricting our subsidiaries' ability to pay dividends; and
- consolidate, merge or sell all or substantially all of their assets.

If and for so long as the 6.375% Notes have an investment grade rating and no default under the indenture has occurred, certain of the covenants will be suspended.

If we sell certain of our assets or experience specific kinds of changes in control, we must offer to purchase the 6.375% Notes. The occurrence of specific kinds of changes in control will be a triggering event requiring us to offer to purchase from the holders all or a portion of the 6.375% Notes at a price equal to 101% of their principal amount, plus accrued and unpaid interest. In addition, certain asset dispositions will be triggering events that may require us to use the proceeds from those asset dispositions to make an offer to purchase the 6.375% Notes at 100% of their principal amount, together with accrued and unpaid interest, if any, to the date of purchase if such proceeds are not otherwise used within 365 days to repay indebtedness or to invest or commit to invest such proceeds in additional assets related to our business or capital stock of a restricted subsidiary.

5.875% Senior Notes due 2024 (the "2024 5.875% Notes")

In March 2014, we sold \$400 million aggregate principal amount of 5.875% Senior Notes due March 2024. Interest on the 2024 5.875% Notes is payable semi-annually on March 1 and September 1 of each year, commencing on September 1, 2014, and the 2024 5.875% Notes will mature on March 1, 2024 unless earlier redeemed or repurchased. Net proceeds from the sale of the 2024 5.875% Notes were approximately \$393 million, consisting of gross proceeds of \$400 million net of approximately \$7 million in offering expenses. We used the net proceeds of the 2024 5.875% Notes offering in part for the repayment of cash convertible notes which matured on June 1, 2014.

The 2024 5.875% Notes are subject to redemption at our option, at any time on or after March 1, 2019, in whole or in part, at the redemption prices set forth in the prospectus supplement, plus accrued and unpaid interest. At any time prior to March 1, 2017, we may redeem up to 35% of the original principal amount of the 2024 5.875% Notes with the proceeds of certain equity offerings at a redemption price of 105.875% of the principal amount of the 2024 5.875% Notes plus accrued and unpaid interest. At any time prior to March 1, 2019, we may also redeem the 2024 5.875% Notes, in whole but not in part, at a price equal to 100% of the principal amount of the 2024 5.875% Notes, plus accrued and unpaid interest and a "make-whole premium."

Other terms and conditions of the 2024 5.875% Notes, including guarantees and security, covenants, and repurchase requirements in the case of certain asset sales or a change of control, are substantially similar to those described above under the 6.375% Notes.

5.875% Senior Notes due 2025 (the "2025 5.875% Notes")

In March 2017, we sold \$400 million aggregate principal amount of 5.875% Senior Notes due July 2025. Interest on the 2025 5.875% Notes is payable semi-annually on January 1 and July 1 of each year, commencing on July 1, 2017, and the 2025 5.875% Notes will mature on July 1, 2025 unless earlier redeemed or repurchased. Net proceeds from the sale of the 2025 5.875% Notes were approximately \$393 million, consisting of gross proceeds of \$400 million net of approximately \$7 million in offering expenses. On April 3, 2017, we used a portion of the net proceeds of the 2025 5.875% Notes offering to fund the redemption of the 7.25% Senior Notes due 2020. For additional information see *Redemption of 7.25% Senior Notes due 2020* above.

The 2025 5.875% Notes are subject to redemption at our option, at any time on or after July 1, 2020, in whole or in part, at the redemption prices set forth in the prospectus supplement, plus accrued and unpaid interest. At any time prior to July 1, 2020, we may redeem up to 35% of the original principal amount of the 2025 5.875% Notes with the proceeds of certain equity offerings at a redemption price of 105.875% of the principal amount of the 2025 5.875% Notes plus accrued and unpaid interest. At any time prior to July 1, 2020, we may also redeem the 2025 5.875% Notes, in whole but not in part, at a price equal to 100% of the principal amount of the 2025 5.875% Notes, plus accrued and unpaid interest and a "make-whole premium."

Other terms and conditions of the 2025 5.875% Notes, including guarantees and security, covenants, and repurchase requirements in the case of certain asset sales or a change of control, are substantially similar to those described above under the 6.375% Notes.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

4.00% - 5.25% Tax-Exempt Bonds due from 2024-2045 ("Tax-Exempt Bonds")

In November 2012, we issued tax-exempt corporate bonds totaling \$335 million. Proceeds from the offerings were utilized to refinance tax-exempt project debt at our Haverhill, Niagara and SEMASS facilities, as well as to fund certain capital expenditures in Massachusetts. Approximately \$7 million of financing costs were incurred, of which \$3 million was expensed and \$4 million will be recognized over the term of the debt.

In August 2015, we issued two new series of fixed rate tax-exempt corporate bonds totaling \$130 million. Proceeds from the offerings were utilized to refinance tax-exempt project debt at our Delaware Valley facility and to fund certain capital improvements at our Essex County facility. Financing costs were not material.

Details of the issues and the use of proceeds are as follows (dollars in millions):

Series	Amount	Maturity	Coupon	Use of Proceeds
Massachusetts Series 2012A	\$ 20	2027	4.875%	New proceeds for qualifying capital expenditures in Massachusetts
Massachusetts Series 2012B	67	2042	4.875%	Redeem SEMASS project debt
Massachusetts Series 2012C	82	2042	5.25%	Redeem Haverhill project debt
Niagara Series 2012A	130	2042	5.25%	Redeem Niagara project debt
Niagara Series 2012B	35	2024	4.00%	Redeem Niagara project debt
New Jersey Series 2015A	90	2045	5.25%	Finance qualifying expenditures at Essex County facility
Pennsylvania Series 2015A	40	2043	5.00%	Refinance outstanding tax-exempt debt
	<u>\$ 464</u>			

We entered into a loan agreement with the Massachusetts Development Finance Agency under which they issued the Resource Recovery Revenue Bonds (the "Massachusetts Series" bonds in the table above) and loaned the proceeds of the Massachusetts Series bonds to us for the purposes of (i) financing qualifying capital expenditures at certain solid waste disposal facilities in Massachusetts and (ii) redeeming the outstanding principal balance of the SEMASS and Haverhill project debt.

We entered into a loan agreement with the Niagara Area Development Corporation under which they issued the Solid Waste Disposal Facility Refunding Revenue Bonds (the "Niagara Series" bonds in the table above) and loaned the proceeds of the Niagara Series bonds to us for the purpose of redeeming the outstanding principal balance of the Niagara project debt.

The Massachusetts Series bonds and the Niagara Series bonds are obligations of Covanta Holding Corporation, are guaranteed by Covanta Energy; and are not secured by project assets. Principal and interest on the Massachusetts Series bonds and the Niagara Series bonds are payable from the repayments we make to the Massachusetts Development Finance Agency and Niagara Area Development Corporation, respectively, pursuant to the respective loan agreements.

The Massachusetts Series bonds and the Niagara Series bonds bear interest at the interest rates per annum set forth in the table above, payable semi-annually on May 1 and November 1 of each year, commencing on May 1, 2013.

We entered into a loan agreement with the Essex County Improvement Authority under which they issued the Solid Waste Disposal Revenue Bonds (the "New Jersey Series" bonds in the table above) and loaned the proceeds to us for the purposes of financing capital improvements at our Essex County facility, including a new emissions control system. Interest on the bonds is paid semi-annually on January 1 and July 1 of each year beginning on January 1, 2016. Interest expense incurred during the construction period will be capitalized.

We entered into a loan agreement with the Delaware County Industrial Development Authority under which they issued the Refunding Revenue Bonds (the "Pennsylvania Series" bonds in the table above) and loaned the proceeds to us for the purpose of redeeming the outstanding \$34 million principal amount of the Variable Rate Bonds and of refinancing \$6 million of project debt due on July 1, 2015 at our Delaware Valley facility. See Variable Rate Tax-Exempt Demand Bonds due 2043 below. Interest on the bonds is paid semi-annually on January 1 and July 1 of each year beginning on January 1, 2016.

Each of the loan agreements contains customary events of default, including failure to make any payments when due, failure to perform its covenants under the respective loan agreement, and the bankruptcy or insolvency. Additionally, each of the loan agreements contains cross-default provisions that relate to our other indebtedness. Upon the occurrence of an event of default, the unpaid balance of the loan under the applicable loan agreement will become due and payable immediately.

The Massachusetts Series bonds and the Niagara Series bonds contain certain terms including mandatory redemption requirements in the event that (i) the respective loan agreement is determined to be invalid, or (ii) the respective bonds are determined to be taxable. In the event of a mandatory redemption of the bonds, we will have an obligation under each respective loan agreement to prepay the respective loan in order to fund the redemption.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES

Union County EfW Facility Capital Lease Arrangement

In June 2016, we extended the lease term related to the Union County EfW facility through 2053, which resulted in capital lease treatment for the revised lease. We recorded a lease liability of \$104 million, calculated utilizing an incremental borrowing rate of 5.0% which is included in long-term project debt on our consolidated balance sheet. The lease includes certain periods of contingent rentals based upon plant performance as either a share of revenue or a share of plant profits. These contingent payments have been excluded from the calculation of the lease liability and instead will be treated as a period expense when incurred. As of December 31, 2017, the outstanding borrowings under the capital lease have mandatory amortization payments remaining as follows (in millions):

	2018	2019	2020	2021	2022	Thereafter
Annual Remaining Amortization	\$ 5	\$ 5	\$ 6	\$ 6	\$ 6	\$ 66

Equipment Financing Capital Lease Arrangements

In 2014, we entered into equipment financing capital lease arrangements to finance the purchase of barges, railcars, containers and intermodal equipment related to our New York City contract. The lease terms range from 10 years to 12 years and the fixed interest rates range from 3.48% to 4.52%. The outstanding borrowings under the equipment financing capital lease arrangements were \$69 million as of December 31, 2017, and have mandatory amortization payments remaining as follows (in millions):

	2018	2019	2020	2021	2022	Thereafter
Annual Remaining Amortization	\$ 5	\$ 6	\$ 6	\$ 6	\$ 6	\$ 40

Depreciation associated with these capital lease arrangements is included in "Depreciation and amortization expense" on our consolidated statement of operations. For additional information see *Note 1. Organization and Summary of Significant Accounting Policies - Property, Plant and Equipment*.

PROJECT DEBT

The maturities of long-term project debt as of December 31, 2017 are as follows (in millions):

	2018	2019	2020	2021	2022	Thereafter	Total	Less: Current Portion	Total Noncurrent Project Debt
Debt	\$ 23	\$ 18	\$ 8	\$ 8	\$ 8	\$ 106	\$ 171	\$ (23)	\$ 148
Premium and deferred financing costs	—	—	—	—	—	3	3	—	3
Total ⁽¹⁾	<u>\$ 23</u>	<u>\$ 18</u>	<u>\$ 8</u>	<u>\$ 8</u>	<u>\$ 8</u>	<u>\$ 109</u>	<u>\$ 174</u>	<u>\$ (23)</u>	<u>\$ 151</u>

(1) Amounts include the Union Capital lease discussed above.

Project debt associated with the financing of energy-from-waste facilities is arranged by municipal entities through the issuance of tax-exempt and taxable revenue bonds or other borrowings. For those facilities we own, that project debt is recorded as a liability on our consolidated financial statements. Generally, debt service for project debt related to Service Fee structures is the primary responsibility of municipal entities, whereas debt service for project debt related to Tip Fee structures is paid by our project subsidiary from project revenue expected to be sufficient to cover such expense.

Payment obligations for our project debt associated with energy-from-waste facilities are generally limited recourse to the operating subsidiary and non-recourse to us, subject to operating performance guarantees and commitments. These obligations are typically secured by the revenue pledged under the respective indentures and by a mortgage lien and a security interest in the respective energy-from-waste facility and related assets. As of December 31, 2017, such revenue bonds were collateralized by property, plant and equipment with a net carrying value of \$616 million and restricted funds held in trust of approximately \$25 million.

Financing Costs

All deferred financing costs are amortized to interest expense over the life of the related debt using the effective interest method. For each of the years ended December 31, 2017, 2016 and 2015 amortization of deferred financing costs included as a component of interest expense totaled \$7 million, \$6 million and \$8 million, respectively.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES

Capitalized Interest

Interest expense paid and costs amortized to interest expense related to project financing are capitalized during the construction and start-up phase of the project. Total interest expense capitalized was as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
Capitalized interest	\$ 17	\$ 26	\$ 10

Dublin Project Refinancing

During 2014, we executed agreements for project financing totaling €375 million to fund a majority of the construction costs of the Dublin EfW facility. The project financing package included: (i) €300 million of project debt under a credit facility agreement with various lenders which consisted of a €250 million senior secured term loan (the “Dublin Senior Term Loan due 2021”) and a €50 million second lien term loan (the “Dublin Junior Term Loan due 2022”), and (ii) a €75 million convertible preferred investment (the “Dublin Convertible Preferred”), which was committed by a leading global energy infrastructure investor.

On December 14, 2017, we executed agreements for project financing totaling €446 million (\$534 million) to refinance the existing project debt and the Dublin Convertible Preferred. The new financing package included: (i) €396 million (\$474 million) of senior secured project debt under a credit facility agreement between Dublin Waste to Energy Limited and various lenders (the “Dublin Senior Loan”) and (ii) a €50 million (\$60 million) second lien term loan between Dublin Waste to Energy Group (Holdings) Limited and various lenders (the “Dublin Junior Loan”). The proceeds of the loans, along with other sources of funds, were utilized to repay (i) Dublin Senior Term Loan due 2021, (ii) the Dublin Junior Term Loan due 2022, (iii) the Dublin Convertible Preferred and (iv) transaction related fees and expenses.

During the year ended December 31, 2017, as a result of the Dublin project refinancing, we recorded the following charges to "Loss on extinguishment of debt" on our consolidated statement of operations: (i) a "make whole" payment on the Dublin Convertible Preferred of \$41 million, (ii) \$19 million of third party fees incurred in connection with the refinance and a write-off of part of the remaining deferred financing costs and (iii) unamortized debt discount and deferred financing costs of \$11 million.

Unamortized debt discount and deferred financing costs of \$13 million related to the remaining portion of the previous debt that was considered a debt modification will continue to be amortized over the term of the refinanced debt. Debt discount and fees incurred in connection with the refinance totaling \$11 million were deferred and will be amortized over the life of the refinanced debt as a debt discount.

As of December 31, 2017 the Dublin project debt was classified as "Liabilities held for sale" on our consolidated balance sheet. For further information see *Note 4. Dispositions and Assets Held for Sale* and *Note 18. Subsequent Events*.

Debt included in "Liabilities held for sale" on our consolidated balance sheet of December 31, 2017 is as follows:

Project debt included in Liabilities held for sale:	
Dublin Senior Loan due 2032 (2.77% - 3.57%) ⁽¹⁾	\$ 474
Less: debt discount related to Dublin Senior Loan	(10)
Less: deferred financing costs related to Dublin Senior Loan	(13)
Dublin Senior Loan, net	451
Dublin Junior Loan due 2032 (4.23%-5.36%)	\$ 60
Less: debt discount related to Dublin Junior Loan	—
Less: deferred financing costs related to Dublin Junior Loan	(1)
Dublin Junior Loan, net	59
Total project debt included in Liabilities held for sale, net	\$ 510

⁽¹⁾ Reflects hedged fixed rates.

Dublin Senior Loan due 2032

As of December 31, 2017, the €396 million (\$474 million) Dublin Senior Loan was fully drawn and is included in "Liabilities held for sale" on our consolidated balance sheet. The Dublin Senior Loan is comprised of three tranches as follows: i) a €94 million (\$113 million) fixed rate Tranche A, (ii) a €167 million (\$199 million) fixed rate Tranche B and (iii) a €135 million (\$162 million) floating rate Tranche C.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Key commercial terms of the Dublin Senior Term Loan include:

- Final maturity on November 24, 2032 (approximately 15 years after the operational commencement date of the facility).
- Scheduled repayments will be made semi-annually according to a 15-year amortization profile, beginning in 2018. The Dublin Senior Loan is pre-payable at our option, subject to potential prepayment costs under Tranche A and B.
- Borrowings will bear interest as follows:
 - Tranche A: At a fixed rate equal to 3.00%
 - Tranche B: At a fixed rate equal to 2.77%
 - Tranche C: At the 6-month Euro Interbank Offered Rate ("EURIBOR") plus 2.15%. We entered into interest rate swap agreements in order to hedge our exposure to adverse variable interest rate fluctuations under Tranche C.
- The Dublin Senior Loan is a senior obligation of the project company and certain other related subsidiaries, all of which are wholly-owned by us, and is secured by a first priority lien on substantially all of the project-related assets. The Dublin Senior Term Loan is non-recourse to us and our subsidiary Covanta Energy.
- The Dublin Senior Loan credit agreement contains positive, negative and financial maintenance covenants that are customary for a project financing of this type. Our ability to service the Dublin Junior Loan and to make cash distributions to common equity is subject to ongoing compliance with these covenants, including maintaining a minimum debt service coverage ratio and loan life coverage ratio on the Dublin Senior Loan.

Dublin Junior Loan due 2032

As of December 31, 2017, the €50 million Dublin Junior Loan (\$60 million) was fully drawn and is included in "Liabilities held for sale" on our consolidated balance sheet. The Dublin Junior Loan is comprised of two tranches: (i) a €21 million (\$25 million) floating rate Tranche A and (ii) a €29 million (\$35 million) fixed rate Tranche B.

Key commercial terms of the Dublin Junior Loan include:

- Final maturity on December 24, 2032 (one month after the maturity of the Dublin Senior Loan).
- Scheduled repayments will be made semi-annually according to a 15-year amortization profile, beginning in 2018. The loan is pre-payable at our option subject to potential prepayment costs under Tranche B. The loan shall also be reduced by an incremental amount equal to 10% of Excess Cashflow, as defined in the credit agreement, on each of the Repayment Dates occurring between October 31, 2026 through April 30, 2029 and 20% of Excess Cashflow thereafter.
 - Tranche A borrowings will bear interest at the 6-month Euro Interbank Offered Rate ("EURIBOR") plus 4.50%
 - Tranche B borrowings will bear interest at a fixed rate equal to 5.358%.
- The Dublin Junior Loan is a junior obligation of the project company and certain other related subsidiaries, all of which are wholly-owned by us, and is secured by a second priority lien on substantially all of the project-related assets and a first priority lien on the assets of the top tier project holding company. The Dublin Junior Loan is non-recourse to us and our subsidiary Covanta Energy.
- Under the Dublin Junior Loan credit agreement, our ability to make cash distributions to common equity is subject to ongoing compliance with the covenants under the agreement, including maintaining a minimum debt service coverage ratio on the Dublin Junior Loan.

NOTE 11. FINANCIAL INSTRUMENTS

Fair Value Measurements

Authoritative guidance associated with fair value measurements provides a framework for measuring fair value and establishes a fair value hierarchy that prioritizes the inputs used to measure fair value, giving the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 inputs), then significant other observable inputs (Level 2 inputs) and the lowest priority to significant unobservable inputs (Level 3 inputs). The following methods and assumptions were used to estimate the fair value of each class of financial instruments:

- For cash and cash equivalents, restricted funds, and marketable securities, the carrying value of these amounts is a reasonable estimate of their fair value. The fair value of restricted funds held in trust is based on quoted market prices of the investments held by the trustee.
- Fair values for long-term debt and project debt are determined using quoted market prices.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

- The fair value of our interest rate swaps are determined by applying the Euribor forward curve observable in the market to the contractual terms of our floating to fixed rate swap agreements. Prior to the Dublin Project Refinancing, the fair value for interest rate swaps was determined by obtaining quotes from two counterparties (one is a holder of the long position and the other is in the short) and extrapolating those across the long and short notional amounts. The fair value of the interest rate swaps is adjusted to reflect counterparty risk of non-performance, and is based on the counterparty's credit spread in the credit derivatives market.
- The fair values of our energy hedges were determined using the spread between our fixed price and the forward curve information available within the market.
- The fair value of our foreign currency hedge was determined by obtaining quotes from counterparties and is based on market accepted option pricing methodology which utilizes inputs such as the currency spot rate as of the balance sheet date, the strike price of the options and volatility.

The estimated fair value amounts have been determined using available market information and appropriate valuation methodologies. However, considerable judgment is required in interpreting market data to develop estimates of fair value. Accordingly, the estimates presented herein are not necessarily indicative of the amounts that we would realize in a current market exchange. The fair-value estimates presented herein are based on pertinent information available to us as of December 31, 2017. Such amounts have not been comprehensively revalued for purposes of these financial statements since December 31, 2017, and current estimates of fair value may differ significantly from the amounts presented herein.

The following financial instruments are recorded at their estimated fair value. The following table presents information about the recurring fair value measurement of our assets and liabilities as of December 31, 2017 and 2016:

Financial Instruments Recorded at Fair Value on a Recurring Basis:	Fair Value Measurement Level	As of December 31,	
		2017	2016
(In millions)			
Assets:			
Cash and cash equivalents:			
Bank deposits and certificates of deposit	1	\$ 37	\$ 79
Money market funds	1	9	5
Total cash and cash equivalents:		46	84
Restricted funds held in trust:			
Bank deposits and certificates of deposit	1	6	12
Money market funds	1	25	36
U.S. Treasury/agency obligations ⁽¹⁾	1	10	14
State and municipal obligations	1	11	46
Commercial paper/guaranteed investment contracts/repurchase agreements	1	19	2
Total restricted funds held in trust:		71	110
Restricted funds held in trust included in assets held for sale: ⁽²⁾			
Bank deposits and certificates of deposit	1	77	—
Total restricted funds held in trust included in assets held for sale:		77	—
Investments:			
Mutual and bond funds ⁽³⁾	1	2	2
Derivative asset — energy hedges ⁽⁴⁾	2	—	3
Total assets:		\$ 196	\$ 199
Liabilities:			
Derivative liability — energy hedges ⁽⁵⁾⁽⁶⁾	2	\$ 5	\$ 1
Derivative liability — interest rate swaps ⁽⁵⁾⁽⁶⁾	2	—	20
Derivative liability — interest rate swaps included in liabilities held for sale ⁽²⁾	2	7	—
Total liabilities:		\$ 12	\$ 21

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The following financial instruments are recorded at their carrying amount (in millions):

Financial Instruments Recorded at Carrying Amount:	As of December 31, 2017		As of December 31, 2016	
	Carrying Amount	Estimated Fair Value	Carrying Amount	Estimated Fair Value
Assets:				
Accounts receivables ⁽⁷⁾	\$ 342	\$ 342	\$ 333	\$ 333
Liabilities:				
Long-term debt	\$ 2,349	\$ 2,371	\$ 2,252	\$ 2,237
Project debt	\$ 174	\$ 179	\$ 383	\$ 387
Project debt included in liabilities held for sale ⁽²⁾	\$ 510	\$ 510	\$ —	\$ —

- (1) The U.S. Treasury/agency obligations in restricted funds held in trust are primarily comprised of Federal Home Loan Mortgage Corporation securities at fair value.
- (2) As of December 31, 2017, assets and liabilities related to our Dublin EfW facility met the criteria to be classified as held for sale on our consolidated balance sheet. For further information see *Note 4. Dispositions and Assets Held for Sale* and *Note 18. Subsequent Events*.
- (3) Included in other noncurrent assets in the consolidated balance sheets.
- (4) Included in prepaid expenses and other current assets in the consolidated balance sheets.
- (5) Included in accrued expenses and other current liabilities in the consolidated balance sheets.
- (6) Included in other noncurrent liabilities in the consolidated balance sheets.
- (7) Includes \$1 million of noncurrent receivables in other noncurrent assets in the consolidated balance sheets as of December 31, 2017 and 2016.

In addition to the recurring fair value measurements, certain assets are measured at fair value on a non-recurring basis when an indication of impairment is identified and the assets fair value is determined to be less than its carrying value. See *Note 13. Supplementary Information - Impairment Charges* for additional information.

NOTE 12. DERIVATIVE INSTRUMENTS

The following disclosures summarize the fair value of derivative instruments not designated as hedging instruments in the on the consolidated statements of operations (in millions):

Effect on Income of Derivative Instruments Not Designated As Hedging Instruments	Location of Gain or (Loss) Recognized in Income on Derivatives	Amount of (Loss) Gain Recognized In Income on Derivatives		
		Year Ended December 31,		
		2017	2016	2015
Foreign currency hedge	Other expense, net	\$ —	\$ (2)	\$ 6

Foreign Currency Hedge

During 2016, in order to hedge the risk of adverse foreign currency exchange rate fluctuations impacting the sale proceeds from our equity transfer agreement in China (See *Note 4. Dispositions and Assets Held for Sale*), we entered into a foreign currency exchange collar with two financial institutions covering approximately \$100 million of notional to protect against further rate fluctuations pending the sale of our ownership interest to CITIC, which was completed during September 2016. The foreign currency hedge is accounted for as a derivative instrument and, as such, was recorded at fair value quarterly with any change in fair value recognized in our consolidated statements of operations as other expense, net. During the twelve months ended December 31, 2016, cash provided by foreign currency exchange settlements totaled \$5 million and was included in net cash used in investing activities on our consolidated statement of cash flows.

As of December 31, 2016, we received \$105 million of gross sale proceeds relating to the aforementioned sale of our ownership interests to CITIC and therefore, settled or canceled remaining foreign currency exchange derivatives related to this hedged transaction, resulting in a current asset balance of zero.

We have also entered into foreign currency forwards to manage foreign currency exchange rate fluctuations associated with a series of fixed payments to be made by an international subsidiary through the end of 2017. This foreign currency forward was accounted for as a derivative instrument at fair value in our consolidated balance sheet with any changes in fair value recognized in our consolidated statements of operations as "Other expense, net." This derivative instrument was not material to our consolidated statement of operations and had a zero value on our consolidated balance sheet as of December 31, 2017.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Energy Price Risk

Following the expiration of certain long-term energy sales contracts, we may have exposure to market risk, and therefore revenue fluctuations, in energy markets. We have entered into contractual arrangements that will mitigate our exposure to short-term volatility through a variety of hedging techniques, and will continue to do so in the future. Our efforts in this regard will involve only mitigation of price volatility for the energy we produce, and will not involve taking positions (either long or short) on energy prices in excess of our physical generation. The amount of energy generation for which we have hedged under agreements with various financial institutions is indicated in the following table (in millions):

Calendar Year	Hedged MWh
2018	2.9
2019	0.6
Total	3.5

As of December 31, 2017, the net fair value of the energy derivatives of \$5 million, pre-tax, was recorded as a \$4 million current liability and a \$1 million noncurrent liability and as a component of AOCI. As of December 31, 2017, the amount of hedge ineffectiveness was not material. The net fair value energy derivative balance of \$5 million includes a natural gas hedge transaction of 1.0 million British Thermal Units to mitigate exposure to short-term volatility in certain contracted steam prices during the 2017 calendar year. As of December 31, 2016, the fair value of the energy derivatives of \$2 million, pre-tax, was recorded as a \$3 million current asset and a \$1 million noncurrent liability and as a component of AOCI. The change in fair value was recorded as a component of comprehensive income.

During the twelve months ended December 31, 2017, cash provided by and used in energy derivative settlements of \$17 million and zero, respectively, was included in "Net cash provided by operating activities" on our consolidated statement of cash flows. During the twelve months ended December 31, 2016, cash provided by and used in energy derivative settlements of \$32 million and zero, respectively, was included in the change in "Net cash provided by operating activities" on our consolidated statement of cash flows.

Interest Rate Swaps

In order to hedge the risk of adverse variable interest rate fluctuations associated with the Dublin Senior Loan, we have entered into floating to fixed rate swap agreements with various financial institutions to hedge the variable interest rate fluctuations associated with floating rate portion €135 million of the loan, expiring in 2032. For further information see *Note 10. Consolidated Debt*. This interest rate swap is designated as a cash flow hedge which is recorded at fair value with changes in fair value recorded as a component of AOCI. As of December 31, 2017, the fair value of the interest rate swap derivative of \$7 million, pre-tax, was recorded within "Liabilities held for sale" on our consolidated balance sheet. There was \$1 million, pre-tax, of ineffectiveness recorded during the fourth quarter recognized in our consolidated statements of operations as interest expense resulting from the execution of certain off-market swaps. As of December 31, 2016, the fair value of the interest rate swap derivative of \$20 million, pre-tax, was recorded as a \$2 million and \$18 million current and noncurrent liability, respectively.

NOTE 13. SUPPLEMENTARY INFORMATION

Other Operating Expense, net

Insurance Recoveries

Fairfax County Energy-from-Waste Facility

In February 2017, our Fairfax County energy-from-waste facility experienced a fire in the front-end receiving portion of the facility. During the first quarter of 2017, we completed our evaluation of the impact of this event and recorded an immaterial asset impairment, which we have since recovered from insurance proceeds. The facility resumed operations in December 2017. We expect receipt of remaining insurance recoveries for both property loss and business interruption to in 2018.

Plymouth Energy-from-Waste Facility

In May 2016, our Plymouth energy-from-waste facility experienced a turbine generator failure. Damage to the turbine generator was extensive and operations at the facility were suspended promptly to assess the cause and extent of damage. The facility is capable of processing waste without utilizing the turbine generator to generate electricity, and we resumed waste processing operations in early June of 2016. The facility resumed generating electricity early in the first quarter of 2017 after the generator and other damaged equipment were replaced.

The cost of repair or replacement of assets and business interruption losses for the above matters are insured under the terms of applicable insurance policies, subject to deductibles.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

We recorded insurance gains, as a reduction to "Other operating expense, net" in our consolidated statement of operations as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
Insurance gains for property and clean-up costs, net of impairment charges	\$ 7	\$ 1	\$ —
Insurance gains for business interruption costs, net of costs incurred	\$ 23	\$ 4	\$ —

We recorded insurance recoveries, as a reduction to "Plant operating expense" in our consolidated statement of operations as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
Insurance recoveries for business interruption and clean-up costs, net of costs incurred	\$ —	\$ 3	\$ —

Hennepin County Legal Settlement

On September 25, 2017, we settled a dispute with Hennepin County, Minnesota regarding extension provisions in our service contract to operate the Hennepin Energy Recovery Center. We received \$8 million in connection with the settlement and will continue to operate the facility through March 2018. During the year ended December 31, 2017, we recorded a gain on settlement of \$8 million as a reduction of "Other operating expense, net" in our consolidated statement of operations.

Impairment Charges

Impairment charges are as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
<i>North America segment:</i>			
Impairment charges	\$ 2	\$ 20	\$ 43

During the year ended December 31, 2016, we recorded a non-cash impairment charge of \$13 million, pre-tax, related to the previously planned closure of our Pittsfield EfW facility which we now continue to operate. Such amount was calculated based on the estimated liquidation value of the tangible equipment utilizing Level 3 inputs.

We are party to a joint venture that was formed to recover and recycle metals from EfW ash monofills in North America. During the year ended December 31, 2016, due to operational difficulties and the decline in the scrap metal market, a valuation of the entity was conducted. As a result, we recorded a net impairment of our investment in this joint venture of \$3 million, pre-tax, which represents our portion of the carrying value of the entity in excess of the fair value. Such amount was calculated based on the estimated liquidation value of the tangible equipment utilizing Level 3 inputs.

During the year ended 2015, we identified indicators of impairment associated with our biomass facilities, primarily due to a decline in energy market pricing. As a result of these developments, we recorded a non-cash impairment charge of \$43 million, pre-tax, which was calculated based on a range of potential outcomes utilizing various estimated cash flows for these facilities utilizing Level 3 inputs.

For more information regarding fair value measurements, see *Note 11. Financial Instruments*.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Selected Supplementary Balance Sheet Information

Selected supplementary balance sheet information is as follows (in millions):

	As of December 31,	
	2017	2016
Prepaid expenses	\$ 22	\$ 28
Hedge receivables	—	3
Spare parts	22	21
Renewable energy credits	6	3
Other	23	17
Total prepaid expenses and other current assets	<u>\$ 73</u>	<u>\$ 72</u>
Operating expenses, payroll and related expenses	\$ 145	\$ 164
Deferred revenue	14	16
Accrued liabilities to client communities	17	19
Interest payable	37	30
Dividends payable	36	35
Other	64	25
Total accrued expenses and other current liabilities	<u>\$ 313</u>	<u>\$ 289</u>

NOTE 14. INCOME TAXES

The Tax Cuts and Jobs Act (the "Act") was enacted on December 22, 2017. The Act reduces the U.S. Federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred and creates new taxes on certain foreign sourced earnings. At December 31, 2017, we have not completed our accounting for the tax effects of enactment of the Act; however, in certain cases, as described below, we have made a reasonable estimate of the effects on our existing deferred tax balances and the one-time transition tax. For the transition tax for which we were able to determine a reasonable estimate, we recognized a provisional amount of \$21 million, which is included as a component of income tax expense from continuing operations with a corresponding reduction of deferred tax asset related to the utilization of gross NOL of approximately \$59 million. Accordingly no tax liability will be incurred. Also, we continue to evaluate the method and the impact of accounting for the global intangible low-taxed income ("GILTI") in accordance with the Act.

Deferred tax assets and liabilities: We re-measured our U.S. deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future, which is generally 21%. However, we are still analyzing certain aspects of the Act and refining our calculations, which could potentially affect the measurement of these balances or potentially give rise to new deferred tax amounts. The provisional amount recorded related to the re-measurement of our deferred tax balance was a tax benefit of \$204 million.

Foreign tax effects: The one-time transition tax is based on our total post-1986 earnings and profits (E&P) that we previously deferred from U.S. income taxes. We recorded a provisional amount for our one-time transition tax liability, resulting in an increase in income tax expense of \$21 million. We have not yet completed our calculation of the total post-1986 E&P for these foreign subsidiaries. Further, the transition tax is based in part on the amount of those earnings held in cash and other specified assets. This amount may change when we finalize the calculation of post-1986 foreign E&P previously deferred from U.S. federal taxation and finalize the amounts held in cash or other specified assets. No additional income taxes have been provided for any remaining undistributed foreign earnings not subject to the transition tax, or any additional outside basis difference inherent in these entities, as these amounts continue to be indefinitely reinvested in foreign operations.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

We file a federal consolidated income tax return with our eligible subsidiaries. Our federal consolidated income tax return also includes the taxable results of certain grantor trusts described below. The components of income tax expense were as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
Current:			
Federal	\$ 4	\$ (2)	\$ (91)
State	2	6	16
Foreign	(1)	(2)	2
Total current	<u>5</u>	<u>2</u>	<u>(73)</u>
Deferred:			
Federal	(204)	28	7
State	(2)	(9)	(11)
Foreign	10	1	(7)
Total deferred	<u>(196)</u>	<u>20</u>	<u>(11)</u>
Total income tax (benefit) expense	<u>\$ (191)</u>	<u>\$ 22</u>	<u>\$ (84)</u>

Domestic and foreign pre-tax income (loss) was as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
Domestic	\$ (43)	\$ 26	\$ 6
Foreign	(92)	(12)	(34)
Total	<u>\$ (135)</u>	<u>\$ 14</u>	<u>\$ (28)</u>

The effective income tax rate was 142%, 150%, and 302% for the years ended December 31, 2017, 2016 and 2015, respectively.

The decrease in the effective tax rate for the year ended December 31, 2017, compared to the year ended December 31, 2016 is primarily due to the combined effects of (i) the recognition of tax benefit from the re-measurement of the deferred taxes and the estimated transition tax due to the enactment of the Act and (ii) the change from pre-tax income in 2016 to pre-tax loss in 2017.

The decrease in effective tax rate for the year ended December 31, 2016, compared to the year ended December 31, 2015 is primarily due to the combined effects of (i) the recognition of tax benefit due to the resolution of the IRS audit in 2015 and (ii) the fact that the Company turned from pre-tax loss in 2015 to pre-tax income in 2016, offset by the uncertain tax positions recorded in 2016.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

A reconciliation of our income tax expense (benefit) at the federal statutory income tax rate of 35% to income tax expense (benefit) at the effective tax rate is as follows (in millions):

	Year Ended December 31,		
	2017	2016	2015
Income tax expense (benefit) at the federal statutory rate	\$ (47)	\$ 5	\$ (10)
State and other tax expense	(2)	1	1
Tax rate differential on foreign earnings	10	4	8
Permanent differences	4	4	4
Income from Grantor Trust	(8)	—	—
Production tax credits/R&E tax credits	—	—	(3)
State ITC credit	1	(4)	—
Change in valuation allowance	31	2	(7)
Liability for uncertain tax positions	—	16	(82)
Adjustment to deferred tax	(1)	(5)	4
Impact of deferred tax re-measurement for federal tax rate change	(204)	—	—
Tax reform transition tax	21	—	—
Expiration of non-qualified stock options	3	—	—
Other	1	(1)	1
Total income tax expense (benefit)	<u>\$ (191)</u>	<u>\$ 22</u>	<u>\$ (84)</u>

We had consolidated federal NOLs estimated to be approximately \$240 million for federal income tax purposes as of the end of 2017. These consolidated federal NOLs will expire, if not used, in the following amounts in the following years (in millions):

	Amount of Carryforward Expiring
2028	\$ 10
2030	29
2031	1
2032	1
2033	197
2035	1
2036	1
	<u>\$ 240</u>

In addition to the consolidated federal NOLs, as of December 31, 2017, we had state NOL carryforwards of approximately \$389 million, which expire between 2028 and 2037, net foreign NOL carryforwards of approximately \$287 million with some expiring between 2018 and 2037. The federal tax credit carryforwards include production tax credits of \$47 million expiring between 2024 and 2036, and research and experimentation tax credits of \$1 million expiring between 2027 and 2033. Additionally, we had state income tax credits of \$3 million. The corresponding deferred tax assets are offset by a valuation allowance of approximately \$77 million.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The tax effects of temporary differences that give rise to the deferred tax assets and liabilities are presented as follows (in millions):

	As of December 31,	
	2017	2016
Deferred tax assets:		
Net operating loss carryforwards	\$ 119	\$ 143
Accrued expenses	15	20
Prepaid and other costs	48	71
Deferred tax assets attributable to pass-through entities	10	17
Retirement benefits	2	3
Other	3	4
AMT and other credit carryforwards	48	55
Total gross deferred tax asset	245	313
Less: valuation allowance	(77)	(71)
Total deferred tax asset	168	242
Deferred tax liabilities:		
Unbilled accounts receivable	3	3
Property, plant and equipment	538	780
Intangible assets	33	36
Deferred tax liabilities attributable to pass-through entities	8	22
Deferred gain on convertible debt	4	13
Swap income	—	—
Prepaid expenses	—	—
Other, net	1	5
Total gross deferred tax liability	587	859
Net deferred tax liability, including deferred tax liability held for sale	419	617
Less: Deferred tax liability held for sale ⁽¹⁾	7	—
Net deferred tax liability	\$ 412	\$ 617

(1) As of December 31, 2017, assets and liabilities related to our Dublin EfW facility met the criteria to be classified as held for sale on our consolidated balance sheet. For further information see *Note 4. Dispositions and Assets Held for Sale* and *Note 18. Subsequent Events*.

Cumulative undistributed foreign earnings for which United States taxes were not provided were included in consolidated retained earnings in the amount of approximately zero and \$257 million as of December 31, 2017 and 2016, respectively. This is due to the one time transition tax on the cumulative undistributed foreign earnings as of December 31, 2017 that was included in the tax provision as the result of the Act. Such amounts were considered permanently invested, therefore no provision for U.S. income taxes was accrued in 2016.

Deferred tax assets relating to employee stock based compensation deductions were reduced to reflect exercises of non-qualified stock option grants and vesting of restricted stock. Some exercises of non-qualified stock option grants and vesting of restricted stock resulted in tax deductions in excess of previously recorded benefits resulting in a "windfall". Although these additional deductions were reported on the corporate tax returns and increased NOLs, the related tax benefits were not previously recognized for financial reporting purposes. The Company adopted ASU 2016-09 in 2017, as a result, the related tax benefits, if applicable, will now be recognized for financial statement purposes. The historical benefit of \$11 million was recorded as a decrease to Accumulated deficit and an increase to our deferred tax asset balance as of January 1, 2017 to recognize the cumulative effect of adoption of the new standard.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in millions):

Balance at December 31, 2014	\$	133
Additions based on tax positions related to the current year		12
Reductions for tax positions of prior years		(109)
Balance at December 31, 2015		<u>36</u>
Additions based on tax positions related to the current year		16
Additions for tax positions of prior years		4
Reductions for lapse in applicable statute of limitations		(3)
Reductions for tax positions of prior years		(4)
Payment		(6)
Balance at December 31, 2016		<u>43</u>
Additions based on tax positions related to the current year		1
Additions for tax positions of prior years		6
Reductions for lapse in applicable statute of limitations		(1)
Reductions for tax positions of prior years		(2)
Additions due to acquisitions		1
Balance at December 31, 2017	\$	<u><u>48</u></u>

The uncertain tax positions, exclusive of interest and penalties, were \$48 million and \$43 million as of December 31, 2017 and 2016, respectively, which also represent potential tax benefits that if recognized, would impact the effective tax rate.

We record interest accrued on liabilities for uncertain tax positions and penalties as part of the tax provision. As of December 31, 2017 and 2016, we had accrued interest and penalties associated with liabilities for uncertain tax positions of \$5 million and \$3 million, respectively. We continue to reflect interest accrued and penalties on uncertain tax positions as part of the tax provision.

Audits for federal income tax returns are closed for the years through 2010. However, the Internal Revenue Service ("IRS") can audit the NOL's generated during those years in the years that the NOL's are utilized.

State income tax returns are generally subject to examination for a period of three to six years after the filing of the respective tax return. The state impact of any federal changes remains subject to examination by various states for a period of up to one year after formal notification to the states. We have various state income tax returns in the process of examination, administrative appeals or litigation.

Our NOLs predominantly arose from our predecessor insurance entities, formerly named Mission Insurance Group, Inc., ("Mission"). These Mission insurance entities have been in state insolvency proceedings in California and Missouri since the late 1980's. The amount of NOLs available to us will be reduced by any taxable income or increased by any taxable losses generated by current members of our consolidated tax group, which include grantor trusts associated with the Mission insurance entities.

While we cannot predict what amounts, if any, may be includable in taxable income as a result of the final administration of these grantor trusts, substantial actions toward such final administration have been taken and we believe that neither arrangements with the California Commissioner of Insurance nor the final administration by the Missouri Director will result in a material reduction in available NOLs.

NOTE 15. STOCK-BASED AWARD PLANS

Stock-Based Award Plans

In May 2014, the stockholders of the Company approved the Covanta Holding Corporation 2014 Equity Award Plan (the "Plan") to provide incentive compensation to non-employee directors, officers and employees, and to consolidate the two previously existing equity compensation plans into a single plan: the Company's Equity Award Plan for Employees and Officers (the "Former Employee Plan") and the Company's Equity Award Plan for Directors (the "Former Director Plan," and together with the Former Employee Plan, the "Former Plans"). Shares that were available for issuance under the Former Plans will be available for issuance under the Plan. The stockholders of the Company also approved the authorization of 6 million new shares of our common stock for issuance under the Plan.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The purpose of the Plan is to promote our interests (including our subsidiaries and affiliates) and our stockholders' interests by using equity interests to attract, retain and motivate our management, non-employee directors and other eligible persons and to encourage and reward their contributions to our performance and profitability. The Plan provides for awards to be made in the form of (a) shares of restricted stock, (b) restricted stock units, (c) incentive stock options, (d) non-qualified stock options, (e) stock appreciation rights, (f) performance awards, or (g) other stock-based awards which relate to or serve a similar function to the awards described above. Awards may be made on a standalone, combination or tandem basis.

Stock-Based Compensation

We recognize compensation costs using the graded vesting attribution method over the requisite service period of the award, which is generally three to five years. Forfeitures are accounted for as they occur. Stock-based compensation expense is as follows (in millions, except for weighted average years):

	Total Compensation Expense Year Ended December 31,			As of December 31, 2017	
	2017	2016	2015	Unrecognized stock-based compensation expense	Weighted- average years to be recognized
	Restricted Stock Awards	\$ 11	\$ 10	\$ 11	\$ 8
Restricted Stock Units	\$ 7	\$ 6	\$ 6	\$ 5	1.4
Tax benefit related to compensation	\$ 10	\$ 10	\$ 15		

Restricted Stock Awards

Restricted stock awards that have been issued to employees typically vest over a three-year period. Restricted stock awards are stock-based awards for which the employee or director does not have a vested right to the stock (“nonvested”) until the requisite service period has been rendered.

Restricted stock awards to employees are subject to forfeiture if the employee is not employed on the vesting date. Restricted stock awards issued to directors are not subject to forfeiture in the event a director ceases to be a member of the Board of Directors, except in limited circumstances. Restricted stock awards will be expensed over the requisite service period. Prior to vesting, restricted stock awards have all of the rights of common stock (other than the right to sell or otherwise transfer, when issued). We calculate the fair value of share-based stock awards based on the closing price on the date the award was granted.

During the year ended December 31, 2017 we awarded certain employees grants of 813,816 shares of restricted stock. The restricted stock awards will be expensed over the requisite service period. The terms of the restricted stock awards include vesting provisions based solely on continued service. If the service criteria are satisfied, the restricted stock awards will generally vest during March of 2018, 2019, and 2020.

In May 2017, we awarded 14,286 shares of restricted stock for annual director compensation. We determined the service vesting condition of these restricted stock awards to be non-substantive and, in accordance with accounting principles for stock compensation, recorded the entire fair value of the awards as compensation expense on the grant date.

During the year ended December 31, 2017, we withheld 235,066 shares of our common stock in connection with tax withholdings for vested stock awards.

Changes in nonvested restricted stock awards as of December 31, 2017 were as follows (in thousands, except per share amounts):

	Number of Shares	Weighted- Average Grant Date Fair Value
Nonvested at the beginning of the year	1,220	\$ 17.20
Granted	828	\$ 16.22
Vested	(585)	\$ 16.53
Forfeited	(74)	\$ 17.67
Nonvested at the end of the year	1,389	\$ 16.46

The weighted-average grant-date fair value of RSAs granted during the years ended December 31 2017, 2016, and 2015 was \$16.22, \$15.14, and \$21.88 respectively. The total fair value of shares vested during the years ended December 31, 2017, 2016, and 2015, was \$10 million, \$9 million, and \$9 million, respectively.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Restricted Stock Units

In 2010, we awarded restricted stock units (“RSUs”) to certain employees in connection with specified growth-based acquisitions or development projects. Vesting of the RSUs is based on the net present value of projected cash flows of the applicable acquisition or development project, calculated as of the award date versus the vesting date. Vesting will occur after at least three years have passed following an acquisition or upon the later of three years from the grant date or one year following the commencement of commercial operations for development projects. For certain stock unit awards, dividends accrue prior to vesting and are paid when the awards vest.

Annually we award units for which the employee does not have a vested right to the stock (“nonvested”) until the required financial performance metric has been reached for each pre-determined vesting date. Stock-based compensation expense for each financial performance metric is recognized beginning in the period when management has determined it is probable the financial performance metric will be achieved for the respective vesting period.

During the year ended December 31, 2017 we awarded certain employees grants of 78,636 RSUs. The RSUs will be expensed over the requisite service period. The terms of the RSUs include vesting provisions based solely on continued service. If the service criteria are satisfied the RSUs will generally vest during March of 2018, 2019, and 2020.

During the year, ended December 31, 2017, we awarded certain employees grants of 440,070 performance based RSUs that will vest based upon the Company’s cumulative Free Cash Flow per share over a three year performance period. Stock-based compensation expense for each financial performance metric is recognized beginning in the period when management has determined that it is probable the performance objectives will be achieved.

During the year ended December 31, 2017 we awarded 82,144 RSUs for annual director compensation and 23,151 RSUs, for quarterly director fees for certain of our directors who elected to receive RSUs in lieu of cash payments. We determined the service vesting condition of these restricted stock units to be non-substantive and, in accordance with accounting principles for stock compensation, recorded the entire fair value of the awards as compensation expense on the grant date.

Changes in nonvested restricted stock units as of December 31, 2017 were as follows (in thousands, except per share amounts):

	Number of Shares	Weighted- Average Grant Date Fair Value
Nonvested at the beginning of the year	1,803	\$ 16.25
Granted	624	\$ 15.94
Vested	(71)	\$ 18.35
Forfeited	(541)	\$ 17.09
Nonvested at the end of the year	1,815	\$ 15.80

The weighted-average grant-date fair value of RSUs granted during the years ended December 31 2017, 2016, and 2015 was \$15.94, \$14.65, and \$21.95, respectively. The total fair value of shares vested during the years ended December 31, 2017, 2016, and 2015, was \$1 million, \$1 million, and zero, respectively.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

Stock Options

We have also awarded stock options to certain employees and directors. Stock options awarded to directors vested immediately. Stock options awarded to employees have typically vested annually over three to five years and expire over ten years. We calculate the fair value of our share-based option awards using the Black-Scholes option pricing model which requires estimates of the expected life of the award and stock price volatility.

The following table summarizes activity and balance information of the options under the 2014 Stock Option Plan as of December 31, 2017:

	Shares	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value ⁽²⁾
(in thousands, except per share amounts)				
2014 Stock Option Plan				
Outstanding at the beginning of the year	1,080	\$ 21.38		
Granted	—	\$ —		
Exercised	—	\$ —		
Expired	(855)	\$ 20.62		
Forfeited	—	\$ —		
Outstanding at the end of the year ⁽¹⁾	225	\$ 24.30	1.06	\$ —
Options exercisable at year end	225	\$ 24.30	1.06	\$ —

(1) All options outstanding as of December 31, 2017 are fully vested.

(2) The aggregate intrinsic value represents the total pre-tax intrinsic value (the difference between the closing stock price on the last trading day of 2017 and the exercise price, multiplied by the number of in-the-money options) that would have been received by the option holders had all option holders exercised their options on the last trading day of 2017 (December 29, 2017). The intrinsic value changes based on the fair market value of our common stock.

Effective January 1, 2017 we adopted FASB issued ASU2016-09 Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting to simplify the accounting for employee share-based payments, including income tax impacts, classification on the statement of cash flows, and forfeitures. For additional information see *Note 1. Organization and Summary of Significant Accounting Policies*. The new guidance requires excess tax benefits and deficiencies to be recognized in the statement of operations. We recognized tax expense in our provision for income taxes during the year ended December 31, 2017. Excess tax benefits were not recognized \$1 million for financial reporting purposes in the prior periods. Future realization of the tax benefit will be presented in cash flows from financing activities in the consolidated statements of cash flows in the period the tax benefit is recognized.

NOTE 16. COMMITMENTS AND CONTINGENCIES

We and/or our subsidiaries are party to a number of claims, lawsuits and pending actions, most of which are routine and all of which are incidental to our business. We assess the likelihood of potential losses on an ongoing basis and when losses are considered probable and reasonably estimable, record as a loss an estimate of the outcome. If we can only estimate the range of a possible loss, an amount representing the low end of the range of possible outcomes is recorded. Our assessments are based on estimates and assumptions that have been deemed reasonable by management, but the assessment process relies on estimates and assumptions that may prove to be incomplete or inaccurate, and unanticipated events or circumstances may occur that might cause us to change those estimates and assumptions. The final consequences of these proceedings are not presently determinable with certainty. As of December 31, 2017 and 2016, accruals for our loss contingencies approximated \$18 million and \$11 million, respectively.

Environmental Matters

Our operations are subject to environmental regulatory laws and environmental remediation laws. Although our operations are occasionally subject to proceedings and orders pertaining to emissions into the environment and other environmental violations, which may result in fines, penalties, damages or other sanctions, we believe that we are in substantial compliance with existing environmental laws and regulations.

We may be identified, along with other entities, as being among parties potentially responsible for contribution to costs associated with the correction and remediation of environmental conditions at disposal sites subject to federal and/or analogous state laws. In certain instances, we may be exposed to joint and several liabilities for remedial action or damages. Our liability in connection with such environmental claims will depend on many factors, including our volumetric share of waste, the total cost of remediation, and the financial viability of other companies that also sent waste to a given site and, in the case of divested operations, the contractual arrangement with the purchaser of such operations.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The potential costs related to the matters described below and the possible impact on future operations are uncertain due in part to the complexity of governmental laws and regulations and their interpretations, the varying costs and effectiveness of cleanup technologies, the uncertain level of insurance or other types of recovery and the questionable level of our responsibility. Although the ultimate outcome and expense of any litigation, including environmental remediation, is uncertain, we believe that the following proceedings will not have a material adverse effect on our consolidated results of operations, financial position or cash flows.

Lower Passaic River Matter. In August 2004, the United States Environmental Protection Agency (the “EPA”) notified our subsidiary, Covanta Essex Company (“Essex”), that it was a potentially responsible party (“PRP”) for Superfund response actions in the Lower Passaic River Study Area, referred to as “LPRSA,” a 17 mile stretch of river in northern New Jersey. Essex’s LPRSA costs to date are not material to its financial position and results of operations; however, to date the EPA has not sought any LPRSA remedial costs or natural resource damages against PRPs. On March 3, 2016, the EPA released the Record of Decision (“ROD”) for its Focused Feasibility Study of the lower eight miles of the LPRSA; the EPA’s selected remedy includes capping/dredging of sediment, institutional controls and long-term monitoring. The Essex facility started operating in 1990 and Essex does not believe there have been any releases to the LPRSA, but in any event believes any releases would have been de minimis considering the history of the LPRSA; however, it is not possible at this time to predict that outcome or to estimate the range of possible loss relating to Essex’s liability in the matter, including for LPRSA remedial costs and/or natural resource damages.

Tulsa Matter. In January 2016, we were informed by the office of the United States Attorney for the Northern District of Oklahoma (“U.S. Attorney”) that our subsidiary, Covanta Tulsa Renewable Energy LLC, is the target of a criminal investigation being conducted by the EPA. We understand that the EPA is focused on alleged improprieties in the recording and reporting of emissions data during an October 2013 incident involving one of the three municipal waste combustion units at our Tulsa, Oklahoma facility. We believe that our operations in Tulsa were and are in compliance with existing laws and regulations in all material respects. While we can provide no assurance as to the outcome of this matter, we do not believe that the investigation or any issues arising therefrom will have a material adverse effect on our consolidated results of operations, financial position or cash flows.

Other Matters

Durham-York Contractor Arbitration

We are seeking to resolve outstanding disputes with our primary contractor for the Durham-York construction project regarding (i) claims by the contractor for change orders and other expense reimbursement and (ii) claims by us for charges and liquidated damages for project completion delays. Our contract with this contractor contemplates binding arbitration to resolve these disputes, which we expect will conclude in 2018. While we do not expect resolution of these disputes to have a material adverse impact on our financial position, it could be material to our results of operations and or cash flows in any given accounting period.

China Indemnification Claims

Subsequent to completing the exchange of our project ownership interests in China for a 15% ownership interest in Sanfeng Environment, Sanfeng Environment made certain claims for indemnification under the agreement related to the condition of the facility in Taixing. For additional information, see *Note 4. Dispositions and Assets Held for Sale* and *Note 18. Subsequent Events*.

Other Commitments

Other commitments as of December 31, 2017 were as follows (in millions):

	Commitments Expiring by Period		
	Total	Less Than One Year	More Than One Year
Letters of credit issued under the Revolving Credit Facility	\$ 192	\$ 20	\$ 172
Letters of credit - other	70	70	—
Surety bonds	196	—	196
Total other commitments — net	<u>\$ 458</u>	<u>\$ 90</u>	<u>\$ 368</u>

The letters of credit were issued to secure our performance under various contractual undertakings related to our domestic and international projects or to secure obligations under our insurance program. Each letter of credit relating to a project is required to be maintained in effect for the period specified in related project contracts, and generally may be drawn if it is not renewed prior to expiration of that period.

We believe that we will be able to fully perform under our contracts to which these existing letters of credit relate, and that it is unlikely that letters of credit would be drawn because of a default of our performance obligations. If any of these letters of credit were to be drawn by the beneficiary, the amount drawn would be immediately repayable by us to the issuing bank. If we do not immediately repay such amounts drawn under letters of credit issued under the Revolving Credit Facility, unreimbursed amounts would be treated under the Credit Facilities as either additional term loans or as revolving loans.

COVANTA HOLDING CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The surety bonds listed in the table above relate primarily to construction and performance obligations and support for other obligations, including closure requirements of various energy projects when such projects cease operating. Were these bonds to be drawn upon, we would have a contractual obligation to indemnify the surety company.

We have certain contingent obligations related to the 6.375% Notes, the 5.875% Notes due 2024, the 5.875% Notes due 2025, and Tax-Exempt Bonds. Holders may require us to repurchase their 6.375% Notes, 5.875% Notes due 2024, 5.875% Notes due 2025 and Tax-Exempt Bonds if a fundamental change occurs. For specific criteria related to the redemption features of the 6.375% Notes, 5.875% Notes due 2024, 5.875% Notes due 2025 and Tax-Exempt Bonds, see *Note 10. Consolidated Debt*.

We have issued or are party to guarantees and related contractual support obligations undertaken pursuant to agreements to construct and operate waste and energy facilities. For some projects, such performance guarantees include obligations to repay certain financial obligations if the project revenue is insufficient to do so, or to obtain or guarantee financing for a project. With respect to our businesses, we have issued guarantees to public sector clients and other parties that our subsidiaries will perform in accordance with contractual terms, including, where required, the payment of damages or other obligations. Additionally, damages payable under such guarantees for our energy-from-waste facilities could expose us to recourse liability on project debt. If we must perform under one or more of such guarantees, our liability for damages upon contract termination would be reduced by funds held in trust and proceeds from sales of the facilities securing the project debt and is presently not estimable. Depending upon the circumstances giving rise to such damages, the contractual terms of the applicable contracts, and the contract counterparty's choice of remedy at the time a claim against a guarantee is made, the amounts owed pursuant to one or more of such guarantees could be greater than our then-available sources of funds. To date, we have not incurred material liabilities under such guarantees.

New York City Contract Investments

In 2013, New York City awarded us a contract to handle waste transport and disposal from two marine transfer stations located in Queens and Manhattan. Service for the Queens marine transfer station began in early 2015 and service for the Manhattan marine transfer station is expected to follow pending notice to proceed to be issued by New York City which is anticipated in 2018. We expect to incur approximately \$30 million of additional capital expenditures, primarily for the purchase of transportation equipment, following receipt of notice to proceed.

NOTE 17. QUARTERLY DATA (UNAUDITED)

The following table presents quarterly unaudited financial data for the periods presented on the consolidated statements of operations (in millions, except per share amounts):

	Quarter Ended							
	March 31,		June 30,		September 30,		December 31,	
	2017	2016	2017	2016	2017	2016	2017	2016
Operating revenue	\$ 404	\$ 403	\$ 424	\$ 418	\$ 429	\$ 421	\$ 495	\$ 457
Operating (loss) income	\$ (23)	\$ (14)	\$ 20	\$ 5	\$ 46	\$ 60	\$ 58	\$ 58
Net (loss) income	\$ (52)	\$ (37)	\$ (37)	\$ (29)	\$ 15	\$ 54	\$ 131	\$ 8
(Loss) earnings per share:								
Basic	\$ (0.41)	\$ (0.29)	\$ (0.28)	\$ (0.23)	\$ 0.11	\$ 0.42	\$ 1.02	\$ 0.06
Diluted	\$ (0.41)	\$ (0.29)	\$ (0.28)	\$ (0.23)	\$ 0.11	\$ 0.42	\$ 1.01	\$ 0.06
Cash dividend declared per share: ..	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25

Net income for the quarter ended December 31, 2017 includes a net benefit of \$183 million or \$1.39 per diluted share associated with the enactment of the Tax Cuts and Jobs Act discussed further in *Note 14. Income Taxes*.

NOTE 18. SUBSEQUENT EVENTS

GIG Joint Venture

On February 12, 2018 as part of our partnership with GIG to develop, fund and own EfW projects in the U.K. and Ireland, GIG purchased a 50% indirect interest in our Dublin EfW project. For additional information on the transaction see *Note 3. New Business and Asset Management* and *Note 4. Dispositions and Assets Held for Sale*. We received proceeds of \$167 million and expect to record a gain on sale of assets in our first quarter 2018 consolidated statement of operations. Our 50% ownership in the joint venture will be accounted for under the equity method of accounting. Therefore, subsequent to the sale, our proportional share of net income from the joint venture will be reflected as "Equity in income from unconsolidated investments" on our consolidated statement of operations and cash distributions from the joint venture will be reflected as "Dividends from

COVANTA HOLDING CORPORATION AND SUBSIDIARIES

unconsolidated investments" on our consolidated statement of cash flows. The results of our wholly-owned O&M subsidiary will continue to be consolidated.

Sanfeng Environment sale to CITIC

On February 9, 2018 we sold our remaining investment in Sanfeng Environment and received proceeds of approximately \$7 million, net of a settlement payment for certain indemnification claims related to the previous sale of our ownership interests in China. For further information see *Note 4. Dispositions and Assets Held for Sale - China Investments*. We expect to record a gain on sale of assets in our first quarter 2018 consolidated statement of operations.

**Schedule II — Valuation and Qualifying Accounts
Receivables Valuation and Qualifying Accounts**

	Balance Beginning of Year	Additions		Deductions	Balance at End of Period
		Charged to Costs and Expense	Charged to Other Accounts		
			(In millions)		
2017 – Reserves for doubtful accounts .	\$ 9	\$ 9	\$ —	\$ 4	\$ 14
2016 – Reserves for doubtful accounts .	\$ 7	\$ 3	\$ —	\$ 1	\$ 9
2015 – Reserves for doubtful accounts .	\$ 6	\$ 1	\$ —	\$ —	\$ 7

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

There were no disagreements with accountants on accounting and financial disclosure.

Item 9A. CONTROLS AND PROCEDURES

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of Covanta's disclosure controls and procedures, as required by Rule 13a-15(b) and 15d-15(b) under the Securities Exchange Act of 1934 (the "Exchange Act") as of December 31, 2017. Our disclosure controls and procedures are designed to reasonably assure that information required to be disclosed by us in reports we file or submit under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding disclosure and is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms.

Our management, including our Chief Executive Officer and Chief Financial Officer, believes that any disclosure controls and procedures or internal controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must consider the benefits of controls relative to their costs. Inherent limitations within a control system include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by unauthorized override of the control. While the design of any system of controls is to provide reasonable assurance of the effectiveness of disclosure controls, such design is also based in part upon certain assumptions about the likelihood of future events, and such assumptions, while reasonable, may not take into account all potential future conditions. Accordingly, because of the inherent limitations in a cost effective control system, misstatements due to error or fraud may occur and may not be prevented or detected.

Our management has conducted an assessment of its internal control over financial reporting as of December 31, 2017 as required by Section 404 of the Sarbanes-Oxley Act. Management's report on our internal control over financial reporting is included on page 102. The Independent Registered Public Accounting Firm's report with respect to the effectiveness of our internal control over financial reporting is included on page 103.

As previously disclosed in Item 4 of our Quarterly Reports on Form 10-Q filed during the year ended December 31, 2017, our Chief Executive Officer and Chief Financial Officer concluded that we did not maintain effective internal controls over financial reporting because we had control deficiencies which constituted a "material weakness" in income tax accounting. Our Chief Executive Officer and Chief Financial Officer have concluded that, based on their reviews, the material weakness noted above has been remediated. As such, our Chief Executive officer and Chief Financial Officer have concluded that our disclosure controls and procedures are effective to provide the reasonable assurance described above.

Changes in Internal Control over Financial Reporting

As previously disclosed, our management concluded that there was a material weakness in our internal control over financial reporting related to the precision of the review to ensure the accuracy of certain cumulative deferred tax balances, including the precision of the review to ensure the accuracy of the state income tax rate applied to certain cumulative deferred tax balances and the review of the tax impact of certain business transactions.

We took the following steps to remediate the material weakness discussed above:

- Revised task assignments to ensure that discrete items impacting the blended state tax rate are subject to a more comprehensive review process by successive levels of management;
- Enhanced the review of the application of the state tax rate to cumulative deferred income tax balances;
- Implemented specific technologies minimizing our reliance on supplementary spreadsheets to perform tax calculations, reducing the risk of manual computational error and allowing for a more effective and timely review of tax accounting results;
- Implemented analytical procedures to validate actual tax accounting results to supplement internal control reviews using the expected impact of discrete items as a basis;
- Enhanced the analysis and formalized the documentation of tax-sensitive aspects of a business transaction, and;
- Enhanced the review of the above referenced tax analysis.

During the quarters ended March 31, June 30, September 30 and December 31, 2017, we continued to observe the operation of each of the control changes effected as part of our remediation efforts, for the purpose of evaluating their effectiveness over a period of time sufficient for management to conclude whether the reported material weakness has been remediated.

We have concluded that the period of time over which the operating effectiveness of our controls have been observed is sufficient for our Chief Executive Officer and Chief Financial Officer to conclude that this material weakness has been effectively remediated.

Our management has concluded that the identified material weakness in internal control over financial reporting discussed above was fully remediated as of December 31, 2017.

Except as noted in the preceding paragraphs, there has not been any change in our system of internal control over financial reporting during the quarter ended December 31, 2017 that has materially affected, or is reasonably likely to materially affect, internal control over financial reporting.

Management’s Report on Internal Control over Financial Reporting

The management of Covanta Holding Corporation (“Covanta”) is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f).

All internal control systems, no matter how well designed, have inherent limitations including the possibility of human error and the circumvention or overriding of controls. Further, because of changes in conditions, the effectiveness of internal controls may vary over time. 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. Accordingly, even those systems determined to be effective can provide us only with reasonable assurance with respect to financial statement preparation and presentation.

Covanta’s management has assessed the effectiveness of internal control over financial reporting as of December 31, 2017, following the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control - Integrated Framework (2013 Framework). Based on our assessment under the framework in Internal Control - Integrated Framework (2013 Framework), Covanta’s management has concluded that our internal control over financial reporting was effective as of December 31, 2017.

Our independent auditors, Ernst & Young LLP, have issued an attestation report on our internal control over financial reporting. This report appears on page 103 of this report on Form 10-K for the year ended December 31, 2017.

/s/ Stephen J. Jones

Stephen J. Jones
President and Chief Executive Officer

/s/ Bradford J. Helgeson

Bradford J. Helgeson
Executive Vice President and Chief Financial Officer

February 26, 2018

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Covanta Holding Corporation

Opinion on Internal Control over Financial Reporting

We have audited Covanta Holding Corporation's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Covanta Holding Corporation (the Company) maintained, in all material aspects, effective internal control over financial reporting as of December 31, 2017, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), consolidated balance sheets of the Company as of December 31, 2017 and 2016, and the related consolidated statements of operations, comprehensive income (loss), equity and cash flows for each of the three years in the period ended December 31, 2017, and the related notes and financial statement schedule listed in the Index at Item 8 of the Company and our report dated February 26, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Report of Management on Covanta Holding Corporation's Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCOAB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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/ Ernst & Young LLP

Iselin, New Jersey
February 26, 2018

Item 9B. OTHER INFORMATION

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information regarding our executive officers is incorporated by reference herein from the discussion under *Item 1. Business — Executive Officers* of this Annual Report on Form 10-K. We have a Code of Conduct and Ethics for Senior Financial Officers and a Policy of Business Conduct. The Code of Conduct and Ethics applies to our Chief Executive Officer, Chief Financial Officer, Chief Accounting Officer, Controller or persons performing similar functions. The Policy of Business Conduct applies to all of our directors, officers and employees and those of our subsidiaries. Both the Code of Conduct and Ethics and the Policy of Business Conduct are posted on our website at www.covanta.com on the Corporate Governance page. We will post on our website any amendments to or waivers of the Code of Conduct and Ethics or Policy of Business Conduct for executive officers or directors, in accordance with applicable laws and regulations. The remaining information called for by this Item 10 is incorporated by reference herein from the discussions under the headings “Election of Directors,” “Board Structure and Composition — Committees of the Board,” and “Security Ownership of Certain Beneficial Owners and Management — Section 16(a) Beneficial Ownership Reporting Compliance” in our definitive Proxy Statement for the 2018 Annual Meeting of Stockholders.

Item 11. EXECUTIVE COMPENSATION

The information required by Item 11 of Form 10-K is incorporated by reference herein from the discussions under the headings “Compensation Committee Report,” “Board Structure and Composition — Compensation of the Board,” and “Executive Compensation” in our definitive Proxy Statement for the 2018 Annual Meeting of Stockholders.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by Item 12 of Form 10-K is incorporated by reference herein from the discussion under the headings “Security Ownership of Certain Beneficial Owners and Management” and “Equity Compensation Plan Information” in our definitive Proxy Statement for the 2018 Annual Meeting of Stockholders.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 13 of Form 10-K is incorporated by reference herein from the discussions under the headings “Board Structure and Composition” and “Certain Relationships and Related Person Transactions” in the definitive Proxy Statement for the 2018 Annual Meeting of Stockholders.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by Item 14 of Form 10-K is incorporated by reference herein from the discussion under the heading “Independent Registered Public Accountant Fees” in the definitive Proxy Statement for the 2018 Annual Meeting of Stockholders.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) Documents filed as part of this report:

(1) Consolidated Financial Statements of Covanta Holding Corporation:

Included in Part II of this Report:

Consolidated Statements of Operations for the years ended December 31, 2017, 2016 and 2015

Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2017, 2016 and 2015

Consolidated Balance Sheets as of December 31, 2017 and 2016

Consolidated Statements of Cash Flows for the years ended December 31, 2017, 2016 and 2015

Consolidated Statements of Equity for the years ended December 31, 2017, 2016 and 2015

Notes to Consolidated Financial Statements, for the years ended December 31, 2017, 2016 and 2015

Report of Ernst & Young LLP, Independent Registered Public Accounting Firm, on the consolidated financial statements of Covanta Holding Corporation for the years ended December 31, 2017, 2016 and 2015

(2) Financial Statement Schedules of Covanta Holding Corporation:

Included in Part II of this report: Schedule II — Valuation and Qualifying Accounts

All other schedules are omitted because they are not applicable, not significant or not required, or because the required information is included in the financial statement notes thereto.

(3) Exhibits:

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
Articles of Incorporation and By-Laws.	
3.1†	Restated Certificate of Incorporation of Covanta Holding Corporation (incorporated herein by reference to Exhibit 3.1 of Covanta Holding Corporation's Current Report on Form 8-K dated January 19, 2007 and filed with the SEC on January 19, 2007).
3.2†	Amended and Restated Bylaws of Covanta Holding Corporation, effective December 8, 2011 (incorporated herein by reference to Exhibit 3.1(ii) of Covanta Holding Corporation's Current Report on Form 8-K dated September 19, 2013 filed with the SEC on September 20, 2013).
Instruments Defining Rights of Security Holders, Including Indentures.	
4.1†	Registration Rights Agreement dated November 8, 2002 among Covanta Holding Corporation and SZ Investments, L.L.C. (incorporated herein by reference to Exhibit 10.6 of Covanta Holding Corporation's Annual Report on Form 10-K for the year ended December 27, 2002 and filed with the SEC on March 27, 2003).
4.2†	Registration Rights Agreement between Covanta Holding Corporation, D.E. Shaw Laminar Portfolios, L.L.C., SZ Investments, L.L.C., and Third Avenue Trust, on behalf of The Third Avenue Value Fund Series, dated December 2, 2003 (incorporated herein by reference to Exhibit 4.1 of Covanta Holding Corporation's Current Report on Form 8-K dated December 2, 2003 and filed with the SEC on December 5, 2003).
4.3†	Indenture dated as of January 18, 2007 between Covanta Holding Corporation and Wells Fargo Bank, National Association, as trustee (incorporated herein by reference to Exhibit 4.1 of Covanta Holding Corporation's Registration Statement on Form S-3 (Reg. No. 333-140082) filed with the SEC on January 19, 2007).
4.4†	Second Supplemental Indenture dated as of December 1, 2010 between Covanta Holding Corporation and Wells Fargo Bank, National Association, as trustee (including the Form of Note) (incorporated herein by reference to Exhibit 4.3 of Covanta Holding Corporation's Current Report on Form 8-K dated December 1, 2010 and filed with the SEC on December 1, 2010).
4.5†	Third Supplemental Indenture dated as of March 19, 2012 between Covanta Holding Corporation and Wells Fargo Bank, National Association, as trustee (incorporated herein by reference to Exhibit 4.2 of Covanta Holding Corporation's Current Report on Form 8-K dated March 19, 2012 and filed with the SEC on March 19, 2012).
4.6†	Fourth Supplemental Indenture dated as of March 6, 2014 between Covanta Holding Corporation and Wells Fargo Bank, National Association, as trustee (incorporated herein by reference to Exhibit 4.2 of Covanta Holding Corporation's Current Report on Form 8-K dated March 6, 2014 and filled with the SEC on March 6, 2014).
Material Contracts.	
10.1†	Tax Sharing Agreement, dated as of March 10, 2004, by and between Covanta Holding Corporation, Covanta Energy Corporation, and Covanta Power International Holdings, Inc. (incorporated herein by reference to Exhibit 10.25 of Covanta Holding Corporation's Annual Report on Form 10-K for the year ended December 31, 2003 and filed with the SEC on March 15, 2004).
10.2†	Amendment No. 1 to Tax Sharing Agreement, dated as of June 24, 2005, by and between Covanta Holding Corporation, Covanta Energy Corporation and Covanta Power International Holdings, Inc., amending Tax Sharing Agreement between Covanta Holding Corporation, Covanta Energy Corporation and Covanta Power International Holdings, Inc. dated as of March 10, 2004 (incorporated herein by reference to Exhibit 10.8 of Covanta Holding Corporation's Current Report on Form 8-K dated June 24, 2005 and filed with the SEC on June 30, 2005).
10.3†*	Covanta Energy Savings Plan, as amended by December 2003 amendment (incorporated herein by reference to Exhibit 10.25 of Covanta Holding Corporation's Annual Report on Form 10-K for the year ended December 31, 2004 and filed with the SEC on March 16, 2005).

- 10.4† Rehabilitation Plan Implementation Agreement, dated January 11, 2006, by and between John Garamendi, Insurance Commissioner of the State of California, in his capacity as Trustee of the Mission Insurance Company Trust, the Mission National Insurance Company Trust and the Enterprise Insurance Company Trust, on the one hand, and Covanta Holding Corporation, on the other hand (incorporated herein by reference to Exhibit 10.1 of Covanta Holding Corporation's Current Report on Form 8-K dated March 2, 2006 and filed with the SEC on March 6, 2006).
- 10.5† Amendment to Rehabilitation Plan Implementation Agreement, accepted and agreed to on March 17, 2006 (incorporated herein by reference to Exhibit 10.1 of Covanta Holding Corporation's Current Report on Form 8-K dated March 17, 2006 and filed with the SEC on March 20, 2006).
- 10.6† Amendment to Agreement Regarding Closing (Exhibit A to the Rehabilitation Plan Implementation Agreement), dated January 10, 2006, by and between John Garamendi, Insurance Commissioner of the State of California, in his capacity as Trustee of the Mission Insurance Company Trust, the Mission National Insurance Company Trust, and the Enterprise Insurance Company Trust, on the one hand, and Covanta Holding Corporation, on the other hand (incorporated herein by reference to Exhibit 10.2 of Covanta Holding Corporation's Current Report on Form 8-K dated March 2, 2006 and filed with the SEC on March 6, 2006).
- 10.7† Pledge and Security Agreement, dated as of March 28, 2012, between each of Covanta Energy Corporation and the other grantors party thereto, and Bank of America, N.A., as Collateral Agent (incorporated herein by reference to Exhibit 10.2 of Covanta Holding Corporation's Current Report on Form 8-K dated March 28, 2012 and filed with the SEC on March 30, 2012).
- 10.8† Pledge Agreement, dated as of March 28, 2012, between Covanta Holding Corporation and Bank of America, N.A., as Collateral Agent (incorporated herein by reference to Exhibit 10.3 of Covanta Holding Corporation's Current Report on Form 8-K dated March 28, 2012 and filed with the SEC on March 30, 2012).
- 10.9† Intercompany Subordination Agreement, dated as of March 28, 2012, among Covanta Energy Corporation, Covanta Holding Corporation, certain subsidiaries of Covanta Energy Corporation, as Guarantor Subsidiaries, certain other subsidiaries of Covanta Energy Company, as non-guarantor subsidiaries, and Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.4 of Covanta Holding Corporation's Current Report on Form 8-K dated March 28, 2012 and filed with the SEC on March 30, 2012).
- 10.10† Form of Covanta Holding Corporation Indemnification Agreement, entered into with each Director and Officer (incorporated herein by reference to Exhibit 10.1 of Covanta Holding Corporation's Current Report on Form 8-K dated December 6, 2007 and filed with the SEC on December 12, 2007).
- 10.11† Equity Commitment for Rights Offering between Covanta Holding Corporation and SZ Investments L.L.C. dated February 1, 2005 (incorporated herein by reference to Exhibit 10.2 of Covanta Holding Corporation's Current Report on Form 8-K dated January 31, 2005 and filed with the SEC on February 2, 2005).
- 10.12† Equity Commitment for Rights Offering between Covanta Holding Corporation and EGI-Fund (05-07) Investors, L.L.C. dated February 1, 2005 (incorporated herein by reference to Exhibit 10.3 of Covanta Holding Corporation's Current Report on Form 8-K dated January 31, 2005 and filed with the SEC on February 2, 2005).
- 10.14† Loan Agreement, dated as of November 1, 2012, by and between Covanta Holding Corporation and the Massachusetts Development Finance Agency (incorporated by reference to Exhibit 10.1 of Covanta Holding Corporation's Current Report on Form 8-K dated November 15, 2012 and filed with the SEC on November 19, 2012).
- 10.15† Loan Agreement, dated as of November 1, 2012, by and between Covanta Holding Corporation and the Niagara Area Development Corporation Agency (incorporated herein by reference to Exhibit 10.2 of Covanta Holding Corporation's Current Report on Form 8-K dated November 15, 2012 and filed with the SEC on November 19, 2012).
- 10.16† Guaranty Agreement, dated as of November 1, 2012, by and between Covanta Energy Corporation and Wells Fargo Bank, National Association, pursuant to the Loan Agreement, dated as of November 1, 2012, by and between Covanta Holding Corporation and the Massachusetts Development Finance Agency (incorporated herein by reference to Exhibit 10.3 of Covanta Holding Corporation's Current Report on Form 8-K dated November 15, 2012 and filed with the SEC on November 19, 2012).
- 10.17† Guaranty Agreement, dated as of November 1, 2012, by and between Covanta Energy Corporation and Wells Fargo Bank, National Association, pursuant to the Loan Agreement, dated as of November 1, 2012, by and between Covanta Holding Corporation and the Niagara Area Development Corporation Agency (incorporated herein by reference to Exhibit 10.4 of Covanta Holding Corporation's Current Report on Form 8-K dated November 15, 2012 and filed with the SEC on November 19, 2012).

- 10.18† . . . Agreement, dated as of August 22, 2013, by and among Covanta Holding Corporation and John M. Huff, as Director of the Missouri Department of Insurance, Financial Institutions and Professional Registration (the "Trustee") solely in his capacity as trustee and statutory receiver of the Mission Reinsurance Corporation Trust and the Holland-America Insurance Company Trust (incorporated herein by reference to Exhibit 10.1 of Covanta Holding Corporation's Quarterly Report on Form 10-Q dated October 24, 2013 and filed with the SEC on October 24, 2013).
- 10.19†* . . . Covanta Holding Corporation 2014 Equity Award Plan (incorporated herein by reference to Exhibit 4.1 of Covanta Holding Corporation's Registration Statement on Form S-8 filed with the SEC on May 8, 2014).
- 10.20†* . . . Form of Covanta Holding Corporation Stock Option Agreement for Employees and Officers (incorporated herein by reference to Exhibit 4.3 of Covanta Holding Corporation's Registration Statement on Form S-8 filed with the SEC on May 7, 2008).
- 10.21†* . . . Form of Growth Equity Award Agreement (incorporated herein by reference to Exhibit 10.1 of Covanta Holding Corporation's Current Report on Form 8-K dated February 24, 2010 and filed with the SEC on March 2, 2010).
- 10.22†* . . . Covanta Energy Corporation Senior Officers Severance Plan (incorporated herein by reference to Exhibit 10.2 of Covanta Holding Corporation's Current Report on Form 8-K dated February 24, 2010 and filed with the SEC on March 2, 2010).
- 10.25* . . . Form of Covanta Holding Corporation Restricted Stock Award Agreement for Directors.
- 10.26†* . . . Form of Covanta Holding Corporation TSR Award Agreement for Employees and Officers (incorporated herein by reference to Exhibit 10.4 of Covanta Holding Corporation's Quarterly Report on Form 10-QA dated August 11, 2014 and filed with the SEC on August 11, 2014).
- 10.27†* . . . Form of Covanta Holding Corporation Stock Option Award Agreement for Directors (incorporated herein by reference to Exhibit 10.5 of Covanta Holding Corporation's Quarterly Report on Form 10-QA dated August 11, 2014 and filed with the SEC on August 11, 2014).
- 10.28†* . . . Form of Covanta Holding Corporation Restricted Stock Unit Agreement for Directors (incorporated herein by reference to Exhibit 10.35 of Covanta Holding Corporation's Annual Report on Form 10-K for the year ended December 31, 2016 and filed with the SEC on February 28, 2017).
- 10.29† . . . Amended and Restated Credit and Guaranty Agreement, dated as of April 10, 2015, among Covanta Energy, LLC, Covanta Holding Corporation, certain subsidiaries of Covanta Energy, LLC, as guarantors, the lenders party thereto, Bank of America, N.A., as Administrative Agent, Collateral Agent and Issuing Bank, Credit Agricole Corporate and Investment Bank, JPMorgan Chase Bank, N.A., Citizens Bank, N.A. and MUFG Union Bank, N.A, as Syndication Agents, and TD Bank, N.A., Sumitomo Mitsui Banking Corporation and Compass Bank, as Co-Documentation Agents (incorporated herein by reference to Exhibit 10.1 of Covanta Holding Corporation's Current Report on Form 8-K dated April 10, 2015 and filed with the SEC on April 20, 2015).
- 10.30†* . . . Succession Agreement by and among Covanta Holding Corporation, Covanta Energy LLC, Covanta Projects LLC and Anthony J. Orlando dated January 5, 2015 (incorporated herein by reference to Exhibit 10.2 of Covanta Holding Corporation's Current Report on Form 8-K dated January 5, 2015 and filed with the SEC on January 5, 2015).
- 10.31†* . . . Offer Letter from Covanta Holding Corporation to Stephen J. Jones dated January 5, 2015 (incorporated herein by reference to Exhibit 10.1 of Covanta Holding Corporation's Current Report on Form 8-K dated January 5, 2015 and filed with the SEC on January 5, 2015).
- 10.32†* . . . Offer Letter from Covanta Holding Corporation to Michael J. de Castro dated May 12, 2015 (incorporated herein by reference to Exhibit 10.1 of Covanta Holding Corporation's Current Report on Form 8-K dated June 2, 2015 and filed with the SEC on June 2, 2015).
- 10.33†* . . . Form of Covanta Holding Corporation 2014 Equity Award Plan Performance Share Award Agreement for Employees and Officers (incorporated herein by reference to Exhibit 10.1 of Covanta Holding Corporation's Current Report on Form 8-K dated March 2, 2016 and filed with the SEC on March 3, 2016).
- 10.34†* . . . Form of Covanta Holding Corporation Restricted Stock Award Agreement for Senior Officers (incorporated herein by reference to Exhibit 10.34 of Covanta Holding Corporation's Annual Report on Form 10-K for the year ended December 31, 2016 and filed with the SEC on February 28, 2017).
- 10.35†* . . . Form of Covanta Holding Corporation Restricted Stock Unit Agreement for Senior Officers (incorporated herein by reference to Exhibit 10.35 of Covanta Holding Corporation's Annual Report on Form 10-K for the year ended December 31, 2016 and filed with the SEC on February 28, 2017).

Other.

12.1	Computation of Ratio of Earnings to Fixed Charges
21.1	Subsidiaries of the Registrant
23.1	Consent of Independent Registered Public Accounting Firm
31.1	Certification pursuant to Section 302 of Sarbanes-Oxley Act of 2002 by the Chief Executive Officer.
31.2	Certification pursuant to Section 302 of Sarbanes-Oxley Act of 2002 by the Chief Financial Officer.
32	Certification of periodic financial report pursuant to Section 906 of Sarbanes-Oxley Act of 2002 by the Chief Executive Officer and Chief Financial Officer.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Calculation Linkbase
101.LAB	XBRL Taxonomy Extension Labels Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Document

† Not filed herewith, but incorporated herein by reference.

* Management contract or compensatory plan or arrangement.

Pursuant to paragraph 601(b)(4)(iii)(A) of Regulation S-K, the registrant has omitted from the foregoing list of exhibits, and hereby agrees to furnish to the Securities and Exchange Commission, upon its request, copies of certain instruments, each relating to long-term debt not exceeding 10% of the total assets of the registrant and its subsidiaries on a consolidated basis.

(b) Exhibits: See list of Exhibits in this Part IV, Item 15(a)(3) above.

(c) Financial Statement Schedules: See Part IV, Item 15(a)(2) above.

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Stephen J. Jones, certify that:

1. I have reviewed this Annual Report on Form 10-K of Covanta Holding Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ STEPHEN J. JONES

Stephen J. Jones

President and Chief Executive Officer

Date: February 26, 2018

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Bradford J. Helgeson, certify that:

1. I have reviewed this Annual Report on Form 10-K of Covanta Holding Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ BRADFORD J. HELGESON

Bradford J. Helgeson

Executive Vice President and Chief Financial Officer

Date: February 26, 2018

**Certification of Periodic Financial Report Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Annual Report on Form 10-K for the period ended December 31, 2017 of Covanta Holding Corporation as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Stephen J. Jones and Bradford J. Helgeson, as Chief Executive Officer and Chief Financial Officer, respectively, of Covanta Holding Corporation, each hereby certifies, pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to his knowledge:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Covanta Holding Corporation;

This certification accompanies the Report pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by the Sarbanes-Oxley Act of 2002, be deemed filed by Covanta Holding Corporation for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

A signed original of this written statement has been provided to Covanta Holding Corporation and will be retained by Covanta Holding Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

/s/ STEPHEN J. JONES

Stephen J. Jones

President and Chief Executive Officer

/s/ BRADFORD J. HELGESON

Bradford J. Helgeson

Executive Vice President and Chief Financial Officer

Date: February 26, 2018

COVANTA
Powering Today. Protecting Tomorrow.