UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington D.C. 20549

Form 10-K

(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2016

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: 001-34112

Energy Recovery, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**01-0616867**
(State or Other Jurisdiction of Incorporation or Organization)	*(I.R.S. Employer Identification No.)*

1717 Doolittle Drive, San Leandro, CA 94577
(Address of Principal Executive Offices)

Registrant's telephone number, including area code: (510) 483-7370

Securities registered pursuant to Section 12(b) of the Securities Exchange Act of 1934:

Title of Each Class	Name of Exchange on Which Registered
Common stock, $0.001 par value	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark whether 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 Act.
☐Yes ☑No

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☑

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

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

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

The aggregate market value of the voting stock held by non-affiliates amounted to approximately $274 million on June 30, 2016.

The number of shares of the registrant's common stock outstanding as of February 28, 2017 was 53,880,311.

DOCUMENTS INCORPORATED BY REFERENCE

Parts of the Proxy Statement for the Registrant's Annual Meeting of Stockholders to be held on June 22, 2017 are incorporated by reference into Part III of this Annual Report on Form 10-K.

TABLE OF CONTENTS

FORWARD- LOOKING INFORMATION

This Annual Report on Form 10-K, including "Item 7– Management's Discussion and Analysis of Financial Condition and Results of Operations" and certain information incorporated by reference, contain forward-looking statements within the "safe harbor" provisions ofthe Private Securities Litigation Reform Act of 1995. Forward-looking statements in this report include, but are not limited to, statements about our expectations, objectives, anticipations, plans, hopes, beliefs, intentions, or strategies regarding the future.

Forward-looking statements represent our current expectations about future events, are based on assumptions, and involve risks and uncertainties. If the risks or uncertainties occur or the assumptions prove incorrect, then our results may differ materially from those set forth or implied by the forward-looking statements. Ourforward-looking statements are not guarantees of future performance or events.

Words such as "expects," "anticipates," "aims," "projects," "intends," "plans," "believes," "estimates," "seeks," variations of such words, and similar expressions are also intended to identify such forward-looking statements. These forward-looking statements are subject to risks, uncertainties, and assumptions that are difficult to predict; therefore, actual results may differ materially and adversely from those expressed in any forward-looking statements. Readers are directed to risks and uncertainties identified under "Item 1A – Risk Factors" and elsewhere in this report for factors that may cause actual results to be differentfrom those expressed in these forward-looking statements. Except as required by law, we undertake no obligation to revise or update publicly any forward-looking statements for any reason.

Forward-looking statements in this report include, without limitation, statements about the following:

- *our belief that levels of gross profit margin are sustainable to the extent that volume grows, we experience a favorable product mix, pricing remains stable, and we continue to realize cost savings through production efficiencies and enhanced yields;*
- *our plan to improve our existing energy recovery devices and to develop and manufacture new and enhanced versions of these devices;*
- *our belief that our PX® energy recovery devices are the most cost-effective energy recovery devices over time and will result in low life-cycle costs;*
- *our belief that our turbocharger devices have long operating lives;*
- *our objective of finding new applications for our technology and developing new products for use outside of desalination, including oil & gas applications;*
- *our expectation that our expenses for research and developmentand sales and marketing may increase as a result of diversification into markets outside of desalination;*
- *our expectation that we will continue to rely on sales of our energy recovery devices in the desalination market for a substantial portion of our revenue and that new desalination markets, including the United States, will provide revenue opportunities to us;*
- *our ability to meet projected new product development dates, anticipated cost reduction targets, or revenue growth objectives for new products;*
- *our belief that we can commercialize the VorTeq™ hydraulic fracturing system;*
- *our belief that customers will accept and adopt our new products;*
- *our belief that our current facilities will be adequate for the foreseeable future;*
- *our expectation that sales outside of the United States will remain asignificant portion of our revenue;*
- *the timing of our receipt of payment for products or services from our customers;*
- *our belief that our existing cash balances and cash generated from our operations will be sufficient to meet our anticipated liquidity needs for the foreseeable future, with the exception of a decision to enter into an acquisition and/or fund investments in newly developed technology arising from rapid market adoption that could require us to seek additional equity or debt financing;*
- *our expectation that, as we expand our international sales, a portion of our revenue could continue to be denominated in foreign currencies;*
- *our belief that new markets will grow in the water desalination market;*
- *our expectation that we will be able to enforce our intellectual property rights; and*
- *other factors disclosed under Items 1 – Business, Item 1A- Risk Factors, Item 2 – Properties, Item 7 – Management's Discussion and Analysis of Financial Condition and Results of Operation, Item 7A – Quantitative and Qualitative Disclosures about Market Risks and elsewhere in this Form 10-K.*

You should not place undue reliance on these forward-looking statements, which reflect management's opinions only as of the date of the filing of this Annual Report on Form 10-K. All forward-looking statements included in this document are subject to additionalrisks and uncertainties further discussed under "Item 1A – Risk Factors" and are based on information available to usas of March 9, 2017. We assume no obligation to update any such forward-looking statements. It is important to notethat our actual results could differ materially from the results set forth or implied by our forward-looking statements. The factors that could cause our actual resultsto differ from those included in such forward-looking statements are set forth under the heading "Item 1A – Risk Factors" and our results disclosed from time to timein our reports on Forms 10-Q and 8-K and our Annual Reports to Stockholders.

PART I

ITEM 1 — BUSINESS

OVERVIEW

Energy Recovery, Inc. (the "Company," "Energy Recovery," "our," "us," and "we") is an energy solutions provider to industrial fluid flow markets worldwide.Our core competencies are fluid dynamics and advanced material science. Our products make industrial processes more operational and capital expenditure efficient. Our solutions convert wasted pressure energy into a reusable asset and preserve or eliminate pumping technology in hostile processing environments. Our solutions are marketed and sold in fluid flow markets, such as water desalination, oil & gas, and chemical processing, under the trademarks ERI®, PX®, Pressure Exchanger®, PX Pressure Exchanger®, AT™, AquaBold™, VorTeq™, IsoBoost®, and IsoGen®. Our solutions are owned, manufactured, and/or developed, in whole or in part, in the United States of America ("U.S.") and the Republic of Ireland.

Energy Recovery was incorporated in Virginia in 1992, reincorporated in Delaware in 2001, and became a public company in July 2008. Our headquarters and primary manufacturing center is located at 1717 Doolittle Drive, San Leandro, California 94577, and we have four (4) wholly-owned subsidiaries: ERI Energy Recovery Holdings Ireland Limited; ERI Energy Recovery Ireland Ltd.; Energy Recovery Iberia, S.L.; and Energy Recovery Canada Corp. We also have sales offices in Dubai, United Arab Emirates and Shanghai, Peoples Republic of China. Our main telephone number is (510) 483-7370.

The Energy Recovery website is *www.energyrecovery.com*. We use the Investor Relations section of our website as a routine channel for distribution of important information, including news releases, presentations, and financial statements. We intend to use the Investor Relations section of our website as a means of complying with our disclosure obligations under Regulation FD. Accordingly, investors should monitor our Investor Relations website in addition to press releases, Securities and Exchange Commission ("SEC") filings, and public conference calls and webcasts. Our Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, all amendments to those reports, and the Proxy Statement for our Annual Meeting of Stockholders are made available, free of charge, in the Investor Relations section of our website, as soon as reasonably practicable after the reports have been filed with or furnished to the SEC. The information contained on our website or any other website is not part of this report nor is it considered to be incorporated by reference herein or with any other filing we make with the SEC.

FLUID FLOW MARKETS

Our primary industrial fluid flow markets are water desalination and oil & gas. We have been and continue to be the technology leader for energy recovery devices ("ERDs") in the water desalination market with our proprietary Pressure Exchanger ("PX") and turbocharger technologies. We also provide high-performance and high-efficiency pumps to facilitate a packaged solution for our customers. Building on our leading technology, we have expanded our technology solutions offering into other fluid flow markets, such as those found in upstream, midstream, and downstream applications of the oil & gas industry, and are exploring other end markets for which our solutions may be applicable. We offer the VorTeq hydraulic fracturing system ("VorTeq"), IsoBoost, and IsoGen product lines to the oil & gas market.

Water Desalination

Water desalination has been our core market for revenue generation to date. The water desalination market ranges from small water desalination plants such as those used in cruise ships and resorts, to mega-project desalination plant deployments globally. Because of the geographical location of many significant desalination projects, geopolitical and economic events can have an effect on the timing of expected projects. In addition, population and economic growth in countries such as India and China are driving water demand for human, agricultural, and industrial use. We anticipate that markets traditionally not associated with water desalination, including the United States, will inevitably develop and provide further revenue growth opportunities. Our solutions leverage our PX, turbocharger, and pump technologies providing our customers significant operational efficiency and energy savings.

Oil & Gas

Across the oil & gas upstream, midstream and downstream markets, highly pressurized fluid flows are required to extract and process oil and gas. These pressurized fluid flows are both a necessity and liability to the oil & gas industry.

Within the oil & gas upstream sector, hydraulic fracturing is a well-stimulation technique in which pressurized liquid containing a highly abrasive, proppant-laden fluid is injected into a wellbore to create cracks in deep-rock formations thereby permitting oil & gas extraction. Oilfield service providers utilize high-pressure hydraulic fracturing pumps to pressurize the fracturing fluid at treating pressures up to 15,000 psi. These pumps are routinely destroyed by the abrasive fluids during the hydraulic fracturing process causing significant oilfield service operator costs associated with excessive downtime, repairs, maintenance, and capital equipment redundancy. Our VorTeq leverages our PX technology to isolate high-pressure hydraulic fracturing pumps from abrasive fracturing fluid thereby enabling oilfield service operators to realize immediate and long-term savings.

Within the oil & gas midstream and downstream sectors, pressure energy becomes a waste product at different stages of oil and gas processing. It is at these stages that our IsoBoost and IsoGen technology enables the recovery of pressure energy in the fluid flow either through the exchange of pressure within the application or by converting it to electricity. Our technology enables gas processing plant and pipeline owners and operators to achieve immediate and long-term energy savings with little or no operational disruption.

OUR SOLUTIONS

Energy, repairs, maintenance, and capital costs are major cost drivers in the water desalination and oil & gas markets. Energy Recovery has developed proprietary technology solutions to address these major cost drivers. In the water desalination market, our energy recovery solutions reduce plant operating costs by capturing and reusing the otherwise lost pressure energy from the reject stream of the desalination process. In the oil & gas market, our hydraulic fracturing solution reduces operating and capital equipment costs by isolating high cost pumping equipment from highly abrasive fracturing fluids; while our centrifugal solutions reduce plant or pipeline operating costs by capturing and reusing otherwise lost pressure energy.

Water Desalination

Our water desalination ERDs are categorized into two technology groups: PX Pressure Exchangers and turbochargers. The first technology group is comprised of our patented PX ERD technology consisting of ceramic rotors and almost frictionless hydrodynamic bearings. Our PX ERDs enable water desalination plant operators to capture wasted hydraulic pressure energy from a high-pressure fluid flow and transfer the energy to a low-pressure fluid flow, thereby recovering wasted pressure energy. Our PX ERDs perform with up to 98% efficiency and unmatched uptime in the desalination industry, and can reduce a desalination plant’s energy costs by up to 60%.

The second technology group is comprised of turbochargers (“AT Turbochargers”) designed for low-pressure brackish and high-pressure seawater reverse osmosis systems. Our AT Turbochargers provide premium efficiency with state-of-the-art engineering and configuration. Designed for reliability and optimum efficiency, our turbochargers offer substantial savings, and the custom-designed hydraulics and 3-D geometry allow for optimum performance. Also, the patent-protected technology for volute inserts allows field flexibility.

Complementing both our PX ERDs and AT Turbochargers are our high-performance, high-efficiency pumps.

Oil & Gas

In the oil & gas market, we design and manufacture innovative solutions that preserve or eliminate pumping technology in hostile processing environments and convert wasted pressure energy into a reusable asset. Our core technology solutions are the VorTeq and our centrifugal line of products, the IsoBoost and the IsoGen.

The VorTeq is an enabling technology for oilfield service (“OFS”) companies to isolate and preserve costly hydraulic fracturing pumps by re-routing hostile fracturing fluid away from these critical pumps. These hydraulic fracturing pumps will then process only water, which leads to reduced repairs and maintenance costs, increased fleet revenue, and reduced capital costs by extending pump life expectancy and eliminating redundant capital equipment. The VorTeq further allows for the migration to increasingly efficient pumping technology that could lead to the revolutionizing of the hydraulic fracturing system.

During 2015, we conducted VorTeq field trials with Liberty Oil Field Services, our early stage test partner, culminating in the successful delivery of proppant to a well located in the Bakken Formation. In October 2015, through our subsidiary ERI Energy Recovery Ireland, Ltd., we entered into a fifteen-year license agreement with Schlumberger Technology Corporation (the “VorTeq Licensee”) for the exclusive, worldwide right to use the VorTeq for hydraulic fracturing onshore operations. The VorTeq is currently in the research and development stage and we are actively working towards commercialization.

IsoBoost and IsoGen technologies were commercialized in 2012. Our IsoBoost energy recovery systems are comprised of hydraulic turbo chargers and related controls and automation systems. The IsoBoost enable oil & gas operators to capture wasted hydraulic pressure energy from a high-pressure fluid flow and transfer the energy to a low-pressure fluid flow, thereby recovering wasted pressure energy. Our IsoGen energy recovery systems are comprised of hydraulic turbines, generators, and related controls and automation systems. The IsoGen enables oil & gas operators to capture hydraulic energy and generate electricity from high-pressure fluid flows. Additionally, our energy recovery and power generation systems result in lower capital costs for oil & gas operators by minimizing the need for high-pressure pumps that consume large amounts of energy.

We have contracted and delivered oil and gas solutions, as pilot projects, to customers in North America, Asia, and the Middle East for use in gas processing and ammonia processing applications. In 2015, we commissioned our first IsoGen unit in a major gas processing plant in the Middle East. In 2016, we received our first major purchase order for multiple units of our IsoBoost technology for integration into a major gas processing plant to be constructed in the Middle East. The contract is for approximately $7 million worth of equipment and services with an option for an additional $4 million to be determined at a later date, which may or may not be exercised. The optional supply may not be confirmed by the customer until the latter portion of 2017.

Services

We provide a portfolio of services tailored to our customers’ needs. Specifically, we assist our customers in the early stages of planning and design by leveraging our broad experience in fluid flows and advanced material science. We also provide engineering, technical support, and training to customers during installation and commissioning. Additionally, we offer preventive maintenance and support services as well as reinstallation services. To date, the revenue from these services has not represented a significant portion of our revenue.

CUSTOMERS

Water Desalination

Our water desalination customers include major international engineering, procurement, and construction (“EPC”) firms that design and build large desalination plants; original equipment manufacturers (“OEM”) which are companies that supply equipment and packaged solutions for small- to medium-sized desalination plants; and national, state and local municipalities worldwide.

<u>Large Engineering, Procurement and Construction Firms</u>

A significant portion of our revenue historically has come from sales of our ERD solutions to large EPC firms worldwide that have the required desalination expertise to engineer, undertake procurement for, construct, and sometimes own and operate, large desalination plants or mega-projects (“MPD”). We work with these firms to specify our solutions for their plants. The time between project tender and shipment can range from sixteen (16) to thirty-six (36) months. Each MPD project typically represents a revenue opportunity of $1 million to $10 million.

A limited number of these EPC firms can account for 10% or more of our product revenue. Revenue from customers representing 10% or more of product revenue varies from year to year. For the years ended December 31, 2016 and 2015, one customer, Acciona Agua, S.A.U., accounted for approximately 11% and 14%, respectively, of total product revenue. For the year ended December 31, 2014, one customer, IDE Americas, Inc., accounted for approximately 14% of total product revenue.

<u>Original Equipment Manufacturers</u>

We also sell our solutions and services to OEM suppliers of pumps and other water-related equipment for assembly and use in small- to medium-sized desalination plants located in hotels, power plants, cruise ships, farm operations, island bottlers, mobile and containerized water desalination solutions, and small municipalities. These OEMs also purchase our solutions for “quick water” or emergency water solutions. The time from project tender and shipment can range from one (1) to twelve (12) months. OEM projects typically represent revenue opportunities of $0.01 million to $1 million.

Our OEM customer base accounted for approximately 39%, 45%, and 57% of our total revenues, for the years ended December 31, 2016, 2015, and 2014, respectively. We typically sell and promote our packaged solutions to this sales channel represented by a product mix of PX Pressure Exchangers, turbochargers, high-pressure pumps, and circulation "booster" pumps.

Oil & Gas

Our oil & gas customers include international oil companies ("IOC"), national oil companies ("NOC"), exploration and production companies ("E&P"), oilfield service companies ("OFS"), and EPC firms that design and build oil & gas processing plants.

Upstream

OFS companies provide the infrastructure, equipment, intellectual property, and services needed by the oil & gas industry to explore for, extract, and transport crude oil and natural gas. OFS hydraulic fracturing operators face significant pressure to reduce costs as oil & gas companies curtail capital expenditures and seek operational efficiencies in response to lower commodity prices. We developed the VorTeq which enables these operators to isolate pumps from fracturing fluid thereby reducing operating and capital costs.

In the third quarter of 2014, we entered into a strategic partnership with Liberty Oil Field Services to pilot and conduct field trials with the VorTeq. These field trials commenced in the second quarter of 2015 and were completed in the fourth quarter of 2015 with the successful delivery of proppant to a well located in the Bakken Formation. In October 2015, we entered into a fifteen-year license agreement with the VorTeq Licensee for the exclusive, worldwide right to use our VorTeq technology for hydraulic fracturing onshore operations.

One customer, Schlumberger Technology Corporation, accounted for 100% of our license and development revenue for 2016 and 2015, which represented 9% and 2% of our total revenue for the years ended December 31, 2016 and 2015, respectively. There was no license and development revenue recognized for 2014.

Midstream and Downstream

We have contracted and delivered gas and oil solutions, as pilot projects, to customers in North America, Asia, and the Middle East for use in gas processing and/or ammonia processing applications. In 2015, we commissioned our first IsoGen unit in a major gas processing plant in the Middle East. In 2016, we received our first major purchase order for multiple units of our IsoBoost technology for integration into a major gas processing plant to be constructed in the Middle East.

For the year ended December 31, 2016, we recognized Oil & Gas Segment revenue from our licensing agreement with the VorTeq Licensee and from a purchase order for multiple units of our IsoBoost technology. For the year ended December 31, 2015, we recognized Oil & Gas Segment revenue from the license agreement with the VorTeq Licensee, a cancellation fee of an IsoBoost purchase order, and from the commissioning of an IsoGen system. For the year ended December 31, 2014, we recognized Oil & Gas Segment rental income from the operating lease and subsequent lease buy-out of an IsoGen system.

While one customer, Tecnicas Reunidas, accounted for 100% of our 2016 Oil & Gas Segment product revenue, no Oil & Gas Segment customer accounted for more than 10% of our total product revenue for the years ended December 31, 2016, 2015, and 2014, respectively.

Additional information regarding our product revenue by segment is included in Note 13 to the Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

COMPETITION

Water Desalination

The market for ERDs and pumps in the water desalination market is competitive. As the demand for fresh water increases and the market expands, we expect competition to persist and intensify.

We have three main competitors for our ERDs: Flowserve Corporation ("Flowserve"), Fluid Equipment Development Company ("FEDCO"), and Danfoss Group ("Danfoss"). We compete with these companies on the basis of price, quality, efficiency, lead time, life expectancy, downtime, and maintenance costs. Although these companies may offer competing solutions at lower initial price, our solutions offer a competitive advantage because we believe that they provide the lowest life-cycle cost and are therefore the most cost-effective ERDs for the reverse osmosis desalination industry over time.

In the market for large desalination projects, our PX ERDs and large turbochargers compete primarily with Flowserve's DWEER product. We believe that our PX ERDs have a competitive advantage over DWEER devices because our devices are made with highly durable and corrosion-resistant ceramic parts that are designed for a life of more than 25 years, are warranted for high efficiencies, cause no unplanned downtime, and offer lower lifecycle costs. Additionally, the PX ERDs offer optimum scalability with a quick startup as well as minimal maintenance. We believe that our large turbocharger solutions also have a competitive advantage over Flowserve's Pelton Turbine product, particularly in countries where energy costs are low and upfront capital costs are a critical factor in purchase decisions, because our turbocharger solutions have lower upfront capital costs, a simple design with one rotating assembly, a small physical footprint, and a long operating life that leads to low total lifecycle costs.

In the market for small-to-medium-sized desalination plants, our solutions compete with FEDCO's turbochargers and Danfoss's ERDs. We believe that our PX ERDs have a competitive advantage over these solutions because our devices provide up to 98% energy efficiency, have lower lifecycle maintenance costs, and are made of highly durable and corrosion-resistant ceramic parts. We also believe that our turbochargers compete favorably with FEDCO's turbochargers on the basis of efficiency and price and because our turbochargers have design advantages that enhance efficiency, field flexibility, and serviceability.

In the market for high-pressure pumps, our solutions compete with pumps manufactured by Clyde Union Ltd.; Düchting Pumpen Maschinenfabrik GmbH & Co KG; FEDCO; Flowserve; KSB Aktiengesellschaft; Torishima Pump Mfg. Co., Ltd.; Sulzer Pumps, Ltd.; and other companies. We believe that our pump solutions are competitive with these solutions because our pumps are developed specifically for reverse osmosis desalination, are highly efficient, and feature product-lubricated bearings.

Oil & Gas

The market for our technology in the oil & gas market is competitive. As demand for our products increase, we expect competition to intensify.

Within the oil & gas upstream market, OFS hydraulic fracturing operators utilize high-pressure hydraulic fracturing pumps to pressurize fracturing fluid. This fluid is sent through traditional missile manifolds into the wellbore to create cracks in the deep-rock formations thereby permitting oil & gas extraction. Our VorTeq is a hydraulic pumping system that replaces the traditional missile manifold used by OFS hydraulic fracturing operators. There are many manufacturers of the traditional missile manifolds.

We believe our VorTeq technology represents a competitive advantage over existing missile manifold technology because our solution re-routes abrasive proppant away from high-pressure pumps, thereby extending pump lifespan, reducing repairs and maintenance costs, and decreasing the need for redundant capital equipment. In addition, because our VorTeq technology isolates the high-pressure pumps from abrasive proppant, OFS hydraulic fracturing operators have the ability to transition to more robust, longer lived centrifugal pumps thereby further decreasing operating and capital costs.

Within the oil & gas midstream and downstream markets, acid gas removal — also known as amine gas treating — refers to a process that utilizes solvents such as an amine solution to remove acid gasses, specifically hydrogen sulfide (H_2S) and carbon dioxide (CO_2) from natural gas, synthesis gas, or other hydrocarbon streams. Our IsoBoost and IsoGen technologies integrate into acid gas removal systems to reduce energy consumption and increase the reliability and uptime of the amine circulation system. Currently, most acid gas removal plants use pumps and valves to pressurize and depressurize the amine solution and the depressurization of the cleansing fluid (e.g. amine) provides an opportunity for the use of ERDs.

Our IsoBoost system is based partly on hydraulic turbocharger technology. While to our knowledge the only turbocharger systems presently utilized in acid gas removal applications are manufactured by Energy Recovery, there is at least one established competitor, FEDCO, which makes a similar hydraulic turbocharger for desalination applications. We combine our highly competitive turbocharger technology with process equipment and control systems to make a unique, proprietary, and highly competitive offering for oil & gas and petrochemical plants.

Our IsoGen system is partly based on hydraulic turbine technology which converts recovered energy to electric power. Many other companies make hydraulic turbines for a broad range of applications. For acid gas removal plants, our competitors utilize reverse running pumps (also called hydraulic power recovery turbines or HPRTs) to perform the same energy recovery function that our IsoGen systems provide. These reverse running pumps are typically part of a large “skid-mounted” system, incorporating a multi-stage pump and motor, all rotating about a common shaft. Flowserve, Sulzer Pumps, Ltd, and Shin Nippon Machinery are known to have supplied these systems and other major pump companies may have built systems for this application as well. We believe most of our competitors’ reverse running pump systems present concerns related to reliability, operational flexibility, and low energy efficiency, as compared to our IsoGen solution.

Sales and Marketing

Energy Recovery has historically offered its products through a direct sales force and a capital sale procurement model. In 2015, the Company evolved its business model to a hybrid of direct capital sales and technology licensing. In 2016, the Company further expanded its procurement offerings to include energy service agreements, operating leases, and various forms of project financing.

We market and sell our solutions directly to customers through our direct sales organization and, in some countries, through authorized, independent sales agents. Our current sales organization consists of two groups: Water Desalination and Oil & Gas.

The Water Desalination group targets MPD, OEM, and aftermarket opportunities within the reverse osmosis desalination market. MPD opportunities are for desalination projects exceeding 50,000 cubic meters per day. OEM opportunities include sales of PX ERDs, turbochargers, and pumps for plants typically designed to produce less than 50,000 cubic meters per day. Aftermarket opportunities include new and replacement parts and products, as well as technical support, training, product installation, and plant commissioning.

Our Oil & Gas group targets IOCs, NOCs, E&Ps, OFSs, or EPCs on behalf of oil producers and chemical producers who have applications for our solutions and services.

Our sales branch in Dubai, United Arab Emirates serves the Middle East, where many water and oil & gas customers are located. We have a sales force in Spain focused on the Spain and European markets. We also have a sales office in Shanghai, China to address this emerging market for our energy recovery solutions. In North America, our sales office along with our corporate headquarters is located in San Leandro, California. As opportunities and diversification dictate, particularly in oil & gas, we will look to expand our geographical presence.

A significant portion of our revenue is from outside of the United States. Additional segment and geographical information regarding our product revenue is included in Note 13 to the Consolidated Financial Statements in Part II, Item 8 of this Form 10-K.

Manufacturing

Our primary Water Segment product manufacturing facility is located in San Leandro, California, where our ERDs and pumps are produced, assembled, and tested. We produce the majority of our ceramic components for our PX solutions in our advanced ceramics manufacturing facility, as well as complete machining and assemble of all ceramic components for our PX devices. In addition, many components of our turbochargers and pumps are also manufactured in San Leandro to protect the proprietary nature of our manufacturing methods and product designs and to maintain premium quality standards.

Our Oil & Gas Segment product manufacturing, assembly, and testing is conducted through our operations in Ireland. To produce our Oil & Gas Segment products, we utilize multiple supply chain partners and complete many machining, assembly, and testing operations in house to protect the proprietary nature of our manufacturing methods and product designs and to maintain premium quality standards. Our Ireland operations are also responsible for overseeing the commercialization of the VorTeq and expanding our manufacturing activities in Europe.

Research and Development

When developing products and ultimately markets for our products, we seek three distinct process criteria: (1) high rates of fluid flow; (2) large pressure differentials; and (3) high degrees of capital intensity, specifically in the form of pumping assets. Based on these criteria, our product development strategy is to identify fluid flow applications where pumps are being destroyed and/or where pressure energy is being wasted. Our technologies isolate pumping assets from hostile process fluids, or recover otherwise wasted pressure energy. Our research and development effort is therefore focused on (1) advancing new products in markets beyond desalination, with a specific and immediate emphasis on oil & gas, where our technology is utilized to preserve pumping assets; and (2) enhancing our existing energy recovery device and pumps for the water desalination market.

Energy Recovery developed a robust, multi-year product development road map which guides our research and development resource allocation. Specific to new product development, our focus is overwhelmingly on our proprietary pressure exchanger technology given its prohibitive nature and broad technical application. Our corporate objective is to achieve proof of concept of one new derivative of the pressure exchanger annually.

To support our product strategy, we have and will continue to invest in identifying and hiring strong engineering talent with expertise in fluid physics and advanced material science. In addition, to enable increasingly complex and shorter-cycle product development, we have invested in advanced numerical modeling and analysis infrastructure allowing for three-dimensional, multi-phase, multiphysics, computational fluid dynamics; this coupled with our existing structural interaction analytical capabilities supports our objective of achieving the proof of concept of one new derivative of the pressure exchanger each year.

Within our Water Segment, research and development investments have produced the latest and most efficient energy recovery device, the PX Prime. In addition, we continue to advance our turbocharger and pump technologies to better service our water end markets.

Within our Oil & Gas Segment, research and development investments are primarily focused on commercializing the VorTeq and developing products for applications where pumping assets are compromised due to hostile process fluids. We expect to announce a new product for these applications in 2017. Our priority remains the commercialization of our VorTeq.

Research and development expense totaled $10.1 million, $7.7 million, and $9.7 million for the years ended December 31, 2016, 2015, and 2014, respectively. Research and development costs are expensed as incurred. We expect research and development expenses to increase in the future as we further fund our product development road map and more broadly, execute against our product strategy.

Seasonality

In our Water Segment, we often experience substantial fluctuations in product revenue from quarter-to-quarter and from year-to-year because a single order for our ERDs by a large EPC firm for a particular plant may represent significant revenue. In addition, historically our EPC customers tend to order a significant amount of equipment for delivery in the fourth quarter, and as a consequence, a significant portion of our annual sales typically occur during the fourth quarter.

We do not currently have enough history to determine seasonal revenue patterns within our Oil & Gas Segment.

Intellectual Property

We seek patent protection for new technologies, inventions, and improvements that are likely to be incorporated into our solutions. We rely on patents, trade secret laws, and contractual safeguards to protect the proprietary tooling, processing techniques, and other know-how used in the production of our solutions. We have a robust intellectual property portfolio consisting of U.S. and International issued patents as well as pending patent applications.

We have registered the following trademarks with the United States Patent and Trademark office: “ERI,” “PX,” “PX Pressure Exchanger,” “Pressure Exchanger,” the Energy Recovery logo, “ERI Energy Recovery, Inc.,” “Making Desalination Affordable,” “AT,” “AquaBold,” “VorTeq,” “IsoBoost,” and “IsoGen.” We have also applied for and received registrations in international trademark offices.

In July 2015, the U.S. parent company transferred our Oil & Gas Segment intellectual property via platform license agreements to ERI Energy Recovery Holdings Ireland Limited.

Employees

As of December 31, 2016, we had 120 employees: 40 in manufacturing; 30 in corporate services and management; 28 in sales, service, and marketing; and 22 in engineering and research and development. Fourteen of these employees were located outside of the United States. We also engage a relatively small number of independent contractors, primarily as sales agents worldwide. We have not experienced any work stoppages, and our employees are not unionized.

Item 1A — Risk Factors

The following discussion sets forth what management currently believes could be the most significant risks and uncertainties that could impact our businesses, results of operations, and financial condition. Other risks and uncertainties, including those not currently known to the Company or its management, could also negatively impact our businesses, results of operations, and financial conditions. Accordingly, the following should not be considered a complete discussion of all of the risks and uncertainties the Company may face. We may amend or supplement these risk factors from time to time in other reports we file with the Securities and Exchange Commission ("SEC").

Risk Related to our Water Segment

- ***Our Water Segment depends on the construction of new desalination plants for revenue, and as a result, our operating results have experienced, and may continue to experience, significant variability due to volatility in capital spending, availability of project financing, and other factors affecting the water desalination industry.***

We currently derive the majority of our revenue from sales of products and services used in desalination plants for municipalities, hotels, mobile containerized desalination solutions, resorts, and agricultural operations in dry or drought-ridden regions of the world. The demand for our Water Segment products may decrease if the construction of desalination plants declines for political, economic, or other factors, especially in these dry or drought-ridden regions. Other factors that could affect the number and capacity of desalination plants built or the timing of their completion include the availability of required engineering and design resources; a weak global economy; shortage in the supply of credit and other forms of financing; changes in government regulation, permitting requirements, or priorities; and reduced capital spending for desalination. Each of these factors could result in reduced or uneven demand for our Water Segment products. Pronounced variability or delays in the construction of desalination plants or reductions in spending for desalination, could negatively impact our Water Segment sales and revenue, which in turn could have an adverse effect on our entire business, financial condition, or results of operations and make it difficult for us to accurately forecast our future sales and revenue.

- ***Our Water Segment faces competition from a number of companies that offer competing energy recovery and pump solutions. If any one of these companies produces superior technology or offers more cost-effective products, our competitive position in the market could be harmed and our profits may decline.***

The market for ERD and pumps for desalination plants is competitive and evolving. We expect competition, especially competition on price, to persist and intensify as the desalination market grows and new competitors enter the market. Some of our current and potential competitors may have significantly greater financial, technical, marketing, and other resources; longer operating histories; or greater name recognition. They may also have more extensive products and product lines that would enable them to offer multi-product or packaged solutions as well as competing products at lower prices or with other more favorable terms and conditions. As a result, our ability to sustain our market share may be adversely impacted, which would affect our business, operating results, and financial condition. In addition, if one of our competitors were to merge or partner with another company, the change in the competitive landscape could adversely affect our continuing ability to compete effectively.

- ***If we are unable to collect unbilled receivables, which are caused in part by holdback provisions, our operating results could be adversely affected.***

Our contracts with large engineering, procurement, and construction firms generally contain holdback provisions that typically delay final installment payments for our products by up to twenty-four (24) months, after the product has been shipped and revenue has been recognized. Generally 10% or less of the revenue we recognize pursuant to our customer contracts is subject to such holdback provisions and is accounted for as unbilled receivables. Such holdbacks may result in relatively high unbilled receivables. If we are unable to collect these performance holdbacks, our results of operations would be adversely affected.

- ***We depend on a limited number of suppliers for some of our components. If our suppliers are not able to meet our demand and/or requirements, our business could be harmed.***

We rely on a limited number of suppliers for vessel housings, stainless steel ports, alumina powder, and tungsten carbide for our portfolio of PX ERDs and stainless steel castings and components for our turbochargers and pumps. Our reliance on a limited number of manufacturers for these supplies involves a number of risks, including reduced control over delivery schedules, quality assurance, manufacturing yields, production costs, and lack of guaranteed production capacity or product supply. We do not have long-term supply agreements with these suppliers but secure these supplies on a purchase order basis. Our suppliers have no obligation to supply products to us for any specific period, in any specific quantity, or at any specific price, except as set forth in a particular purchase order. Our requirements may represent a small portion of the total production capacities of these suppliers, and our suppliers may reallocate capacity to other customers, even during periods of high demand for our products. We have in the past experienced, and may in the future experience, product quality issues and delivery delays with our suppliers due to factors such as high industry demand or the inability of our vendors to consistently meet our quality or delivery requirements. If our suppliers were to cancel or materially change their commitments to us or fail to meet quality or delivery requirements needed to satisfy customer orders for our products, we could lose time-sensitive customer orders, be unable to develop or sell our products cost-effectively or on a timely basis, if at all, and have significantly decreased revenue, which could harm our business, operating results, and financial condition. We may qualify additional suppliers in the future, which would require time and resources. If we do not qualify additional suppliers, we may be exposed to increased risk of capacity shortages due to our dependence on current suppliers.

Risk Related to our Oil & Gas Segment

- ***We may not be able to successfully commercialize the VorTeq.***

In October 2015, we entered into the VorTeq License Agreement with the VorTeq Licensee which provides the VorTeq Licensee with exclusive worldwide rights to our VorTeq technology for hydraulic fracturing onshore applications. Once the VorTeq is commercialized, the VorTeq Licensee will begin paying ongoing recurring royalty fees to us for the VorTeq technology. In order to commercialize the VorTeq, the VorTeq License Agreement provides, among other things, that we successfully meet certain specified milestones against key performance indicators set forth in the license agreement. The VorTeq is a relatively new technology and the hydraulic fracturing process is extremely complex which presents a wide range of technological challenges for us. If we are unable to successfully solve these challenges and, as a result, fail to meet the milestones, we may not be able to successfully commercialize the VorTeq. In that circumstance, we will not receive any royalty payments from the VorTeq Licensee, which could have an adverse effect on our entire business, financial condition, or results of operation.

- ***If the VorTeq Licensee fails to adopt the VorTeq, for any reason, we may not receive royalty payments or be able to successfully commercialize the VorTeq.***

The successful commercialization of the VorTeq depends heavily on the VorTeq Licensee's support and ultimate adoption of the technology. If the VorTeq Licensee fails to adopt the VorTeq, for any reason, we may not be able to successfully commercialize the VorTeq with the VorTeq Licensee and consequently, we may not receive any royalties under the VorTeq License Agreement. In addition, we may not be able to find a suitable replacement for the VorTeq Licensee or be able to negotiate royalties similar to those contained in the VorTeq License Agreement or to commercialize the VorTeq at all. Failure to commercialize the VorTeq could have an adverse effect on our entire business, financial condition, or results of operation.

- ***We may not meet the key performance indicators necessary to meet the two milestones in the VorTeq License Agreement.***

The VorTeq License Agreement calls for certain milestone key performance indicators that if met will result in payments to the Company of $25 million for each of two milestones. Achievement of these milestones is uncertain, and while we believe we can meet the milestones, if we are unable to do so, the milestone payments will be delayed until such time as the milestones are met or not earned and received at all. Failure to meet said milestones may also jeopardize commercialization and the rate of adoption of our VorTeq.

- ***Our Oil & Gas Segment may be impacted by prolonged deflation in global oil prices which may cause delays or cancellations of projects by Oil & Gas Segment customers, negatively affecting the rate of our market penetration and consequently our revenue and profitability.***

A deflationary oil environment such as the one experienced over the last few years may delay and even stall adoption and deployment of our products within our Oil & Gas Segment including but not limited to the VorTeq as licensed for onshore applications by the VorTeq Licensee. Emerging market economies, those dependent on commodity exports, and especially those for whom oil exports make up a significant percent of total exports, may be unable to retrofit or expand their oil exploration, production, and gas processing infrastructure thus negatively impacting our addressable market and future revenue. Additionally, oil price deflation may continue to lead to widespread liquidity and insolvency issues for exploration, production, and processing customers, which may negatively affect our addressable markets and therefore our financial performance.

- ***Within our Oil & Gas Segment, the use of the percentage-of-completion method of accounting for the IsoBoost and IsoGen products requires us to make estimates and judgments, which are subject to an inherent degree of uncertainty and which may differ from actual results.***

The IsoBoost and IsoGen systems are highly engineered, customized solutions that are designed and manufactured over an extended period of time and are built specifically to meet a customer's specifications. It is the Company's position that the percentage-of-completion method of accounting is appropriate for the IsoBoost and IsoGen systems given the facts and circumstances of these projects. This methodology requires the application of significant judgment by management in selecting the appropriate assumptions for calculating revenue and costs. Revenue and profits are recognized over the life of a project based on costs incurred to date compared to total estimated project costs. Revisions to revenues and profits are made once amounts are known and can be reasonably estimated. In addition, percentage-of-completion revenue may vary from quarter to quarter while a project is being completed due to accounting requirements. Given the uncertainties in accurately estimating the costs of projects, as well as providing reliable estimates to completion, it is possible for actual amounts to vary significantly from estimates previously made, which may result in the reversal of revenues and gross profit previously recognized and publicly reported.

Risk Related to our Entire Business

- ***Our diversification into new fluid flow markets, such as oil & gas, may not be successful***

We have made a substantial investment in research, development, and sales to execute on our diversification strategy into fluid flow markets such as oil & gas and chemical processing. While we see diversification as core to our growth strategy, there is no guarantee that we will be successful in our efforts. Our model for growth is based on our ability to initiate and embrace disruptive technology trends, to enter new markets, both in terms of geographies and product areas, and to drive broad adoption of the products and services that we develop and market. Any inability to execute this model for growth could damage our reputation, limit our growth, and negatively affect our operation results. For example, while we believe that our products will enable gas processing plant operators to operate at a high level of energy efficiency with minimal downtime, we may be subject to warranty claims if customers of these offerings experience significant downtimes or failures for which our warranty reserves may be inadequate given the lack of historical failure rates associated with new product introductions. We also could be subject to damage claims based on our products against which we may not be able to properly insure. In addition, profitability, if any, in new industrial verticals may be lower than in our Water Segment, and we may not be sufficiently successful in our diversification efforts to recoup investments.

- ***Our operating results may fluctuate significantly, making our future operating results difficult to predict and causing our operating results to fall below expectations.***

Our operating results may fluctuate due to a variety of factors, many of which are outside of our control.

We have experienced significant fluctuations in revenue from quarter-to-quarter and year-to-year, and we expect such fluctuations to continue. In addition, in the past, customer buying patterns led to a significant portion of our sales occurring in the fourth quarter. This presents the risk that delays, cancellations, or other adverse events in the fourth quarter could have a substantial negative impact on annual results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Since it is difficult for us to anticipate our future results, in the event our revenue or operating results fall below the expectations of investors or securities analysts, our stock price may decline.

- ***Our sales cycles can be long and unpredictable, and our sales efforts require considerable time and expense. As a result, our sales are difficult to predict and may vary substantially from quarter to quarter, which may cause our operating results to fluctuate.***

Our sales efforts involve substantial education of our current and prospective customers about the use and benefits of our energy recovery products. This education process can be time-consuming and typically involves a significant product evaluation process which is particularly pronounced when dealing with product introduction into new fluid flow industrial verticals. In our Water Segment, the sales cycle for our OEM customers, which are involved with smaller desalination plants, averages one (1) to twelve (12) months. The Water Segment sales cycle for our international engineering, procurement, and construction firm customers, which are involved with larger desalination plants, ranges from sixteen (16) to thirty-six (36) months. In our Oil & Gas Segment, experience indicates that sales efforts are prolonged due in part to customers' reluctance to accept new technology, procurement processes, plant turnaround dates, and budgetary constraints. The sales cycle for our Oil & Gas Segment customers ranges from 16 to 36 months. These long sales cycles make quarter-by-quarter revenue predictions difficult and results in our expending significant resources well in advance of orders for our products.

- ***Our business entails significant costs that are fixed or difficult to reduce in the short term while demand for our products is variable and subject to fluctuation, which may adversely affect our operating results.***

Our business requires investments in facilities, equipment, research and development, and training that are either fixed or difficult to reduce or scale in the short term. At the same time, the market for our products is variable and has experienced downturns due to factors such as economic recessions, increased precipitation, uncertain global financial markets, and political changes, many of which are outside of our control. During periods of reduced product demand, we may experience higher relative costs and excess manufacturing capacity, resulting in high overhead and lower gross profit margins while causing cash flow and profitability to decline. Similarly, although we believe that our existing manufacturing facilities are capable of meeting current demand and demand for the foreseeable future, the continued success of our business depends on our ability to expand our manufacturing, research and development, and testing facilities to meet market needs. If we are unable to respond timely to an increase in demand, our revenue, gross profit margin, net income, and cash flow may be adversely affected.

- ***Parts of our inventory may become excess or obsolete, which would increase our cost of revenues.***

Inventory of raw materials, parts, components, work in-process, or finished products may accumulate, and we may encounter losses due to a variety of factors, including technological change in the water desalination and oil & gas industries that result in product changes; long delays in shipment of our products or order cancellations; our need to order raw materials that have long lead times and our inability to estimate exact amounts and types of items needed, especially with regard to the configuration of our high-efficiency pumps and IsoBoost and IsoGen systems; and cost reduction initiatives resulting in component changes within the products.

In addition, we may from time to time purchase more inventory than is immediately required in order to shorten our delivery time in case of an anticipated increase in demand for our products. If we are unable to forecast demand for our products with a reasonable degree of certainty and our actual orders from our customers are lower than these forecasts, we may accumulate excess inventory that we may be required to write off, and our business, financial condition, and results of operations could be adversely affected.

- ***We are subject to risks related to product defects, which could lead to warranty claims in excess of our warranty provision or result in a significant or a large number of warranty or other claims in any given year.***

We provide a warranty for certain products for a period of eighteen (18) to thirty (30) months and provide up to a five-year warranty for the ceramic components of our PX-branded products. We test our products in our manufacturing facilities through a variety of means; however, there can be no assurance that our testing will reveal latent defects in our products, which may not become apparent until after the products have been sold into the market. The testing may not replicate the harsh, corrosive, and varied conditions of the desalination and other plants in which they are installed. It is also possible that components purchased from our suppliers could break down under those conditions. Certain components of our turbochargers and pumps are custom-made and may not scale or perform as required in production environments. Accordingly, there is a risk that we may have significant warranty claims or breach supply agreements due to product defects. We may incur additional cost of revenue if our warranty provisions are not sufficient to cover the actual cost of resolving issues related to defects in our products. If these additional expenses are significant, they could adversely affect our business, financial condition, and results of operations.

- ***Business interruptions may damage our facilities or those of our suppliers.***

Our operations and those of our suppliers may be vulnerable to interruption by fire, earthquake, flood, and other natural disasters, as well as power loss, telecommunications failure, and other events beyond our control. Our facilities in California are located near major earthquake faults and have experienced earthquakes in the past. If a natural disaster occurs, our ability to conduct our operations could be seriously impaired, which could harm our business, financial condition, results of operations, and cash flows. We cannot be sure that the insurance we maintain against general business interruptions will be adequate to cover all of our losses.

- ***If we are unable to protect our technology or enforce our intellectual property rights, our competitive position could be harmed, and we could be required to incur significant expenses to enforce our rights.***

Our competitive position depends on our ability to establish and maintain proprietary rights in our technology and to protect our technology from copying by others. We rely on trade secret, patent, copyright, and trademark laws, as well as confidentiality agreements with employees and third parties, all of which may offer only limited protection. We hold a number of U.S. and counterpart international patents, and when their terms expire, we could become more vulnerable to increased competition. The protection of our intellectual property in some countries may be limited. While we have expanded our portfolio of patent applications, we do not know whether any of our pending patent applications will result in the issuance of patents or whether the examination process will require us to narrow our claims, and even if patents are issued, they may be contested, circumvented, or invalidated. Moreover, while we believe our issued patents and patent pending applications are essential to the protection of our technology, the rights granted under any of our issued patents or patents that may be issued in the future may not provide us with proprietary protection or competitive advantages, and as with any technology, competitors may be able to develop similar or superior technologies now or in the future. In addition, our granted patents may not prevent misappropriation of our technology, particularly in foreign countries where intellectual property laws may not protect our proprietary rights as fully as those in the United States. This may render our patents impaired or useless and ultimately expose us to currently unanticipated competition. Protecting against the unauthorized use of our products, trademarks, and other proprietary rights is expensive, difficult, and in some cases, impossible. Litigation may be necessary in the future to enforce or defend our intellectual property rights or to determine the validity and scope of the proprietary rights of others. Intellectual property litigation could result in substantial costs and diversion of management resources, either of which could harm our business.

- ***Claims by others that we infringe their proprietary rights could harm our business.***

Third parties could claim that our technology infringes their intellectual property rights. In addition, we or our customers may be contacted by third parties suggesting that we obtain a license to certain of their intellectual property rights that they may believe we are infringing. We expect that infringement claims against us may increase as the number of products and competitors in our market increases and overlaps occur. In addition, to the extent that we gain greater visibility, we believe that we will face a higher risk of being the subject of intellectual property infringement claims. Any claim of infringement by a third party, even those without merit, could cause us to incur substantial costs defending against the claim and could distract management from our business. Furthermore, a party making such a claim, if successful, could secure a judgment that requires us to pay substantial damages. A judgment against us could also include an injunction or other court order that could prevent us from offering our products. In addition, we might be required to seek a license for the use of such intellectual property, which may not be available on commercially reasonable terms, or at all. Alternatively, we may be required to develop non-infringing technology, which could require significant effort and expense and may ultimately not be successful. Any of these events could seriously harm our business. Third parties may also assert infringement claims against our customers. Because we generally indemnify our customers if our products infringe the proprietary rights of third parties, any such claims would require us to initiate or defend protracted and costly litigation on their behalf in one or more jurisdictions, regardless of the merits of these claims. If any of these claims succeed, we may be forced to pay damages on behalf of our customers.

- ***We are currently involved in legal proceedings, and may be subject to additional future legal proceedings, that may result in material adverse outcomes.***

In addition to intellectual property litigation risks discussed above, we are presently involved, and may become involved in the future, in various commercial and other disputes as well as related claims and legal proceedings that arise from time to time in the course of our business. See Note 9 to the Consolidated Financial Statements in Part II, Item 8 of this Form 10-K for information about certain legal proceedings in which we are involved. Our current legal proceedings and any future lawsuits to which we may become a party are and will likely be expensive and time consuming to investigate, defend and resolve, and will divert our management's attention. Any litigation to which we are a party may result in an onerous or unfavorable judgment that may not be reversed upon appeal or in payments of substantial monetary damages or fines, or we may decide to settle lawsuits on similarly unfavorable terms, which could have an adverse effect on our business, financial condition, or results of operations.

- ***Our global operations expose us to risks and challenges associated with conducting business internationally, and our results of operations may be adversely affected by our efforts to comply with the laws of other countries, as well as U.S. laws which apply to international operations, such as the Foreign Corrupt Practices Act (FCPA) and U.S. export control laws.***

We operate on a global basis with offices or activities in Europe, Africa, Asia, South America, and North America. We face risks inherent in conducting business internationally, including compliance with international and U.S. laws and regulations that apply to our international operations. These laws and regulations include tax laws, anti-competition regulations, import and trade restrictions, export control laws, and laws which prohibit corrupt payments to governmental officials or certain payments or remunerations to customers, including the U.S. Foreign Corrupt Practices Act (FCPA) or other anti-corruption laws that have recently been the subject of a substantial increase in global enforcement. Many of our products are subject to U.S. export law restrictions that limit the destinations and types of customers to which our products may be sold, or require an export license in connection with sales outside the United States. Given the high level of complexity of these laws, there is a risk that some provisions may be inadvertently or intentionally breached, for example through fraudulent or negligent behavior of individual employees, our failure to comply with certain formal documentation requirements, or otherwise. Also, we may be held liable for actions taken by our local dealers and partners. Violations of these laws and regulations could result in fines, criminal sanctions against us, our officers or our employees, and prohibitions or conditions on the conduct of our business. Any such violations could include prohibitions or conditions on our ability to offer our products in one or more countries and could materially damage our reputation, our brand, our business, and our operating results.

In addition, we operate in many parts of the world that have experienced significant governmental corruption to some degree and, in certain circumstances, strict compliance with anti-bribery laws may conflict with local customs and practices. We may be subject to competitive disadvantages to the extent that our competitors are able to secure business, licenses, or other preferential treatment by making payments to government officials and others in positions of influence or through other methods that relevant law and regulations prohibit us from using. Our success depends, in part, on our ability to anticipate these risks and manage these difficulties.

These factors or any combination of these factors may adversely affect our revenue or our overall financial performance.

- ***Significant developments stemming from the recent U.S. presidential election could have a material adverse effect on us.***

The current 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 the current administration 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, sell our products, or procure our raw materials. In addition, these changes could result in negative sentiments towards the United States among non-U.S. customers. 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 due to the substantial exposure we have to international markets which could have an adverse effect on our business, financial condition, or results of operations.

- ***Regulations related to conflict minerals could adversely impact our business.***

The Dodd-Frank Wall Street Reform and Consumer Protection Act contains provisions to improve transparency and accountability concerning the supply of certain minerals, known as conflict minerals, originating from the Democratic Republic of Congo (“DRC”) and adjoining countries. As a result, in August 2012, the SEC adopted annual disclosure and reporting requirements for those companies who use conflict minerals mined from the DRC and adjoining countries in their products. Based on our purchasing policy and supplier selection, it is considered unlikely that any conflict minerals are used in the manufacturing of our products. Nevertheless, we are continuing reasonable country of origin inquiry and have implemented a program of due diligence on the source and chain of custody for conflict minerals.

There are costs associated with complying with these disclosure requirements, including loss of customers and potential changes to products, processes, or sources of supply as a consequence of our verification activities. The implementation of these rules could adversely affect the sourcing, supply, and pricing of materials used in our products. As there may be only a limited number of suppliers offering “conflict free” minerals, we cannot be sure that we will be able to obtain necessary materials from such suppliers in sufficient quantities or at competitive prices. Also, we may face reputational challenges if we determine that certain of our products contain minerals not determined to be conflict-free or if we are unable to sufficiently verify the origins for all conflict minerals used in our products through the procedures we have implemented.

● ***We may have risks associated with security of our information technology systems.***

We make significant efforts to maintain the security and integrity of our information technology systems and data. Despite significant efforts to create security barriers to such systems, it is virtually impossible for us to entirely mitigate this risk. There is a risk of industrial espionage, cyber-attacks, misuse or theft of information or assets, or damage to assets by people who may gain unauthorized access to our facilities, systems, or information. Such cybersecurity breaches, misuse, or other disruptions could lead to the disclosure of confidential information, improper usage and distribution of our intellectual property, theft, manipulation and destruction of private and proprietary data, and production downtimes.

Although we actively employ measures to prevent unauthorized access to our information systems, preventing unauthorized use or infringement of our rights is inherently difficult. These events could adversely affect our financial results and any legal action in connection with any such cybersecurity breach could be costly and time-consuming and may divert management's attention and adversely affect the market's perception of us and our products.

● ***We may have risks associated with our new international tax optimization structure.***

In 2015, the Company implemented a new international tax optimization structure. Subsidiaries were established in Ireland and the Company transferred our Oil & Gas Segment intellectual property via platform licenses to ERI Energy Recovery Holdings Ireland Limited. The Company has undertaken extensive due diligence, implemented and continues to implement manufacturing, research and development, and sales operations to create Irish substance, and has conferred with tax experts to ensure that uncertain tax positions are unlikely. It is possible that the new international tax structure could be examined by the Internal Revenue Service in the U.S. and/or the Tax Authorities in Ireland, and it is possible that such an examination could result in an unfavorable impact on the Company.

● ***If we need additional capital to fund future growth, it may not be available on favorable terms, or at all.***

Our primary source of cash historically has been customer payments for our products and services and proceeds from the issuance of common stock. This has funded our operations and capital expenditures. We may require additional capital from equity or debt financing in the future to fund our operations or respond to competitive pressures or strategic opportunities, such as a potential acquisition or the expansion of operations. We may not be able to secure such additional financing on favorable terms or at all. The terms of additional financing may place limits on our financial and operational flexibility. If we raise additional funds through further issuances of equity, convertible debt securities, or other securities convertible into equity, our existing stockholders could suffer significant dilution in their percentage ownership of our company, and any new securities that we issue could have rights, preferences, or privileges senior to those of existing or future holders of our common stock. If we are unable to obtain necessary financing on terms satisfactory to us, if and when we require it, our ability to grow or support our business and to respond to business challenges or opportunities could be significantly limited.

● ***We may seek to expand through acquisitions of and investments in other businesses, technologies, and assets. These acquisition activities may be unsuccessful or divert management’s attention.***

We may consider strategic and complementary acquisitions of and investments in other businesses, technologies, and assets, and such acquisitions or investments are subject to risks that could affect our business, including risks related to:

- the necessity of coordinating geographically disparate organizations;

- implementing common systems and controls;
- integrating personnel with diverse business and cultural backgrounds;
- integrating acquired research and manufacturing facilities, technology and products;
- combining different corporate cultures and legal systems;
- unanticipated expenses related to integration, including technical and operational integration;
- increased costs and unanticipated liabilities, including with respect to registration, environmental, health and safety matters, that may affect sales and operating results;
- retaining key employees;
- obtaining required government and third-party approvals;
- legal limitations in new jurisdictions;
- installing effective internal controls and audit procedures;
- issuing common stock that could dilute the interests of our existing stockholders;
- spending cash and incurring debt;
- assuming contingent liabilities; and
- creating additional expenses.

We may not be able to identify opportunities or complete transactions on commercially reasonable terms, or at all, or actually realize any anticipated benefits from such acquisitions or investments. Similarly, we may not be able to obtain financing for acquisitions or investments on attractive terms. If we do complete acquisitions, we cannot ensure that they will ultimately strengthen our competitive or financial position or that they will not be viewed negatively by customers, financial markets, investors, or the media. In addition, the success of any acquisitions or investments also will depend, in part, on our ability to integrate the acquisition or investment with our existing operations.

- ***Insiders and principal stockholders will likely have significant influence over matters requiring stockholder approval.***

Our directors, executive officers, and other principal stockholders beneficially own, in the aggregate, a substantial amount of our outstanding common stock. These stockholders could likely have significant influence over all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions such as a merger or other sale of our company or its assets.

- ***The market price of our common stock may continue to be volatile.***

The market price of our common stock has been, and is likely to continue to be, volatile and subject to fluctuations. Changes in the stock market generally or as it concerns our industry, as well as geopolitical, economic, and business factors unrelated to us, may also affect our stock price. Significant declines in the market price of our common stock or failure of the market price to increase could harm our ability to recruit and retain key employees, reduce our access to debt or equity capital, and otherwise harm our business or financial condition. In addition, we may not be able to use our common stock effectively as consideration in connection with any future acquisitions.

- ***Anti-takeover provisions in our charter documents and under Delaware law could discourage, delay, or prevent a change in control of our company and may affect the trading price of our common stock.***

Provisions in our amended and restated certificate of incorporation and bylaws may have the effect of delaying or preventing a change of control or changes in our management. Our amended and restated certificate of incorporation and amended and restated bylaws include provisions that:

- authorize our Board of Directors to issue, without further action by the stockholders, up to 10,000,000 shares of undesignated preferred stock;
- require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;

- specify that special meetings of our stockholders can be called only by our Board of Directors, the chairman of the board, the chief executive officer, or the president;
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our Board of Directors;
- establish that our Board of Directors is divided into three classes, Class I, Class II, and Class III, with each class serving staggered terms;
- provide that our directors may be removed only for cause;
- provide that vacancies on our Board of Directors may be filled only by a majority vote of directors then in office, even though less than a quorum;
- specify that no stockholder is permitted to cumulate votes at any election of directors; and
- require a super-majority of votes to amend certain of the above mentioned provisions.

In addition, we are subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. Section 203 generally prohibits us from engaging in a business combination with an interested stockholder subject to certain exceptions.

Item 1B — Unresolved Staff Comments

None

Item 2 — Properties

We lease approximately 170,000 square feet of space in San Leandro, California for product manufacturing, research and development, and executive headquarters under a lease that expires in November of 2019. We believe that this facility will be adequate for our purposes for the foreseeable future. Additionally, we lease offices near Dublin, Ireland; Dubai, United Arab Emirates; Shanghai, Peoples Republic of China; and Houston, Texas.

Item 3 — Legal Proceedings

See Note 9 — C*ommitments and Contingencies* to the Consolidated Financial Statements in Part II, Item 8 of this Form 10-K Item 8 of this report, under the heading "*Litigation,*" which is incorporated by reference into this Item 3, for a description of the lawsuits pending against us.

Item 4 — Mine Safety Disclosures

Not applicable.

PART II

Item 5 — Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

Our common stock is quoted on the NASDAQ Stock Market under the symbol "ERII."

The following table sets forth the high and low intra-day sales prices of our common stock for the periods indicated.

	2016		2015	
	High	Low	High	Low
First Quarter	$ 10.82	$ 5.28	$ 5.37	$ 2.49
Second Quarter	$ 13.35	$ 7.77	$ 3.71	$ 2.28
Third Quarter	$ 16.67	$ 8.35	$ 3.07	$ 2.07
Fourth Quarter	$ 16.30	$ 8.53	$ 9.50	$ 2.09

Stockholders

As of February 28, 2017, there were approximately thirty-two (32) stockholders of record of our common stock as reported by our transfer agent, one of which is Cede & Co., a nominee for Depository Trust Company (DTC). All of the shares of common stock held by brokerage firms, banks, and other financial institutions as nominees for beneficial owners are deposited into participant accounts at DTC and are therefore considered to be held of record by Cede & Co. as one stockholder.

Dividend Policy

We have never declared or paid any dividends on our common stock, and we do not currently intend to pay any dividends on our common stock for the foreseeable future. Any future determination to pay dividends on our common stock will be, subject to applicable law, at the discretion of our Board of Directors, and will depend upon, among other factors, our results of operations, financial condition, capital requirements, and contractual restrictions in loan or other agreements.

Stock Repurchase Program

In January 2016, our Board of Directors authorized a stock repurchase program under which the Company, at the discretion of management, could repurchase up to $6.0 million in aggregate cost of our outstanding common stock through June 30, 2016 (the "January Authorization"). In May 2016, our Board of Directors rescinded the January Authorization and authorized a new stock repurchase program under which the Company, at the discretion of management, could repurchase up to $10.0 million in aggregate cost of our outstanding common stock through October 31, 2016 (the "May Authorization"). At December 31, 2016, 673,700 shares, at an aggregate cost of $4.1 million, had been repurchased under the January Authorization and 568,500 shares, at an aggregate cost of $5.3 million, had been repurchased under the May Authorization. The May Authorization expired in October 2016 and there was no repurchase authorization in place at December 31, 2016.

A stock repurchase program was not in place during the year ended December 31, 2015, therefore no shares were repurchased during 2015.

In February 2014, our Board of Directors authorized a stock repurchase program under which up to three million shares, not to exceed $6.0 million in aggregate cost, of our outstanding common stock could be repurchased through December 31, 2014 at the discretion of management. During the year ended December 31, 2014, 696,853 shares at an aggregate cost of $2.8 million were repurchased under this authorization. This 2014 repurchase authorization expired on December 31, 2014.

Sales of Unregistered Securities

There were no outstanding warrants during the year ended December 31, 2016. All outstanding warrants had been exercised as of December 31, 2015.

During the year ended December 31, 2015, warrants to purchase 200,000 shares of common stock were exercised for cash at a price of $1.00 per share. The proceeds received from this exercise totaled $200,000.

During the year ended December 31, 2014, warrants to purchase 450,000 shares of common stock were exercised. Warrants to purchase 50,000 shares of common stock were exercised for cash at a price of $1.00 per share. The proceeds received from this exercise totaled $50,000. Warrants to purchase 400,000 shares of common stock were exercised for 311,111 shares of common stock in lieu of cash proceeds. The remaining 88,889 warrants were cancelled and considered payment for the exercise.

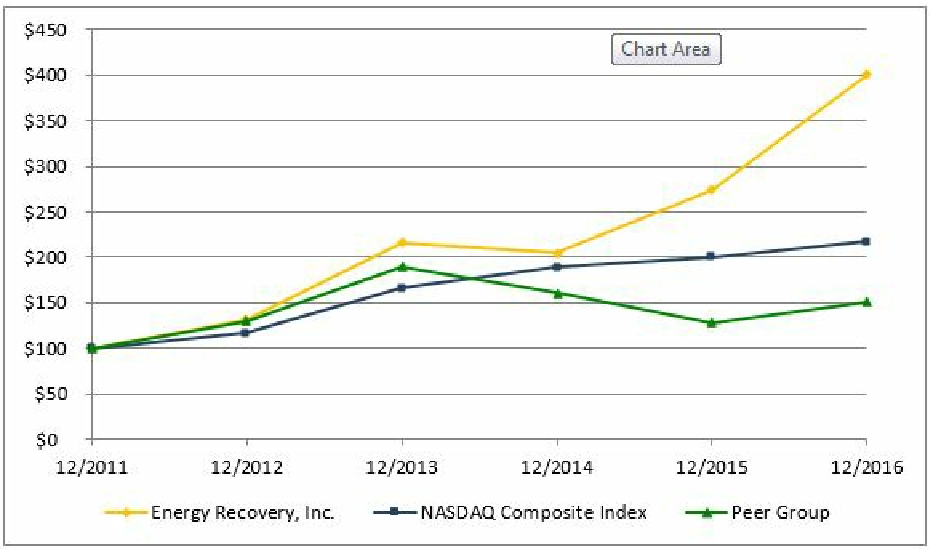
These shares issued pursuant to the warrants were not registered under the Securities Act of 1933, as amended, in reliance upon the exemption set forth in Section 4(2) of that Act for transactions not involving a public offering.

Stock Performance Graph

The following graph shows the cumulative total stockholder return of an investment of $100 on December 31, 2011 in (i) our common stock, (ii) common stock of a selected group of peer issuers ("Peer Group"), and (iii) the NASDAQ Composite Index. Cumulative total return assumes the reinvestment of dividends, although dividends have never been declared on our stock, and is based on the returns of the component companies weighted according to their capitalizations as of the end of each quarterly period. The NASDAQ Composite Index tracks the aggregate price performance of equity securities traded on the NASDAQ. The Peer Group tracks the weighted average price performance of equity securities of seven companies in our industry: Consolidated Water Co. Ltd.; Flowserve Corp.; Hyflux Ltd., Kurita Water Industries Ltd.; Pentair PLC; Tetra Tech, Inc.; and The Gorman-Rupp Company. The return of each component issuer of the Peer Group is weighted according to the respective issuer's stock market capitalization at the end of each period for which a return is indicated. Our stock price performance shown in the graph below is not indicative of future stock price performance.

The following graph and its related information is not "soliciting material," is not deemed "filed" with the Securities and Exchange Commission, and is not to be incorporated by reference into any filing of the Company under the 1933 Securities Act or 1934 Securities Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language contained in such filing.

COMPARISON OF FIVE-YEAR CUMULATIVE TOTAL RETURN *
Among Energy Recovery Inc., The NASDAQ Composite Index,
And A Peer Group



* Graph represents the value of $100 invested on December 31, 2011 in stock or index, including reinvestment of dividends as of the fiscal year ending December 31.

	12/31/11	12/31/12	12/31/13	12/31/14	12/31/15	12/31/16
Energy Recovery, Inc.	100.00	131.78	215.12	204.26	274.03	401.16
NASDAQ Composite Index	100.00	116.41	165.47	188.69	200.32	216.54
Peer Group	100.00	129.13	189.14	160.70	126.75	150.14

Item 6 — Selected Financial Data

The following selected financial data 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" included in this Report on Form 10-K.

	Years Ended December 31,				
	2016	2015	2014	2013	2012
Consolidated Statements of Operations Data:					
Product revenue	$ 49,715	$ 43,671	$ 30,426	$ 43,045	$ 42,632
Product cost of revenue	17,849	19,111	13,713	17,323	22,419
Product gross profit	31,866	24,560	16,713	25,722	20,213
License and development revenue	5,000	1,042	—	—	—
Operating expenses:					
General and administrative	16,626	19,773	14,139	15,192	15,146
Sales and marketing	9,116	9,326	10,525	7,952	7,290
Research and development	10,136	7,659	9,690	4,361	4,774
Amortization of intangible assets	631	635	842	921	1,042
Restructuring charges	—	—	—	184	369
Impairment of intangibles	—	—	—	—	1,020
Proceeds from litigation settlement	—	—	—	—	(775)
Total operating expenses	36,509	37,393	35,196	28,610	28,866
Income (loss) from operations	357	(11,791)	(18,483)	(2,888)	(8,653)
Other income (expense):					
Interest expense	(3)	(42)	—	—	(6)
Other non-operating income (expense), net	290	(139)	69	109	143
Income (loss) before income taxes	644	(11,972)	(18,414)	(2,779)	(8,516)
(Benefit from) provision for income taxes	(390)	(334)	291	327	(262)
Net income (loss)	$ 1,034	$ (11,638)	$ (18,705)	$ (3,106)	$ (8,254)
Income (loss) per share – basic	$ 0.02	$ (0.22)	$ (0.36)	$ (0.06)	$ (0.16)
Income (loss) per share – diluted	$ 0.02	$ (0.22)	$ (0.36)	$ (0.06)	$ (0.16)
Number of shares used in per share calculation:					
Basic	52,341	52,151	51,675	51,066	51,452
Diluted	55,451	52,151	51,675	51,066	51,452

	As of December 31,				
	2016	2015	2014	2013	2012
Consolidated Balance Sheets Data:					
Cash and cash equivalents	$ 61,364	$ 99,931	$ 15,501	$ 14,371	$ 16,642
Short-term investments	39,073	257	13,072	5,856	9,497
Long-term investments	—	—	267	13,694	4,773
Total assets	149,063	151,799	85,941	101,935	104,554
Long-term liabilities	66,772	72,116	4,501	4,338	4,317
Total liabilities	83,930	88,140	16,023	15,020	17,173
Total stockholders' equity	65,133	63,659	69,918	86,915	87,381

Item 7 — Management's Discussion and Analysis of Financial Condition and Results of Operations

The following Management Discussion and Analysis of Financial Condition and Results of Operations is intended to help the reader understand our results of operations and financial condition. It should be read in conjunction with the Consolidated Financial Statements and related Notes included in "Item 8 – Financial Statements and Supplementary Data" in this Report.

Overview

Energy Recovery, Inc. (the "Company," "Energy Recovery," "our," "us," and "we") is an energy solutions provider to industrial fluid flow markets worldwide. Our core competencies are fluid dynamics and advanced material science. Our products make industrial processes more operating and capital expenditure efficient. Our solutions convert wasted pressure energy into a reusable asset and preserve or eliminate pumping technology in hostile processing environments. Our solutions are marketed and sold in fluid flow markets, such as water, oil & gas, and chemical processing, under the trademarks ERI®, PX®, Pressure Exchanger®, PX Pressure Exchanger®, AT™, AquaBold™, VorTeq™, IsoBoost®, and IsoGen®. Our solutions are owned, manufactured, and/or developed, in whole or in part, in the United States of America, ("U.S.") and the Republic of Ireland.

Energy Recovery was incorporated in Virginia in 1992, reincorporated in Delaware in 2001, and became a public company in July 2008. We introduced the initial version of our Pressure Exchanger energy recovery device in early 1997 for sea water reverse osmosis desalination. In 2009, we acquired Pump Engineering, LLC, which manufactured centrifugal energy recovery devices, known as turbochargers, as well as high-pressure pumps. In 2012, we introduced the IsoBoost and IsoGen products for use in the oil & gas industry. In 2015, we conducted field trials for the VorTeq hydraulic fracturing solution ("VorTeq") also for use in the oil & gas industry for oil field hydraulic fracturing operations and entered into a fifteen-year license agreement with Schlumberger Technology Corporation (the "VorTeq Licensee"). In 2016, we received our first major purchase order for multiple units of our IsoBoost technology for integration into a major gas processing plant to be constructed in the Middle East.

Our reportable operating segments consist of the Water Segment and the Oil & Gas Segment. These segments are based on the industries in which the technology solutions are sold, the type of energy recovery device or other technology sold, and the related solution and service.

Water Segment

Our Water Segment consists of revenues and expenses associated with solutions sold for use in reverse osmosis desalination. Our Water Segment revenue is principally derived from the sale of energy recovery devices ("ERDs"), however, we also derive revenue from the sale of our high-pressure and circulation pumps, which we manufacture and sell in connection with our ERDs for use in desalination plants. Additionally, we receive revenue from the sale of spare parts and services, including start-up and commissioning services that we provide for our customers.

With respect to product revenue from our ERDs in our Water Segment, a significant portion of our revenue is typically generated by sales to a limited number of large engineering, procurement, and construction ("EPC") firms, which are involved with the design and construction of larger desalination plants. Sales to these firms often involve a long sales cycle, which can range from sixteen (16) to thirty-six (36) months. A single large desalination project can generate an order for numerous ERDs and generally represents an opportunity for significant revenue. We also sell our devices to many small- to medium-sized original equipment manufacturers ("OEM"), which commission smaller desalination plants, order fewer ERDs per plant, and have shorter sales cycles.

We often experience substantial fluctuations in our Water Segment product revenue from quarter-to-quarter and from year-to-year because a single order for our ERDs by a large EPC firm for a particular plant may represent significant revenue. In addition, historically our EPC customers tend to order a significant amount of equipment for delivery in the fourth quarter, and as a consequence, a significant portion of our annual sales typically occurs during that quarter. Normal seasonality trends also generally lead to our lowest revenue being in the first quarter of the year.

A limited number of our customers account for a substantial portion of our product revenue and accounts receivable in the Water Segment. Revenue from customers representing 10% or more of product revenue in the Water Segment varies from period to period. For the years ended December 31, 2016, 2015, and 2014, one Water Segment customer per year accounted for approximately 11%, 14%, and 14%, respectively, of our total product revenue. See Note 14 — *"Concentrations"* in the Notes to the Consolidated Financial Statements in Item 8 of this Form 10-K for further details on customer concentration.

At December 31, 2016, one Water Segment customer accounted for 13% of our accounts receivable and unbilled receivable balance. At December 31, 2015, two Water Segment customers accounted for 26% and 18%, respectively, of our accounts receivable and unbilled receivable balance. See Note 14 — *"Concentrations"* in the Notes to the Consolidated Financial Statements in Item 8 of this Form 10-K for further details on customer concentration.

At December 31, 2016 and 2015, no Water Segment vendor accounted for more than 10% of our accounts payable balance. See Note 14 —*"Concentrations"* in the Notes to the Consolidated Financial Statements in Item 8 of this Form 10-K for further details on vendor concentration.

During the years ended December 31, 2016, 2015, and 2014, most of our Water Segment product revenue was attributable to sales outside of the United States. We expect sales outside of the United States to remain a significant portion of our revenue for the foreseeable future.

Oil & Gas Segment

Our Oil & Gas Segment consists of revenues and expenses associated with solutions sold or licensed for use in hydraulic fracturing, gas processing, and chemical processing. In the past several years, we have invested significant research and development costs to expand our business into pressurized fluid flow industries within the oil & gas industry.

In 2012, we introduced the IsoBoost and IsoGen products for use in the oil & gas industry. For the years ended December 31, 2014 and 2015, we recognized Oil & Gas Segment product revenue from the operating lease, subsequent lease buy-out, and commissioning services of an IsoGen system. For the year ended December 31, 2015, we also recognized Oil & Gas Segment product revenue related to the cancellation fee of a cancelled sales order for an IsoBoost system.

In 2014, we announced a new product for the hydraulic fracturing industry, the VorTeq. Field trials were initiated for the VorTeq in the second quarter of 2015 and completed in December 2015 with the successful delivery of proppant to a well located in the Bakken Formation.

In October 2015, through our subsidiary ERI Energy Recovery Ireland Ltd., we entered into a license agreement with the VorTeq Licensee ("VorTeq License Agreement"). The VorTeq License Agreement has a term of fifteen (15) years for the exclusive, worldwide right to use our VorTeq technology for hydraulic fracturing onshore operations. The VorTeq License Agreement includes $125 million in payments paid in stages: a $75 million upfront, exclusivity fee payment and two separate $25 million payments upon successful achievement of two milestone tests. Following product commercialization, the VorTeq License Agreement includes recurring royalty payments throughout the fifteen-year term.

The revenue related to the VorTeq License Agreement exclusivity fee will be recognized pro-ratably over the fifteen-year agreement. Revenue from each milestone payment will be recognized when the milestone is reached. Revenue from the recurring royalty payments will be recognized when earned throughout the term of the agreement.

In 2016, we received our first major purchase order for multiple units of our IsoBoost technology for integration into a major gas processing plant to be constructed in the Middle East and we recognized Oil & Gas Segment product revenue using the percentage-of-completion method of accounting. For the years ended December 31, 2016, we recognized Oil & Gas Segment revenue related to our VorTeq License Agreement and product revenue related to the sale of the IsoBoost systems.

One customer accounted for 100% of our Oil &Gas Segment license and development revenue for 2016 and 2015, which represented 9% and 2% of our total revenue for the years ended December 31, 2016 and 2015, respectively. There was no Oil &Gas Segment license and development revenue recognized for 2014.

While one customer accounted for 100% of our Oil & Gas Segment product revenue for the year ended December 31, 2016, no Oil & Gas Segment customer accounted for more than 10% of our total product revenue for the years ended December 31, 2016, 2015, and 2014, respectively. See Note 14 – *"Concentrations"* in the Notes to the Consolidated Financial Statements in Item 8 of this Form 10-K for further details on customer concentration.

At December 31, 2016, one Oil & Gas Segment customer accounted for 16% of our accounts receivable and unbilled receivable balance. At December 31, 2015, no Oil & Gas Segment customer accounted for more than 10% of our accounts receivable and unbilled receivable balance. See Note 14 – *"Concentrations"* in the Notes to the Consolidated Financial Statements in Item 8 of this Form 10-K for further details on customer concentration.

At December 31, 2016, one Oil & Gas Segment vendor accounted for 18% of our accounts payable balance. At December 31, 2015, no Oil & Gas Segment vendor accounted for more than 10% of our accounts payable balance. See Note 14 – *"Concentrations"* in the Notes to the Consolidated Financial Statements in Item 8 of this Form 10-K for further details on vendor concentration.

During the years ended December 31, 2016, 2015, and 2014, all of our Oil & Gas Segment product revenue was attributable to sales outside of the United States.

Critical Accounting Policies and Estimates

Our Consolidated Financial Statements are prepared in accordance with generally accepted accounting principles ("GAAP") in the United States. These accounting principles require us to make estimates and judgments that can affect the reported amounts of assets and liabilities as of the date of the Consolidated Financial Statements as well as the reported amounts of revenue and expense during the periods presented. We believe that the estimates and judgments upon which we rely are reasonable based upon information available to us at the time that we make these estimates and judgments. To the extent that there are material differences between these estimates and actual results, our consolidated financial results will be affected. The accounting policies that reflect our more significant estimates and judgments and which we believe are the most critical to aid in fully understanding and evaluating our reported financial results are revenue recognition, including percentage-of-completion accounting for oil & gas projects; allowance for doubtful accounts; allowance for product warranty; valuation of stock options; valuation and impairment of goodwill and acquired intangible assets; valuation adjustments for excess and obsolete inventory; deferred taxes and valuation allowances on deferred tax assets; and evaluation and measurement of contingencies, including contingent consideration.

The following is not intended to be a comprehensive list of all of our accounting policies or estimates. Our accounting policies are more fully described in Note 2 – "*Summary of Significant Accounting Policies,"* included in "Item 8 — Financial Statements and Supplementary Data" in this Report.

Revenue Recognition

<u>*Product and service revenue recognition – Water Segment*</u>

We recognize revenue when the earnings process is complete, as evidenced by a written agreement with the customer, transfer of title, fixed pricing that is determinable, and collection that is reasonably assured. Transfer of title typically occurs upon shipment of the equipment pursuant to a written purchase order or contract. The portion of the sales agreement related to the field services and training for commissioning of our devices in a desalination plant is deferred until we have performed such services. We regularly evaluate our revenue arrangements to identify deliverables and to determine whether these deliverables are separable into multiple units of accounting.

Under our revenue recognition policy, evidence of an arrangement is met when we have an executed purchase order, sales order, or stand-alone contract. Typically, smaller projects utilize sales or purchase orders that conform to standard terms and conditions.

The specified product performance criteria for our PX ERD pertain to the ability of our product to meet its published performance specifications and warranty provisions, which our products have demonstrated on a consistent basis. This factor, combined with historical performance metrics, provides our management with a reasonable basis to conclude that the PX ERDs will perform satisfactorily upon commissioning of the plant. To ensure this successful product performance, we provide service consisting principally of supervision of customer personnel and training to the customers during the commissioning of the plant. The installation of the PX ERDs is relatively simple, requires no customization, and is performed by the customer under the supervision of our personnel. We defer the value of the service and training component of the contract and recognize such revenue as services are rendered. Based on these factors, our management has concluded that, for sale of PX ERDs, as well as for turbochargers and pumps, delivery and performance have been completed upon shipment or delivery when title transfers based on the shipping terms.

We perform an evaluation of customer credit worthiness on an individual contract basis to assess whether collectability is reasonably assured. As part of this evaluation, our management considers many factors about the individual customer, including the underlying financial strength of the customer and/or partnership consortium and management's prior history or industry-specific knowledge about the customer and its supplier relationships. For smaller projects, we require the customer to remit payment generally within 30 to 90 days after product delivery. In some cases, if credit worthiness cannot be determined, prepayment or other security is required.

We establish separate units of accounting for contracts, as our contracts with customers typically include one or both of the deliverables, products or commissioning, and there is no right of return under the terms of the contract.

Commissioning includes supervision of the installation, start-up, and training to ensure that the installation performed by the customer, which is relatively simple and straightforward, is completed consistent with the recommendations under the factory warranty. The commissioning services' element of our contracts represents an incidental portion of the total contract price. The allocable consideration for these services relative to that for the underlying products has been well under 1% of any arrangement. Commissioning is often bundled into the large stand-alone contracts, and we frequently sell products without commissioning since our product can be easily installed in a plant without supervision. These facts and circumstances validate that the delivered element has value on a stand-alone basis and should be considered a separate unit of accounting.

Having established separate units of accounting, we then allocate amounts to each unit of accounting. With respect to products, we have established vendor specific objective evidence ("VSOE") based on the price at which such products are sold separately without commissioning services. With respect to commissioning, we charge out our engineers for field visits to customers based on a stand-alone standard daily field service charge as well as a flat service rate for travel, if applicable. This has been determined to be the VSOE of the service based on stand-alone sales of other comparable professional services at consistent pricing.

The amount allocable to the delivered unit of account (in our case the product) is limited to the amount that is not contingent upon the delivery of additional items or meeting specified performance conditions. We adhere to consistent pricing in both stand-alone sale of products and professional services and the contractual pricing of products and commissioning of services in bundled arrangements.

For large projects, stand-alone contracts are utilized. For these contracts, consistent with industry practice, our customers typically require their suppliers, including Energy Recovery, to accept contractual holdback provisions (also referred to as a retention payment) whereby the final amounts due under the sales contract are remitted over extended periods of time or alternatively, stand-by letters of credit are issued to guarantee performance. These retention payments are generally 10% or less of the total contract amount and are due and payable when the customer is satisfied that certain specified product performance criteria have been met upon commissioning of the desalination plant, which may be up to twenty-four (24) months from the date of product delivery as described further below.

Under stand-alone contracts, the usual payment arrangements are summarized as follows:

- an advance payment due upon execution of the contract, typically 10% to 20% of the total contract amount. This advance payment is accounted for as deferred revenue until shipment or when products are delivered to the customer, depending on the Incoterms and transfer of title;

- a payment ranging from 50% to 70% of the total contract is typically due upon delivery of the product. This payment is often divided into two parts. The first part, which is due thirty (30) to sixty (60) days following delivery of the product and documentation, is invoiced upon shipment when the product revenue is recognized and results in an open accounts receivable with the customer. The second part is typically due ninety (90) to one hundred twenty (120) days following product delivery and documentation. This payment is booked to unbilled receivables upon shipment when the product revenue is recognized, and it is invoiced to the customer upon notification that the equipment has been received or when the time period has expired. We have no performance obligation to complete to be legally entitled to this payment. It is invoiced based on the passage of time.

- a final retention payment of generally 10% or less of the contract amount is due either at the completion of plant commissioning or upon the issuance of a stand-by letter of credit, which is typically issued up to twenty-four (24) months from the delivery date of products and documentation. This payment is recorded to unbilled receivables upon shipment when the product revenue is recognized, and it is invoiced to the customer when it is determined that commissioning is complete or the stand-by letter of credit has been issued. This payment is not contingent upon the delivery of commissioning services. The Company had no performance obligation to complete to be legally entitled to this payment. It is invoiced based on the passage of time.

We do not provide our customers with a right of product return; however, we will accept returns of products that are deemed to be damaged or defective when delivered that are covered by the terms and conditions of the product warranty. Product returns have not been significant.

Shipping and handling charges billed to customers are included in product revenue. The cost of shipping to customers is included in cost of revenue.

License, milestone payment, and royalty revenue recognition – Oil & Gas Segment

License and development revenue is comprised of the amortization of the upfront non-refundable $75 million exclusivity fee received in connection with the VorTeq License Agreement. See Note 16 – *VorTeq License Agreement* in the Notes to the Consolidated Financial Statements in Item 8 of this Form 10-K. The VorTeq License Agreement comprises a fifteen-year exclusivity license for our VorTeq technology, milestone payments upon achievement of successful tests in accordance with the Key Performance Indicators ("KPIs") and, after commercialization is achieved, royalty payments for the supply and servicing of certain components of the VorTeq. All payments are non-refundable.

We recognize license and development revenue in accordance with ASC 605 "Revenue Recognition," subtopic ASC 605-25 "Revenue with Multiple Element Arrangements" and subtopic ASC 605-28 "Revenue Recognition-Milestone Method," which provides accounting guidance for revenue recognition for arrangements with multiple deliverables and guidance on defining the milestone and determining when the use of the milestone method of revenue recognition is appropriate, respectively.

For multiple-element arrangements, each deliverable is accounted for as a separate unit of accounting if both the following criteria are met: (1) the delivered item or items have value to the customer on a standalone basis and (2) for an arrangement that includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially in our control. Contingent deliverables within multiple element arrangements are excluded from the evaluation of the units of accounting. Non-refundable, upfront license fees where we have continuing obligation to perform are recognized over the period of the continuing performance obligation. The VorTeq License Agreement was determined to include a single unit of accounting. The initial upfront fee of $75 million is recognized on a straight-line basis over the fifteen-year term of the arrangement based on the performance period of the last or final deliverables, which include the license and support.

We recognize revenue from milestone payments when: (i) the milestone event is substantive and its achievability has substantive uncertainty at the inception of the agreement, and (ii) it does not have ongoing performance obligations related to the achievement of the milestone earned. Milestone payments are considered substantive if all of the following conditions are met, the milestone payment: (a) is commensurate with either the Company's performance subsequent to the inception of the arrangement to achieve the milestone or the enhancement of the value of the delivered item or items as a result of a specific outcome resulting from the Company's performance subsequent to the inception of the arrangement to achieve the milestone; (b) relates solely to past performance; and (c) is reasonable relative to all of the deliverables and payment terms (including other potential milestone consideration) within the arrangement. The VorTeq License Agreement includes two substantive milestones of $25 million each due on achievement of successful tests in accordance with KPIs. No revenues associated with achievement of the milestones have been recognized to date.

Percentage-of-completion revenue recognition – Oil & Gas Segment

IsoBoost and IsoGen systems are highly engineered, customized solutions that are designed and manufactured over an extended period of time and are built specifically to meet a customer's specifications. It is the Company's position that percentage-of-completion method of accounting is appropriate for IsoBoost and IsoGen systems given the facts and circumstances of these projects. In the event that a purchase order for an IsoBoost or IsoGen does not meet these facts and circumstances, then percentage-of-completion method of accounting does not apply.

Revenue from fixed price contracts is recognized using the percentage-of-completion method of accounting in the ratio of costs incurred to estimated final costs. Contract costs include all direct material and labor costs related to contract performance. Pre-contract costs with no future benefit are expensed in the period in which they are incurred. Since the financial reporting of these contracts depends on estimates, which are assessed continually during the term of the contract, recognized revenues and profit are subject to revisions as the contract progresses to completion. Revisions in profit estimates are reflected in the period in which the facts that give rise to the revisions become known. If material, the effects of any changes in estimates are disclosed in the notes to the consolidated financial statements. When estimates indicate that a loss will be incurred on a contract, a provision for the expected loss is recorded in the period in which the loss becomes evident. No loss has been incurred to date. Revenue is recognized only to the extent costs have been recognized in the same period.

Allowances for Doubtful Accounts

We record a provision for doubtful accounts based on historical experience and a detailed assessment of the collectability of our accounts receivable. In estimating the allowance for doubtful accounts, we consider, among other factors, the aging of the accounts receivable, our historical write-offs, the credit worthiness of each customer, and general economic conditions. Account balances are charged off against the allowance when we believe that it is probable that the receivable will not be recovered. Actual write-offs may be in excess of our estimated allowance.

Warranty Costs

We sell products with a limited warranty for a period ranging from eighteen (18) months to five (5) years. We accrue for warranty costs based on estimated product failure rates, historical activity, and expectations of future costs. Periodically, we evaluate and adjust the warranty costs to the extent that actual warranty costs vary from the original estimates.

During the year ended December 31, 2015, we adjusted previously established warranty reserves. The adjustment related to expired warranties, which increased gross profit and reduced net loss by $0.4 million.

Stock-based Compensation

We measure and recognize stock-based compensation expense based on the fair value measurement for all stock-based awards made to our employees and directors — including restricted stock units ("RSUs"), restricted shares ("RS"), and employee stock options — over the requisite service period (typically the vesting period of the awards). The fair value of RSUs and RS is based on our stock price on the date of grant. The fair value of stock options is calculated on the date of grant using the Black-Scholes option pricing model, which requires a number of complex assumptions including expected life, expected volatility, risk-free interest rate, and dividend yield. The estimation of awards that will ultimately vest requires judgment, and to the extent that actual results or updated estimates differ from our current estimates, such amounts are recorded as a cumulative adjustment in the period in which the estimates are revised. See Note 12 – *"Stock-based Compensation"* in the Notes to the Consolidated Financial Statements in Item 8 of this Form 10-K for further discussion of stock-based compensation.

Goodwill and Other Intangible Assets

The purchase price of an acquired company is allocated between intangible assets and the net tangible assets of the acquired business with the residual purchase price recorded as goodwill. The determination of the value of the intangible assets acquired involves certain judgments and estimates. These judgments can include, but are not limited to, the cash flows that an asset is expected to generate in the future and the appropriate weighted average cost of capital.

Acquired intangible assets with determinable useful lives are amortized on a straight-line or accelerated basis over the estimated periods benefited, ranging from one (1) to twenty (20) years. Acquired intangible assets with contractual terms are amortized over their respective legal or contractual lives. Customer relationships and other non-contractual intangible assets with determinable lives are amortized over periods ranging from five (5) to twenty (20) years.

We evaluate the recoverability of intangible assets by comparing the carrying amount of an asset to estimated future net undiscounted cash flows generated by the asset. If such assets are considered to be impaired, the impairment recognized is measured as the amount by which the carrying amount of the assets exceeds the fair value of the assets. The evaluation of recoverability involves estimates of future operating cash flows based upon certain forecasted assumptions, including, but not limited to, revenue growth rates, gross profit margins, and operating expenses over the expected remaining useful life of the related asset. A shortfall in these estimated operating cash flows could result in an impairment charge in the future.

Goodwill is not amortized, but is evaluated annually for impairment at the reporting unit level or when indicators of a potential impairment are present. We estimate the fair value of the reporting unit using the discounted cash flow and market approaches. Forecast of future cash flows are based on our best estimate of future net sales and operating expenses, based primarily on expected category expansion, pricing, market segment, and general economic conditions.

As of December 31, 2016 and 2015, acquired intangibles, including goodwill, relate to the acquisition of Pump Engineering, LLC during the fourth quarter of 2009. See Note 6 – *"Goodwill and Intangible Assets"* in the Notes to the Consolidated Financial Statements for further discussion of intangible assets.

Inventories

Inventories are stated at the lower of cost (using the first-in, first-out "FIFO" method) or market. We calculate inventory valuation adjustments for excess and obsolete inventory based on current inventory levels, movement, expected useful lives, and estimated future demand of the products and spare parts.

Income Taxes

Current and non-current tax assets and liabilities are based upon an estimate of taxes refundable or payable for each of the jurisdictions in which we are subject to tax. In the ordinary course of business, there is inherent uncertainty in quantifying income tax positions. We assess income tax positions and record tax benefits for all years subject to examination based upon our evaluation of the facts, circumstances, and information available at the reporting dates. For those tax positions where it is more likely than not that a tax benefit will be sustained, we record the largest amount of tax benefit with a greater than 50% likelihood of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. For those income tax positions where it is not more likely than not that a tax benefit will be sustained, no tax benefit is recognized in the financial statements. When applicable, associated interest and penalties are recognized as a component of income tax expense. Accrued interest and penalties are included within the related tax asset or liability on the Consolidated Balance Sheets.

Deferred income taxes are provided for temporary differences arising from differences in bases of assets and liabilities for tax and financial reporting purposes. Deferred income taxes are recorded on temporary differences using enacted tax rates in effect for the year in which the temporary differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Significant judgment is required in determining whether and to what extent any valuation allowance is needed on our deferred tax assets. In making such a determination, we consider all available positive and negative evidence including recent results of operations, scheduled reversals of deferred tax liabilities, projected future income, and available tax planning strategies. As of December 31, 2016, we have a valuation allowance of approximately $21.1 million to reduce our U.S. deferred income tax assets to the amount expected to be realized. See Note 10 – *"Income Taxes"* in the Notes to the Consolidated Financial Statementsin Item 8 of this Form 10-K for further discussion of the tax valuation allowance.

We have recorded a valuation allowance against all of our U.S. deferred tax assets as of December 31, 2016. We intend to continue maintaining a full valuation allowance on our U.S. deferred tax assets until there is sufficient evidence to support the reversal of all or some portion of this allowance. However, given our current earnings and anticipated future earnings, we believe that there is a reasonable possibility that within the next twelve (12) months, sufficient positive evidence may become available to allow us to reach a conclusion that a significant portion of the valuation allowance will no longer be needed. Release of the valuation allowance would result in the recognition of certain deferred tax assets and a decrease in income tax expense for the period the release is recorded. However, the exact timing and amount of the valuation allowance release are subject to change on the basis of the level of profitability that we are able to actually achieve.

Our operations are subject to income and transaction taxes in the U.S. and in foreign jurisdictions. Significant estimates and judgments are required in determining our worldwide provision for income taxes. Some of these estimates are based on interpretations of existing tax laws or regulations. The ultimate amount of tax liability may be uncertain as a result.

Results of Operations

2016 Compared to 2015

Total revenue

	For the Year Ended December 31,					
	2016		2015		Change Increase (Decrease)	
Product revenue	$ 49,715	91%	$ 43,671	98%	$ 6,044	14%
License and development revenue	5,000	9%	1,042	2%	3,958	380%
Total revenue	$ 54,715	100%	$ 44,713	100%	$ 10,002	22%

Product revenue

	For the Year Ended December 31,			
Segment	2016	2015	$ Change	% Change
Water	$ 47,545	$ 43,530	$ 4,015	9%
Oil & Gas	2,170	141	2,029	1,439%
Total product revenue	$ 49,715	$ 43,671	$ 6,044	14%

Total product revenue increased by $6.0 million, or 14%, to $49.7 million in 2016 from $43.7 million in 2015. Of the $6.0 million increase, $4.0 million was attributable to the Water Segment and $2.0 million was attributable to the Oil & Gas Segment.

The increase in Water Segment product revenue was primarily due to higher mega-project (MPD), OEM, and aftermarket shipments in 2016 as compared to 2015. Of the $4.0 million increase in our Water Segment product revenue, $1.9 million related to MPD sales, $1.2 million related to OEM sales, $0.9 million related to aftermarket sales.

Of the $2.0 million increase in Oil & Gas Segment product revenue, $2.2 million was due to the percentage-of-completion revenue recognition associated with the sale of multiple IsoBoost systems. The increase was offset by ($0.2) million related to the commissioning of an IsoGen system and the cancellation of a purchase order for an IsoBoost in early 2015.

Product revenue attributable to domestic and international sales as a percentage of total product revenue was as follows:

	For the Year Ended December 31,	
	2016	2015
Domestic revenue	2%	7%
International revenue	98%	93%
Total product revenue	100%	100%

License and development revenue

	For the Year Ended December 31,			
Segment	2016	2015	$ Change	% Change
Water	$ —	$ —	$ —	—
Oil & Gas	5,000	1,042	3,958	380%
License and development revenue	$ 5,000	$ 1,042	$ 3,958	380%

License and development revenue increased by $4.0 million, or 380%, to $5.0 million in 2016 from $1.0 million in 2015. In October 2015, we entered into a fifteen-year exclusive license agreement with the VorTeq Licensee for the use of our VorTeq technology and received a $75 million up-front exclusivity fee. The increase of $4.0 million in license and development revenue in 2016 compared to 2015 was due to the recognition of a full year of amortization of the deferred revenue compared to a partial year of amortization in 2015 related to this license agreement.

License and development revenue attributable to domestic and international sales as a percentage of total license and development revenue was as follows:

	For the Year Ended December 31, 2016	For the Year Ended December 31, 2015
Domestic revenue	—	—
International revenue	100%	100%
Total license and development revenue	100%	100%

Product gross profit

	Year Ended December 31, 2016			Year Ended December 31, 2015		
	Water	Oil &Gas	Total	Water	Oil &Gas	Total
Product gross profit	$ 31,192	$ 674	$ 31,866	$ 24,485	$ 75	$ 24,560
Product gross margin	66%	31%	64%	56%	53%	56%

Product gross profit represents our product revenue less our product cost of revenue. Our product cost of revenue consists primarily of raw materials, personnel costs (including stock-based compensation), manufacturing overhead, warranty costs, depreciation expense, and manufactured components.

Product gross profit increased by $7.3 million, or 30%, to $31.9 million in 2016 from $24.6 million in 2015. For the year ended December 31, 2016, product gross margin (total product gross profit as a percentage of product revenue) was 64% compared to 56% for the year ended December 31, 2015.

The increase in product gross profit in 2016 compared to 2015 was primarily due to increased sales volume, favorable product price and mix, and increased operational efficiencies.

Manufacturing headcount decreased to 40 for the year ended December 31, 2016 from 42 for the year ended December 31, 2015.

Stock-based compensation expense included in cost of revenue was $0.1 million for the year ended December 31, 2016 and $0.1 million for the year ended December 31, 2015.

Operating expenses

	For the Year Ended December 31,					
	2016		2015		Change Increase (Decrease)	
Total revenue	$ 54,715	100%	$ 44,713	100%	$ 10,002	22%
Operating expenses:						
General and administrative	16,626	30%	19,773	44%	(3,147)	(16%)
Sales and marketing	9,116	17%	9,326	21%	(210)	(2%)
Research and development	10,136	19%	7,659	17%	2,477	32%
Amortization of intangible assets	631	1%	635	1%	(4)	(1%)
Total operating expenses	$ 36,509	67%	$ 37,393	84%	$ (884)	(2%)

General and administrative

General and administrative expense decreased by ($3.2) million, or 16%, to $16.6 million in 2016 from $19.8 million in 2015. Of the($3.2) million decrease in general and administrative expense, ($2.1) million related to professional, legal, and other administrative costs and ($1.1) million related to stock-based compensation expense.

General and administrative headcount increased to 30 for the year ended December 31, 2016 from 26 for the year ended December 31, 2015.

Stock-based compensation expense included in general and administrative expense was $2.1 million for the year ended December 31, 2016 and $3.1 million for the year ended December 31, 2015. The decrease in stock-based compensation is primarily related to the decrease of non-recurring expenses associated with the accelerated vesting and modification of options connected to the resignation of the former Chief Executive Officer in the first quarter of 2015.

Sales and marketing

Sales and marketing expense decreased by ($0.2) million, or 2%, to $9.1 million in 2016 from $9.3 million in 2015. Of the ($0.2) million decrease in sales and marketing expense, ($0.4) million related to compensation, sales commissions, and employee-related benefits, which was partially offset by a $0.2 million increase related to bonuses.

Sales and marketing headcount decreased to 28 for the year ended December 31, 2016 from 29 for the year ended December 31, 2015.

Stock-based compensation expense included in sales and marketing expense was $0.5 million for the year ended December 31, 2016 and $0.4 million for the year ended December 31, 2015.

Research and development

Research and development expense increased by $2.4 million, or 32%, to $10.1 million in 2016 from $7.7 million in 2015. Of the $2.4 million increase in research and development expense, $1.2 million related to direct research and development project costs associated with new product initiatives and $1.2 million related to compensation and employee-related benefits.

Research and development headcount increased to 22 for the year ended December 31, 2016 from 17 for the year ended December 31, 2015.

Stock-based compensation expense included in research and development expense was $569,000 for the year ended December 31, 2016 and $354,000 for the year ended December 31, 2015.

Amortization of intangible assets

Amortization of intangible assets is related to finite-lived intangible assets acquired as a result of our purchase of Pump Engineering, LLC in December 2009. Amortization expense decreased by ($0.004) million, or 1%, to $0.6 million in 2016 from $0.6 million in 2015.

Other income (expense)

	For the Year Ended December 31,					
	2016		2015		Change Increase (Decrease)	
Total revenue	$ 54,715	100%	$ 44,713	100%	$ 10,002	22%
Other income (expense):						
Interest expense	(3)	*	(42)	*	39	93%
Other non-operating income (expense), net	290	1%	(139)	*	429	309%
Total other (expense) income	$ 287	1%	$ (181)	*	$ 468	259%

* less than 1%

Other income (expense) increased by $0.5 million, or 259%, to income of $0.3 million in 2016 from an expense of ($0.2) million in 2015. The increase was due to higher interest income; lower interest expense; the favorable disposition of foreign currency options; and favorable foreign currency exchange in 2016 compared to 2015.

Income taxes

Our income tax benefit was $0.4 million for the year ended December 31, 2016 compared to a tax benefit of $0.3 million for the year ended December 31, 2015. The tax benefit of $0.4 million for the year ended December 31, 2016, consisted of $0.7 million benefit related to the losses in our Ireland subsidiary which was partially offset by tax expense of ($0.3) million related to the deferred tax effects associated with the amortization of goodwill and other taxes.

The tax benefit of $0.3 million for the year ended December 31, 2015, consisted of $0.6 million benefit related to the losses in our Ireland subsidiary which was partially offset by tax expense of ($0.3) million related to the deferred tax effects associated with the amortization of goodwill and other taxes.

2015 Compared to 2014

Total revenue

	For the Year Ended December 31,					
	2015		2014		Change Increase (Decrease)	
Product revenue	$ 43,671	98%	$ 30,426	100%	$ 13,245	44%
License and development revenue	1,042	2%	—	—	1,042	—
Total revenue	$ 44,713	100%	$ 30,426	100%	$ 14,287	47%

Product revenue

Segment	For the Year Ended December 31, 2015	2014	$ Change	% Change
Water	$ 43,530	$ 29,643	$ 13,887	47%
Oil & Gas	141	783	(642)	(82%)
Total product revenue	$ 43,671	$ 30,426	$ 13,245	44%

Total product revenue increased by $13.2 million, or 44%, to $43.7 million in 2015 from $30.4 million in 2014. Of the $13.2 million increase, $13.8 million was attributable to the Water Segment, which was partially offset by a decrease of ($0.6) million in the Oil & Gas Segment.

The increase in Water Segment product revenue was primarily due to significantly higher MPD, OEM, and aftermarket shipments in 2015 as compared to 2014. Of the $13.2 million increase in Water Segment product revenue, $9.8 million related to MPD sales, $2.8 million related to OEM sales, $1.2 million related to aftermarket sales.

The decrease in Oil & Gas Segment product revenue of ($0.6) million related to the lease buy-out of an IsoGen system in 2014 and the commissioning of that system in early 2015.

Product revenue attributable to domestic and international sales as a percentage of total product revenue was as follows:

	For the Year Ended December 31, 2015	2014
Domestic revenue	7%	4%
International revenue	93%	96%
Total product revenue	100%	100%

License and development revenue

Segment	For the Year Ended December 31, 2015	2014	$ Change	% Change
Water	$ —	$ —	$ —	—
Oil & Gas	1,042	—	1,042	—
License and development revenue	$ 1,042	$ —	$ 1,042	—

License and development revenue increased by $1.0 million, to $1.0 million in 2015 from zero in 2014. In October 2015, we entered into a fifteen-year exclusive license agreement with the VorTeq Licensee for the use of our VorTeq technology and received a $75 million up-front exclusivity fee. The increase in license and development revenue in 2015 was due to the recognition of a partial year of amortization in 2015 related to this license agreement.

License and development revenue attributable to domestic and international sales as a percentage of total license and development revenue was as follows:

	For the Year Ended December 31,	
	2015	2014
Domestic revenue	—	—
International revenue	100%	—
Total license and development revenue	100%	—

Product gross profit

	Year Ended December 31, 2015			Year Ended December 31, 2014		
	Water	Oil &Gas	Total	Water	Oil &Gas	Total
Product gross profit	$ 24,485	$ 75	$ 24,560	$ 15,930	$ 783	$ 16,713
Product gross margin	56%	53%	56%	54%	100%	55%

Product gross profit increased by $7.9 million, or 47%, to $24.6 million in 2015 from $16.7 million in 2014. For the year ended December 31, 2015, total product gross margin was 56% compared to 55% for the year ended December 31, 2014.

The increase in total product gross profit in 2015 compared to 2014 was primarily due to higher production volume and a shift in product mix toward PX ERDs due to increased MPD sales volume in the Water Segment as well as increased operational efficiencies. The increase in product gross profit in the Water Segment was slightly offset by a decrease in the product gross profit of the Oil & Gas Segment due to cost associated with the commissioning of an IsoGen in 2015.

Manufacturing headcount increased to 42 for the year ended December 31, 2015 from 38 for the year ended December 31, 2014.

Stock-based compensation expense included in cost of revenue was $0.1 million for the year ended December 31, 2015 and $0.1 million for the year ended December 31, 2014.

Operating expenses

	For the Year Ended December 31,					
	2015		2014		Change Increase (Decrease)	
Total revenue	$ 44,713	100%	$ 30,426	100%	$ 14,287	47%
Operating expenses:						
General and administrative	19,773	44%	14,139	46%	5,634	40%
Sales and marketing	9,326	21%	10,525	35%	(1,199)	(11%)
Research and development	7,659	17%	9,690	32%	(2,031)	(21%)
Amortization of intangible assets	635	1%	842	3%	(207)	(25%)
Total operating expenses	$ 37,393	84%	$ 35,196	116%	$ 2,197	6%

General and administrative

General and administrative expense increased by $5.7 million, or 40%, to $19.8 million in 2015 from $14.1 million in 2014. Of the $5.7 million increase in general and administrative expense, $2.0 million related to increased stock-based compensation expense, including non-recurring expense associated with the resignation of our former Chief Executive Officer in January 2015; $1.8 million related to compensation and employee-related benefits, that included non-recurring termination benefits associated with a reduction in force in the first quarter of 2015; $1.1 million related to professional, legal, and other administrative costs, including non-recurring expenses related to the termination of the former Senior Vice-President of Sales in 2014; $0.9 million related to the reversal of VAT in the first quarter of 2014 that was expensed in 2011 and prior years; $0.4 million related to bad debt expense, occupancy costs, and other taxes; and $0.2 million related to the fair value remeasurement of the contingent consideration related to the acquisition of Pump Engineering which was settled in 2014. Partially offsetting these increases was a decrease of ($0.7) million in other general and administrative miscellaneous costs.

General and administrative headcount decreased to 26 for the year ended December 31, 2015 from 28 for the year ended December 31, 2014.

Stock-based compensation expense included in general and administrative expense was $3.1 million for 2015 and $1.2 million for 2014. The increase in stock-based compensation is primarily related to the increased value of options granted to non-employee directors in February 2015, the full vesting of restricted shares granted to a non-employee director in December 2014, and non-recurring expenses related to the accelerated vesting and modification of options associated with the resignation of our former Chief Executive Officer in the first quarter of 2015.

Sales and marketing

Sales and marketing expense decreased by ($1.2) million, or 11%, to $9.3 million in 2015 from $ 10.5 million in 2014. Of the ($1.2) million decrease in sales and marketing expense, ($1.3) million related to marketing, professional, occupancy, and other sales and marketing costs and ($0.7) million related to compensation and employee-related benefits. The decreases were partially offset by an increase of $0.8 million related to sales commissions and bonuses.

Sales and marketing headcount decreased to 29 for the year ended December 31, 2015 from 36 for the year ended December 31, 2014.

Stock-based compensation expense included in sales and marketing expense was $436,000 for the year ended December 31, 2015 and $487,000 for the year ended December 31, 2014.

Research and development

Research and development expense decreased by ($2.0) million, or 21%, to $7.7 million in 2015 from $9.7 million in 2014. Of the ($2.0) million decrease in research and development expense, ($2.4) million related to direct research and development project costs associated with new product initiatives and ($0.3) million related to consulting and professional services. The decreases were partially offset by an increase of $0.7 million related to compensation, employee-related benefits, and occupancy costs.

Research and development headcount decreased to 17 for the year ended December 31, 2015 from 22 for the year ended December 31, 2014.

Stock-based compensation expense included in research and development expense was $0.4 million for the year ended December 31, 2015 and $0.3 million for the year ended December 31, 2014.

Amortization of intangible assets

Amortization expense decreased by ($0.2) million, or 25%, to $0.6 million in 2015 from $0.8 million in 2014. The decrease was due to the full amortization of all intangibles, except developed technology, in November of 2014.

Other income (expense)

	For the Year Ended December 31,					
	2015		2014		Change Increase (Decrease)	
Total revenue	$ 44,713	100%	$ 30,426	100%	$ 14,287	47%
Other income (expense):						
Interest expense	(42)	*	—	*	(42)	*
Other non-operating income (expense), net	(139)	*	69	*	(208)	(301%)
Total other (expense) income	$ (181)	*	$ 69	*	$ (250)	(362%)

* less than 1%

Other income (expense) decreased by ($0.3) million, or 362%, to an expense of ($0.2) million in 2015 from income of $0.1 million in 2014. The decrease was due to lower interest income; higher interest expense; unfavorable fair value re-measurement of put foreign currency options; and favorable foreign currency exchange in 2015 compared to 2014.

Income taxes

Our income tax benefit was $0.3 million for the year ended December 31, 2015 compared to a tax provision of ($0.3) million for the year ended December 31, 2014. The tax benefit of $0.3 million for the year ended December 31, 2015, consisted of $0.6 million benefit related to the losses in our Ireland subsidiary. The benefit was partially offset by tax expense of ($0.3) million related to the deferred tax effects associated with the amortization of goodwill and other taxes.

The tax provision of ($0.3) million for the year ended December 31, 2014, consisted of tax expense of ($0.3) million related to the deferred tax effects associated with the amortization of goodwill and state and other taxes. The tax expenses were offset by a tax benefit associated with foreign currency translation adjustments recorded in other comprehensive income.

Liquidity and Capital Resources

Historically, our primary sources of cash are proceeds from customer payments for our products and services and the issuance of common stock. In October 2015, we received a payment of $75 million for an exclusive license to our VorTeq. From January 1, 2005 through December 31, 2016, we issued common stock for aggregate net proceeds of $94.8 million, excluding common stock issued in exchange for promissory notes. The proceeds have been used to fund our operations and capital expenditures.

As of December 31, 2016, our principal sources of liquidity consisted of unrestricted cash and cash equivalents of $61.4 million, some of which is invested in money market funds; short-term investments in marketable debt securities of $39.1 million; and accounts receivable of $11.8 million. We generally invest cash not needed for current operations predominantly in high-quality, investment-grade, and marketable debt instruments with the intent to make such funds available for operating purposes as needed.

We currently have unbilled receivables pertaining to customer contractual holdback provisions, whereby we will invoice the final retention payment(s) due under certain sales contracts in the next six (6) to twenty-four (24) months. The customer holdbacks represent amounts intended to provide a form of security for the customer; accordingly, these receivables have not been discounted to present value. At December 31, 2016 and 2015, we had $0.2 million and $1.9 million, respectively, of short-term and long-term unbilled receivables.

In June 2012, we entered into a loan agreement with a financial institution. The loan agreement was amended in June 2015, (as amended, the “Loan Agreement”). The Loan Agreement provides for a total available credit line of $16.0 million. Under the Loan Agreement, we are allowed to draw advances not to exceed the lesser of the $16 million credit line or the credit line minus all outstanding revolving loans. Revolving loans may be in the form of a base rate loan that bears interest equal to the prime rate or a Eurodollar loan that bears interest equal to the adjusted LIBOR rate plus 1.25%. Stand-by letters of credit are subject to customary fees and expenses for issuance or renewal. The unused portion of the credit facility is subject to a facility fee in an amount equal to 0.25% per annum of the average unused portion of the revolving line. The Loan Agreement also requires us to maintain a cash collateral balance equal to 101% of all outstanding advances and all outstanding stand-by letters of credit collateralized by the line of credit. The Loan Agreement matures in June 2018 and is collateralized by substantially all of our assets. As of December 31, 2016 and 2015, there were no advances drawn under the Loan Agreement. This Loan Agreement was terminated on January 24, 2017.

As of December 31, 2016, the amount outstanding on stand-by letters of credit collateralized under the Loan Agreement totaled $3.1 million, and restricted cash related to the stand-by letters of credit issued under the Loan Agreement was $3.1 million. Of the $3.1 million in restricted cash, $1.0 million was classified as current and $2.1 million was classified as non-current.

We are subject to certain financial and administrative covenants under the Loan Agreement. As of December 31, 2016, we were in compliance with these covenants.

At December 31, 2016, we also had stand-by letters of credit collateralized by restricted cash at two other financial institutions totaling $1.3 million. Total restricted cash related to these stand-by letters of credit totaled $1.3 million as of December 31, 2016, all of which was classified as current.

On January 27, 2017, we entered into a loan and pledge agreement (the “Loan and Pledge Agreement”) with another financial institution. The Loan and Pledge Agreement provides for a committed revolving credit line of $16.0 million and an uncommitted revolving credit line of $4.0 million. Under the Loan and Pledge Agreement we are allowed to borrow and request letters of credit against the eligible assets held from time to time in the pledged account maintained with the financial institution. Stand-by letters of credit are secured by pledged U.S. investments and there is no cash collateral balance required. Stand-by letters of credit are subject to fees, in an amount equal to 0.7% per annum of the face amount of the letter of credit, that are payable quarterly and are non-refundable. Revolving loans incur interest per annum on the base rate equal to the LIBOR rate plus the Margin defined as 1.5%. Any default bears the aforementioned interest plus an additional 2%. The unused portion of the credit line is subject to a fee equal to the product of 0.20% per annum multiplied by the difference, if positive, between $16.0 million and the average daily balance of all advances under the committed facility plus aggregate average daily undrawn amounts of all letters of credit issued under the committed facility during the immediately preceding month or portion thereof.

Cash Flows from Operating Activities

Net cash provided by (used in) operating activities was $5.0 million, $69.1 million, and ($3.7) million, for the years ended December 31, 2016, 2015, and 2014, respectively. For the years ended December 31, 2016, 2015, and 2014, net income (losses) of $1.0 million, ($11.6) million, and ($18.7) million, respectively, were adjusted to $7.2 million, ($4.3) million, and ($10.9) million, respectively, by non-cash items totaling $6.2 million, $7.3 million, and $7.8 million, respectively.

Non-cash adjustments of $6.2 million in 2016 primarily included $3.7 million of depreciation and amortization; $3.3 million of stock-based compensation; $0.2 million of amortization of premiums paid on investments; $0.2 million provision for warranty claims; $0.1 million of reserves for doubtful accounts; ($0.5) million of deferred income taxes; ($0.4) million of valuation adjustments to excess and obsolete inventory reserves; ($0.2) million reversal of accruals related to expired warranties; and ($0.2) million of other non-cash items.

Non-cash adjustments of $7.3 million in 2015 primarily included $4.1 million of stock-based compensation; $3.8 million of depreciation and amortization; $0.2 million of amortization of premiums paid on investments; a $0.1 million provision for warranty claims; $0.1 million of reserves for doubtful accounts; ($0.4) million reversal of accruals related to expired warranties; ($0.3) million of deferred income taxes; and ($0.3) million of valuation adjustments to excess and obsolete inventory reserves.

Non-cash adjustments of $7.8 million in 2014 primarily included $4.0 million of depreciation and amortization; $2.1 million of stock-based compensation; $0.7 million of deferred income taxes and other non-cash items; $0.4 million of amortization of premiums paid on investments; $0.3 million of reserves for doubtful accounts; $0.3 million of valuation adjustments to excess and obsolete inventory reserves; a $0.2 million provision for warranty claims; ($0.2) million related to the change in fair value of a contingent consideration, which was associated with the acquisition of Pump Engineering; and ($0.1) million of unrealized gains on foreign currency transactions.

The net cash effect from changes in operating assets and liabilities was ($2.3) million, $73.3 million, and $7.2 million for the years ended December 31, 2016, 2015, and 2014, respectively. Net changes in assets and liabilities of $(2.3) million in 2016 were primarily attributable to a ($5.0) million decrease in deferred revenue due to the recognition of revenue related to our exclusive license agreement; a ($1.8) million increase in cost and estimated billings related to a percentage-of-completion revenue recognition project; a ($0.4) million increase in prepaid expenses and other assets; and a ($0.4) million decrease in accounts payable. These were offset by a $2.3 million decrease in inventories due to increased shipments; a $1.5 million decrease in accounts receivable and unbilled receivables due to timing of invoices and payments; a $1.2 million increase in accrued expenses and other liabilities; and a $0.3 million increase in product deferred revenue.

Net changes in assets and liabilities of $73.3 million in 2015 were primarily attributable to the receipt of a $75.0 million exclusive license payment, of which $1.0 million was recognized as revenue and the remainder deferred; a $2.0 million decrease in inventories related to increased shipments; a $0.3 million increase in product deferred revenue; and a $0.3 million decrease in prepaid expenses and other assets. These were offset by a ($1.7) million litigation settlement payment; a ($0.9) million increase in accounts receivable and unbilled receivables related to increased shipments; and a ($0.7) million decrease in accrued expenses and other liabilities related to decrease legal expenses and litigation matters.

Net changes in assets and liabilities of $7.2 million in 2014 were primarily attributable to an $8.9 million decrease in accounts receivable and unbilled receivables as a result of lower sales and the collection of outstanding amounts; a $1.9 million increase in accrued expenses and other liabilities related to increased legal expense and litigation matters; and a $0.6 million increase in accounts payable due to the timing of payments to employees, vendors, and other third parties. These were offset by a $3.6 million increase in inventory of which $2.3 million was an increase in finished goods principally related to a large MPD shipment built in the fourth quarter of 2014 but expected to ship in the first quarter of 2015; a $0.3 million increase in prepaid expenses; and a $0.3 million decrease in deferred revenue.

Cash Flows from Investing Activities

Cash flows from investing activities primarily relate to maturities and purchases of marketable securities to preserve principal and liquidity while at the same time maximizing yields without significantly increasing risk, capital expenditures to support our growth, and changes in our restricted cash used to collateralize our stand-by letters of credit and other contingent considerations.

Net cash (used in) provided by investing activities was ($40.7) million, $14.0 million, and $6.5 million for the years ended December 31, 2016, 2015, and 2014, respectively. Cash used in 2016 of ($40.7) million was primarily attributable to ($46.5) million used to purchase investments; ($1.1) million for capital expenditures; and ($0.6) million increase in restricted cash related to additional stand-by letters of credit. These were offset by $7.5 million in maturities of marketable security investments.

Cash provided in 2015 of $14.0 million was primarily attributable to $12.9 million in maturities of investments and the release of $1.7 million of restricted cash related to the expiration of stand-by letters of credit. These were offset by the use of ($0.6) million for capital expenditures.

Cash provided in 2014 of $6.5 million was primarily attributable to $6.0 million in maturities of investments and the release of $3.3 million of restricted cash primarily related to the settlement of a contingent consideration associated with the acquisition of Pump Engineering. These were offset by uses of ($2.6) million for capital expenditures and ($0.2) million in purchases of marketable security investments.

Cash Flows from Financing Activities

Net cash (used in) provided by financing activities was ($2.8) million, $1.4 million, and ($1.8) million for the years ending December 31, 2016, 2015, and 2014, respectively. Net cash used in 2016 of ($2.8) million was primarily due to the use of ($9.4) million to repurchase our common stock offset by $6.6 million received from the issuance of common stock related to option exercises.

Net cash provided in 2015 of $1.4 million was primarily due to $1.3 million received from the issuance of common stock related to option and warrant exercises and $0.1 million of proceeds from long-term debt.

Net cash used in 2014 of ($1.8) million was primarily due to the use of ($2.8) million to repurchase our common stock and ($1.4) million to pay the contingent consideration related to the acquisition of Pump Engineering, which were offset by $2.4 million received from the issuance of common stock related to option and warrant exercises.

Liquidity and Capital Resource Requirements

We believe that our existing resources and cash generated from our operations will be sufficient to meet our anticipated capital requirements for at least the next twelve months. However, we may need to raise additional capital or incur additional indebtedness to continue to fund our operations or to support acquisitions in the future. Our future capital requirements will depend on many factors, including the continuing market acceptance of our products, our rate of revenue growth, the timing of new product introductions, the expansion of our research and development, manufacturing, and sales and marketing activities, the timing and extent of our expansion into new geographic territories, and the amount and timing of cash used for stock repurchases. In addition, we may enter into potential material investments in, or acquisitions of, complementary businesses, services, or technologies in the future, which could also require us to seek additional equity or debt financing. Should we need additional liquidity or capital funds, these funds may not be available to us on favorable terms or at all.

Contractual Obligations

We lease facilities and equipment under fixed non-cancellable operating leases that expire on various dates through 2021. Additionally, in the course of our normal operations, we have entered into cancellable purchase commitments with our suppliers for various key raw materials and component parts. The purchase commitments covered by these arrangements are subject to change based on our sales forecasts for future deliveries.

The following is a summary of our contractual obligations as of December 31, 2016 (in thousands):

	Payments Due by Period			
Contractual obligations	**Less Than 1 Year**	**1-3 Years**	**3-5 Years**	**Total**
Operating leases	$ 1,705	$ 3,122	$ 93	$ 4,920
Loan payable	11	23	4	38
Purchase obligations(1)	6,755	—	—	6,755
	$ 8,471	$ 3,145	$ 97	$ 11,713

(1) Purchase obligations are related to open purchase orders for materials and supplies.

This table excludes agreements with guarantees or indemnity provisions that we have entered into with customers and others in the ordinary course of business. Based on our historical experience and information known to us as of December 31, 2016, we believe that our exposure related to these guarantees and indemnities as of December 31, 2016 was not material.

Off-Balance Sheet Arrangements

During the periods presented, we did not have any relationships with unconsolidated entities or financial partnerships such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Recent Accounting Pronouncements

See Note 2 — *"Summary of Significant Accounting Policies"* included in "Item 8 — Financial Statements and Supplementary Data" in this Reportregarding the impact of certain recent accounting pronouncements on our Consolidated Financial Statements.

Item 7A — Quantitative and Qualitative Disclosures About Market Risk

Foreign Currency Risk

The majority of our revenue contracts have been denominated in United States Dollars ("USD"). In some circumstances, we have priced certain international sales in Euros. The amount of revenue recognized and denominated in Euros amounted to $6,000, $11,000, and $0.9 million in 2016, 2015, and 2014, respectively. We experienced a net foreign currency loss of approximately $137, $119,000, and $18,000 related to our revenue contracts for the years ended December 31, 2016, 2015, and 2014, respectively. Of the $119,000 of foreign currency losses in 2015, $106,000 related to revenue recognized in 2014 but collected in 2015.

As we expand our international sales, we expect that a portion of our revenue could continue to be denominated in foreign currencies. As a result, our cash and cash equivalents and operating results could be increasingly affected by changes in exchange rates. Our international sales and marketing operations incur expense that is denominated in foreign currencies. This expense could be materially affected by currency fluctuations. Our exposures are to fluctuations in exchange rates for USD versus the Euro, AED, CNY, GBP, and CAD. Changes in currency exchange rates could adversely affect our consolidated operating results or financial position. Additionally, our international sales and marketing operations maintain cash balances denominated in foreign currencies. To decrease the inherent risk associated with translation of foreign cash balances into our reporting currency, we do not maintain excess cash balances in foreign currencies. We have not hedged our exposure to changes in foreign currency exchange rates because expenses in foreign currencies have been insignificant to date, and exchange rate fluctuations have had little impact on our operating results and cash flows.

Interest Rate Risk and Credit Risk

We have an investment portfolio of fixed income marketable debt securities, including amounts classified as cash equivalents, short-term investments, and long-term investments. At December 31, 2016, all of our investments were classified as short-term and totaled approximately $39.1 million. The primary objective of our investment activities is to preserve principal and liquidity while at the same time maximizing yields without significantly increasing risk. We invest primarily in high-quality short-term and long-term debt instruments of the U.S. government and its agencies as well as high-quality corporate issuers. These investments are subject to interest rate fluctuations and will decrease in market value if interest rates increase. To minimize the exposure due to adverse shifts in interest rates, we maintain investments with an average maturity of less than seven months. A hypothetical 1% increase in interest rates would have resulted in an approximately $0.2 million decrease in the fair value of our fixed-income debt securities as of December 31, 2016.

In addition to interest rate risk, our investments in marketable debt securities are subject to potential loss of value due to counterparty credit risk. To minimize this risk, we invest pursuant to a Board-approved investment policy. The policy mandates high credit rating requirements and restricts our exposure to any single corporate issuer by imposing concentration limits.

Item 8 — Financial Statements and Supplementary Data

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Energy Recovery, Inc.
San Leandro, California

We have audited the accompanying consolidated balance sheets of Energy Recovery, Inc. as of December 31, 2016 and 2015 and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2016. In connection with our audits of the financial statements, we have also audited the financial statement schedule ("schedule") listed in Item 15(a)(2). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements and schedule. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the Consolidated Financial Statements referred to above present fairly, in all material respects, the financial position of Energy Recovery, Inc. at December 31, 2016 and 2015, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

Also, in our opinion, the financial statement schedule, when considered in relation to the basic Consolidated Financial Statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Energy Recovery, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and our report dated March 9, 2017 expressed an unqualified opinion thereon.

/s/ BDO USA, LLP

San Jose, California
March 9, 2017

ENERGY RECOVERY, INC.

CONSOLIDATED BALANCE SHEETS

	December 31, 2016	December 31, 2015
	(In thousands, except share data and par value)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 61,364	$ 99,931
Restricted cash	2,297	1,490
Short-term investments	39,073	257
Accounts receivable, net of allowance for doubtful accounts of $130 and $166 at December 31, 2016 and 2015	11,759	11,590
Unbilled receivables, current	190	1,879
Cost and estimated earnings in excess of billings	1,825	—
Inventories	4,550	6,503
Deferred tax assets, net	—	938
Prepaid expenses and other current assets	1,311	943
Total current assets	122,369	123,531
Restricted cash, non-current	2,087	2,317
Unbilled receivables, non-current	—	6
Deferred tax assets, non-current	1,270	—
Property and equipment, net	8,643	10,622
Goodwill	12,790	12,790
Other intangible assets, net	1,900	2,531
Other assets, non-current	4	2
Total assets	$ 149,063	$ 151,799
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,505	$ 1,865
Accrued expenses and other current liabilities	9,019	7,808
Income taxes payable	16	2
Accrued warranty reserve	406	461
Deferred revenue, current	6,201	5,878
Current portion of long-term debt	11	10
Total current liabilities	17,158	16,024
Long-term debt, less current portion	27	38
Deferred tax liabilities, non-current	2,233	2,360
Deferred revenue, non-current	63,958	69,000
Other non-current liabilities	554	718
Total liabilities	83,930	88,140
Commitments and Contingencies (Note 9)		
Stockholders' equity:		
Preferred stock, $0.001 par value; 10,000,000 shares authorized; no shares issued or outstanding	—	—
Common stock, $0.001 par value; 200,000,000 shares authorized; 56,884,207 shares issued and 53,162,551 shares outstanding at December 31, 2016 and 54,948,235 shares issued and 52,468,779 shares outstanding at December 31, 2015	57	55
Additional paid-in capital	139,676	129,809
Accumulated other comprehensive loss	(118)	(64)
Treasury stock, at cost, 3,721,656 shares repurchased at December 31, 2016 and 2,479,456 shares repurchased at December 31, 2015	(16,210)	(6,835)
Accumulated deficit	(58,272)	(59,306)
Total stockholders' equity	65,133	63,659
Total liabilities and stockholders' equity	$ 149,063	$ 151,799

See Accompanying Notes to Consolidated Financial Statements

ENERGY RECOVERY, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

	Years Ended December 31,		
	2016	2015	2014
	(In thousands, except per share data)		
Product revenue	$ 49,715	$ 43,671	$ 30,426
Product cost of revenue	17,849	19,111	13,713
Product gross profit	31,866	24,560	16,713
License and development revenue	5,000	1,042	—
Operating expenses:			
General and administrative	16,626	19,773	14,139
Sales and marketing	9,116	9,326	10,525
Research and development	10,136	7,659	9,690
Amortization of intangible assets	631	635	842
Total operating expenses	36,509	37,393	35,196
Income (loss) from operations	357	(11,791)	(18,483)
Other (expense) income:			
Interest (expense)	(3)	(42)	—
Other non-operating income (expense)	290	(139)	69
Income (loss) before income taxes	644	(11,972)	(18,414)
(Benefit from) provision for income taxes	(390)	(334)	291
Net income (loss)	$ 1,034	$ (11,638)	$ (18,705)
Income (loss) per share:			
Basic	$ 0.02	$ (0.22)	$ (0.36)
Diluted	$ 0.02	$ (0.22)	$ (0.36)
Number of shares used in per share calculations:			
Basic	52,341	52,151	51,675
Diluted	55,451	52,151	51,675

See Accompanying Notes to Consolidated Financial Statements

ENERGY RECOVERY, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	Years Ended December 31,		
	2016	2015	2014
		(In thousands)	
Net income (loss)	$ 1,034	$ (11,638)	$ (18,705)
Other comprehensive (loss) income, net of tax:			
Foreign currency translation adjustments	(27)	4	39
Unrealized (loss) gain on investments	(27)	5	(5)
Other comprehensive (loss) income, net of tax	(54)	9	34
Comprehensive income (loss)	$ 980	$ (11,629)	$ (18,671)

See Accompanying Notes to Consolidated Financial Statements

ENERGY RECOVERY, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

Years Ended December 31, 2016, 2015, and 2014

	Common Stock		Treasury Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
					(In thousands)			
Balance at December 31, 2013	53,137	$ 53	(1,783)	$ (4,000)	$ 119,932	$ (107)	$ (28,963)	$ 86,915
Net loss	—	—	—	—	—	—	(18,705)	(18,705)
Unrealized losses on investment	—	—	—	—	—	(5)	—	(5)
Foreign currency translation adjustments	—	—	—	—	—	39	—	39
Issuance of common stock	1,261	1	—	—	2,404	—	—	2,405
Repurchase of common stock for treasury	—	—	(696)	(2,835)	—	—	—	(2,835)
Employee stock-based compensation	—	—	—	—	2,104	—	—	2,104
Balance at December 31, 2014	54,398	54	(2,479)	(6,835)	124,440	(73)	(47,668)	69,918
Net loss	—	—	—	—	—	—	(11,638)	(11,638)
Unrealized gains on investment	—	—	—	—	—	5	—	5
Foreign currency translation adjustments	—	—	—	—	—	4	—	4
Issuance of common stock	550	1	—	—	1,325	—	—	1,326
Employee stock-based compensation	—	—	—	—	4,044	—	—	4,044
Balance at December 31, 2015	54,948	55	(2,479)	(6,835)	129,809	(64)	(59,306)	63,659
Net Income	—	—	—	—	—	—	1,034	1,034
Unrealized losses on investment	—	—	—	—	—	(27)	—	(27)
Foreign currency translation adjustments	—	—	—	—	—	(27)	—	(27)
Issuance of common stock	1,936	2	—	—	6,598	—	—	6,600
Repurchase of common stock for treasury	—	—	(1,243)	(9,375)	—	—	—	(9,375)
Employee stock-based compensation	—	—	—	—	3,269	—	—	3,269
Balance at December 31, 2016	56,884	$ 57	(3,722)	$ (16,210)	$ 139,676	$ (118)	$ (58,272)	$ 65,133

See Accompanying Notes to Consolidated Financial Statements

ENERGY RECOVERY, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
	2016	2015	2014
		(In thousands)	
Cash Flows From Operating Activities:			
Net income (loss)	$ 1,034	$ (11,638)	$ (18,705)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	3,680	3,838	4,028
Stock-based compensation	3,263	4,059	2,104
Provision for warranty claims	208	135	156
Amortization of premiums on investments	174	162	453
Provision for doubtful accounts	76	112	299
Change in fair value of put options	33	58	—
Loss (gain) on foreign currency transactions	13	1	(153)
Loss on disposal of fixed assets	—	—	38
Gain on fair value remeasurement of contingent consideration	—	—	(149)
Deferred income taxes	(459)	(326)	315
Valuation adjustments for excess or obsolete inventory	(361)	(250)	320
Reversal of accruals related to expired warranties	(236)	(395)	—
Other non-cash adjustments	(164)	(35)	375
Changes in operating assets and liabilities:			
Inventories	2,287	1,951	(3,569)
Unbilled receivables	1,695	(128)	4,882
Accrued expenses and other liabilities	1,259	(708)	1,864
Deferred revenue, product	280	343	(331)
Income taxes payable	14	(3)	(18)
Litigation settlement	—	(1,700)	—
Accounts receivable	(244)	(743)	4,002
Accounts payable	(360)	48	628
Prepaid and other assets	(402)	316	(254)
Costs and estimated earnings in excess of billings	(1,825)	—	—
Deferred revenue, license and development	(5,000)	73,958	—
Net cash provided by (used in) operating activities	4,965	69,055	(3,715)
Cash Flows From Investing Activities:			
Maturities of marketable securities	7,535	12,925	6,027
Restricted cash	(577)	1,665	3,306
Capital expenditures	(1,112)	(572)	(2,562)
Purchases of marketable securities	(46,552)	—	(273)
Net cash (used in) provided by investing activities	(40,706)	14,018	6,498
Cash Flows From Financing Activities:			
Net proceeds from issuance of common stock	6,600	1,326	2,405
Proceeds from long-term debt	—	55	—
Payment of contingent consideration	—	—	(1,375)
Repayment of long-term debt	(10)	(7)	—
Repurchase of common stock	(9,375)	—	(2,835)
Net cash (used in) provided by financing activities	(2,785)	1,374	(1,805)
Effect of exchange rate differences on cash and cash equivalents	(41)	(17)	152
Net change in cash and cash equivalents	(38,567)	84,430	1,130
Cash and cash equivalents, beginning of year	99,931	15,501	14,371
Cash and cash equivalents, end of year	$ 61,364	$ 99,931	$ 15,501
Supplemental disclosure of cash flow information:			
Cash paid for interest	$ 3	$ 42	$ —
Cash received for income tax refunds	$ 2	$ 4	$ 1
Cash paid for income taxes	$ 51	$ 24	$ 35
Supplemental disclosure of non-cash transactions:			
Purchases of property and equipment in trade accounts payable and accrued expenses and other liabilities	$ 66	$ 43	$ 1

See Accompanying Notes to Consolidated Financial Statements

Note 1 — Description of Business

Energy Recovery, Inc. (the “Company,” “Energy Recovery,” “our,” “us,” or “we”) is an energy solutions provider to industrial fluid flow markets worldwide. Our core competencies are fluid dynamics and advanced material science. Our products make industrial processes more operating and capital expenditure efficient. Our solutions convert wasted pressure energy into a reusable asset and preserve or eliminate pumping technology in hostile processing environments. Our solutions are marketed and sold in fluid flow markets, such as water, oil & gas, and chemical processing.

Note 2 —Accounting Policies

Basis of Presentation

Our Consolidated Financial Statements include the accounts of Energy Recovery, Inc. and its wholly-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of Consolidated Financial Statements in conformity with U.S. generally accepted accounting principles (“U.S. GAAP”) requires our management to make judgments, assumptions, and estimates that affect the amounts reported in our Consolidated Financial Statements and accompanying Notes. The accounting policies that reflect our more significant estimates and judgments and that we believe are the most critical to aid in fully understanding and evaluating our reported financial results are revenue recognition, including percentage-of-completion accounting for oil & gas projects; allowance for doubtful accounts; allowance for product warranty; valuation of stock options; valuation and impairment of goodwill and acquired intangible assets; useful lives for depreciation and amortization; valuation adjustments for excess and obsolete inventory; deferred taxes and valuation allowances on deferred tax assets; and evaluation and measurement of contingencies, including contingent consideration. Those estimates could change, and as a result, actual results could differ materially from those estimates. For example, the Company records impairment losses on long-lived assets used in operations when events and circumstances indicate that long-lived assets might be impaired and the undiscounted cash flows estimated to be generated by those assets are less than the carrying amounts of those assets. The Company’s estimate of undiscounted cash flows, at December 31, 2016 and 2015 indicated that such carrying amounts were expected to be recovered. Nonetheless, it is possible that the estimate of undiscounted cash flows may change in the future resulting in the need to write down those assets to fair value.

Cash and Cash Equivalents

We consider all highly liquid investments with an original or remaining maturity of three months or less at the time of purchase to be cash equivalents. Cash equivalents are stated at cost, which approximates fair value. Our cash and cash equivalents are maintained primarily in demand deposit accounts with large financial institutions and in institutional money market funds. We frequently monitor the creditworthiness of the financial institutions and institutional money market funds in which we invest our surplus funds. We have not experienced any credit losses from our cash investments.

Allowances for Doubtful Accounts

We record a provision for doubtful accounts based on historical experience and a detailed assessment of the collectability of our accounts receivable. In estimating the allowance for doubtful accounts, we consider, among other factors, the aging of the accounts receivable, our historical write-offs, the credit worthiness of each customer, and general economic conditions. Account balances are charged off against the allowance when we believe that it is probable that the receivable will not be recovered. Actual write-offs may be in excess of our estimated allowance.

Short-Term and Long-Term Investments

Our short-term and long-term investments consist primarily of investment-grade debt securities, all of which are classified as available-for-sale. Available-for-sale securities are carried at fair value. Amortization or accretion of premium or discount is included in other income (expense) on the Consolidated Statements of Operations. Changes in the fair value of available-for-sale securities are reported as a component of accumulated other comprehensive loss within stockholders' equity on the Consolidated Balance Sheet. Realized gains and losses on the sale of available-for-sale securities are determined by specific identification of the cost basis of each security. Short-term investments mature within twelve months. Long-term investments generally will mature within three (3) years.

Inventories

Inventories are stated at the lower of cost (using the first-in, first-out "FIFO" method) or market. We calculate inventory valuation adjustments for excess and obsolete inventory based on current inventory levels, movement, expected useful lives, and estimated future demand of the products and spare parts.

Property and Equipment

Property and equipment is recorded at cost and reduced by accumulated depreciation. Depreciation expense is recognized over the estimated useful lives of the assets using the straight-line method. Estimated useful lives are three (3) to ten (10) years. Certain equipment used in the development and manufacturing of ceramic components is depreciated over estimated useful lives of up to ten (10) years. Leasehold improvements represent remodeling and retrofitting costs for leased office and manufacturing space and are depreciated over the shorter of either the estimated useful lives or the term of the lease. Software purchased for internal use consists primarily of amounts paid for perpetual licenses to third-party software providers and installation costs. Software is depreciated over the estimated useful lives of three (3) to five (5) years. Estimated useful lives are periodically reviewed, and when appropriate, changes are made prospectively. When certain events or changes in operating conditions occur, asset lives may be adjusted and an impairment assessment may be performed on the recoverability of the carrying amounts. Maintenance and repairs are charged directly to expense as incurred.

Goodwill and Other Intangible Assets

The purchase price of an acquired company is allocated between intangible assets and the net tangible assets of the acquired business with the residual purchase price recorded as goodwill. The determination of the value of the intangible assets acquired involves certain judgments and estimates. These judgments can include, but are not limited to, the cash flows that an asset is expected to generate in the future and the appropriate weighted average cost of capital.

Acquired intangible assets with determinable useful lives are amortized on a straight-line or accelerated basis over the estimated periods benefited, ranging from one (1) to twenty (20) years. Acquired intangible assets with contractual terms are amortized over their respective legal or contractual lives. Customer relationships and other non-contractual intangible assets with determinable lives are amortized over periods ranging from five (5) to twenty (20) years.

We evaluate the recoverability of intangible assets by comparing the carrying amount of an asset to estimated future net undiscounted cash flows generated by the asset. If such assets are considered to be impaired, the impairment recognized is measured as the amount by which the carrying amount of the assets exceeds the fair value of the assets. The evaluation of recoverability involves estimates of future operating cash flows based upon certain forecasted assumptions, including, but not limited to, revenue growth rates, gross profit margins, and operating expenses over the expected remaining useful life of the related asset. A shortfall in these estimated operating cash flows could result in an impairment charge in the future.

Goodwill is not amortized, but is evaluated annually for impairment at the reporting unit level or when indicators of a potential impairment are present. We estimate the fair value of the reporting unit using the discounted cash flow and market approaches. Forecast of future cash flows are based on our best estimate of future net sales and operating expenses, based primarily on expected category expansion, pricing, market segment, and general economic conditions.

As of December 31, 2016 and 2015, acquired intangibles, including goodwill, relate to the acquisition of Pump Engineering, LLC during the fourth quarter of 2009. See Note 6 — *"Goodwill and Intangible Assets"* for further discussion of intangible assets.

Fair Value of Financial Instruments

Our financial instruments include cash and cash equivalents, restricted cash, investments in marketable securities, accounts receivable, accounts payable, and debt. The carrying amounts for these financial instruments reported in the Consolidated Balance Sheets approximate their fair values. See Note 7 — "*Fair Value Measurements"* for further discussion of fair value.

Revenue Recognition

Product and service revenue recognition – Water Segment

We recognize revenue when the earnings process is complete, as evidenced by a written agreement with the customer, transfer of title, fixed pricing that is determinable, and collection that is reasonably assured. Transfer of title typically occurs upon shipment of the equipment pursuant to a written purchase order or contract. The portion of the sales agreement related to the field services and training for commissioning of our devices in a desalination plant is deferred until we have performed such services. We regularly evaluate our revenue arrangements to identify deliverables and to determine whether these deliverables are separable into multiple units of accounting.

Under our revenue recognition policy, evidence of an arrangement is met when we have an executed purchase order, sales order, or stand-alone contract. Typically, smaller projects utilize sales or purchase orders that conform to standard terms and conditions.

The specified product performance criteria for our PX® energy recovery devices ("ERDs") pertain to the ability of our product to meet its published performance specifications and warranty provisions, which our products have demonstrated on a consistent basis. This factor, combined with historical performance metrics, provides our management with a reasonable basis to conclude that the PX ERDs will perform satisfactorily upon commissioning of the plant. To ensure this successful product performance, we provide service consisting principally of supervision of customer personnel and training to the customers during the commissioning of the plant. The installation of the PX ERDs is relatively simple, requires no customization, and is performed by the customer under the supervision of our personnel. We defer the value of the service and training component of the contract and recognize such revenue as services are rendered. Based on these factors, our management has concluded that, for sale of PX ERDs, as well as for turbochargers and pumps, delivery and performance have been completed upon shipment or delivery when title transfers based on the shipping terms.

We perform an evaluation of customer credit worthiness on an individual contract basis to assess whether collectability is reasonably assured. As part of this evaluation, our management considers many factors about the individual customer, including the underlying financial strength of the customer and/or partnership consortium and management's prior history or industry-specific knowledge about the customer and its supplier relationships. For smaller projects, we require the customer to remit payment generally within thirty (30) to ninety (90) days after product delivery. In some cases, if credit worthiness cannot be determined, prepayment or other security is required.

We establish separate units of accounting for contracts, as our contracts with customers typically include one or both of the deliverables, products or commissioning, and there is no right of return under the terms of the contract.

Commissioning includes supervision of the installation, start-up, and training to ensure that the installation performed by the customer which, is relatively simple and straightforward, is completed consistent with the recommendations under the factory warranty. The commissioning services' element of our contracts represents an incidental portion of the total contract price and the allocable consideration for these services relative to that for the underlying products has been well under 1% of any arrangement. Commissioning is often bundled into the large stand-alone contracts, and we frequently sell products without commissioning since our product can be easily installed in a plant without supervision. These facts and circumstances validate that the delivered element has value on a stand-alone basis and should be considered a separate unit of accounting.

Having established separate units of accounting, we then allocate amounts to each unit of accounting. With respect to products, we have established vendor specific objective evidence ("VSOE") based on the price at which such products are sold separately without commissioning services. With respect to commissioning, we charge out our engineers for field visits to customers based on a stand-alone standard daily field service charge as well as a flat service rate for travel, if applicable. This has been determined to be the VSOE of the service based on stand-alone sales of other comparable professional services at consistent pricing.

The amount allocable to the delivered unit of account (in our case the product) is limited to the amount that is not contingent upon the delivery of additional items or meeting specified performance conditions. We adhere to consistent pricing in both stand-alone sale of products and professional services and the contractual pricing of products and commissioning of services in bundled arrangements.

For large projects, stand-alone contracts are utilized. For these contracts, consistent with industry practice, our customers typically require their suppliers, including Energy Recovery, to accept contractual holdback provisions (also referred to as a retention payment) whereby the final amounts due under the sales contract are remitted over extended periods of time or alternatively, stand-by letters of credit are issued to guarantee performance. These retention payments are generally 10% or less of the total contract amount and are due and payable when the customer is satisfied that certain specified product performance criteria have been met upon commissioning of the desalination plant, which may be up to twenty-four (24) months from the date of product delivery as described further below.

Under stand-alone contracts, the usual payment arrangements are summarized as follows:

- an advance payment due upon execution of the contract, typically 10% to 20% of the total contract amount. This advance payment is accounted for as deferred revenue until shipment or when products are delivered to the customer, depending on the Incoterms and transfer of title;

- a payment ranging from 50% to 70% of the total contract is typically due upon delivery of the product. This payment is often divided into two parts. The first part, which is due thirty (30) to sixty (60) days following delivery of the product and documentation, is invoiced upon shipment when the product revenue is recognized and results in an open accounts receivable with the customer. The second part is typically due ninety (90) to one hundred twenty (120) days following product delivery and documentation. This payment is booked to unbilled receivables upon shipment when the product revenue is recognized, and it is invoiced to the customer upon notification that the equipment has been received or when the time period has expired. We have no performance obligation to complete to be legally entitled to this payment. It is invoiced based on the passage of time.

- a final retention payment of generally 10% or less of the contract amount is due either at the completion of plant commissioning or upon the issuance of a stand-by letter of credit, which is typically issued up to twenty-four (24) months from the delivery date of products and documentation. This payment is recorded to unbilled receivables upon shipment when the product revenue is recognized, and it is invoiced to the customer when it is determined that commissioning is complete or the stand-by letter of credit has been issued. This payment is not contingent upon the delivery of commissioning services. The Company had no performance obligation to complete to be legally entitled to this payment. It is invoiced based on the passage of time.

We do not provide our customers with a right of product return; however, we will accept returns of products that are deemed to be damaged or defective when delivered that are covered by the terms and conditions of the product warranty. Product returns have not been significant.

Shipping and handling charges billed to customers are included in product revenue. The cost of shipping to customers is included in cost of revenue.

<u>License, milestone payment, and royalty revenue recognition – Oil & Gas Segment</u>

License and development revenue is comprised of the amortization of the upfront non-refundable $75 million exclusivity fee received in connection with the VorTeq License Agreement entered into with Schlumberger Technology Corporation (the "VorTeq Licensee"). See Note 16 – *VorTeq License Agreement*. The VorTeq License Agreement comprises a fifteen-year exclusivity license for our VorTeq™ technology ("VorTeq"), milestone payments upon achievement of successful tests in accordance with the Key Performance Indicators ("KPIs"), defined in the license agreement, and, after commercialization is achieved, royalty payments for the supply and servicing of certain components of the VorTeq. All payments are non-refundable.

We recognize license and development revenue in accordance with ASC 605 “Revenue Recognition,” subtopic ASC 605-25 “Revenue with Multiple Element Arrangements” and subtopic ASC 605-28 “Revenue Recognition-Milestone Method,” which provides accounting guidance for revenue recognition for arrangements with multiple deliverables and guidance on defining the milestone and determining when the use of the milestone method of revenue recognition is appropriate, respectively.

For multiple-element arrangements, each deliverable is accounted for as a separate unit of accounting if both the following criteria are met: (1) the delivered item or items have value to the customer on a standalone basis and (2) for an arrangement that includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially in our control. Contingent deliverables within multiple element arrangements are excluded from the evaluation of the units of accounting. Non-refundable, upfront license fees where we have continuing obligation to perform are recognized over the period of the continuing performance obligation. The VorTeq License Agreement was determined to include a single unit of accounting. The initial upfront fee of $75 million is recognized on a straight-line basis over the fifteen-year term of the arrangement based on the performance period of the last or final deliverables, which include the license and support.

We recognize revenue from milestone payments when: (i) the milestone event is substantive and its achievability has substantive uncertainty at the inception of the agreement, and (ii) it does not have ongoing performance obligations related to the achievement of the milestone earned. Milestone payments are considered substantive if all of the following conditions are met, the milestone payment: (a) is commensurate with either the Company’s performance subsequent to the inception of the arrangement to achieve the milestone or the enhancement of the value of the delivered item or items as a result of a specific outcome resulting from the Company’s performance subsequent to the inception of the arrangement to achieve the milestone; (b) relates solely to past performance; and (c) is reasonable relative to all of the deliverables and payment terms (including other potential milestone consideration) within the arrangement. The VorTeq License Agreement includes two substantive milestones of $25 million each due on achievement of successful tests in accordance with KPIs. No revenues associated with achievement of the milestones have been recognized to date.

Percentage-of-completion revenue recognition – Oil & Gas Segment

IsoBoost and IsoGen systems are highly engineered, customized solutions that are designed and manufactured over an extended period of time and are built specifically to meet a customer’s specifications. It is the Company’s position that percentage-of-completion method of accounting is appropriate for IsoBoost and IsoGen systems given the facts and circumstances of these projects. In the event that a purchase order for an IsoBoost or IsoGen does not meet these facts and circumstances, then percentage-of-completion method of accounting does not apply.

Revenue from fixed price contracts is recognized using the percentage-of-completion method of accounting in the ratio of costs incurred to estimated final costs. Contract costs include all direct material and labor costs related to contract performance. Pre-contract costs with no future benefit are expensed in the period in which they are incurred. Since the financial reporting of these contracts depends on estimates, which are assessed continually during the term of the contract, recognized revenues and profit are subject to revisions as the contract progresses to completion. Revisions in profit estimates are reflected in the period in which the facts that give rise to the revisions become known. If material, the effects of any changes in estimates are disclosed in the notes to the consolidated financial statements. When estimates indicate that a loss will be incurred on a contract, a provision for the expected loss is recorded in the period in which the loss becomes evident. No loss has been incurred to date. Revenue is recognized only to the extent costs have been recognized in the same period.

Research and Development Expense

Research and development expenses consist of costs incurred for internal projects and for technology licensed to third parties. These costs include our direct and research-related overhead expenses, which include salaries and other personnel-related expenses (including stock-based compensation), occupancy-related costs, depreciation of facilities, as well as external costs for equipment and supplies. Costs to acquire technologies that are utilized in research and development and that have no alternative future use are expensed when incurred. All research and development costs are expensed as incurred and are included in operating expenses.

Warranty Costs

We sell products with a limited warranty for a period ranging from eighteen (18) months to five (5) years. We accrue for warranty costs based on estimated product failure rates, historical activity, and expectations of future costs. Periodically, we evaluate and adjust the warranty costs to the extent that actual warranty costs vary from the original estimates.

During the year ended December 31, 2015, we adjusted previously established warranty reserves. The adjustment related to expired warranties which increased gross profit and reduced net loss by $0.4 million.

Stock-based Compensation

We measure and recognize stock-based compensation expense based on the fair value measurement for all stock-based awards made to our employees and directors — including restricted stock units (“RSUs”), restricted shares (“RS”), and employee stock options — over the requisite service period (typically the vesting period of the awards). The fair value of RSUs and RS is based on our stock price on the date of grant. The fair value of stock options is calculated on the date of grant using the Black-Scholes option pricing model, which requires a number of complex assumptions including expected life, expected volatility, risk-free interest rate, and dividend yield. The estimation of awards that will ultimately vest requires judgment, and to the extent that actual results or updated estimates differ from our current estimates, such amounts are recorded as a cumulative adjustment in the period in which the estimates are revised. See Note 12 — *“Stock-based Compensation”* for further discussion of stock-based compensation.

Foreign Currency

Our reporting currency is the U.S. dollar. The functional currency of our Ireland subsidiaries is the U.S. dollar, while the functional currency of our other foreign subsidiaries is their respective local currencies. The asset and liability accounts of our foreign subsidiaries are translated from their local currencies at the rates in effect on the balance sheet date. Revenue and expenses are translated at average rates of exchange prevailing during the period. Gains and losses resulting from the translation of our subsidiary balance sheets are recorded as a component of accumulated other comprehensive loss. Gains and losses from foreign currency transactions are recorded in other income (expense) in the Consolidated Statements of Operations.

Income Taxes

Current and non-current tax assets and liabilities are based upon an estimate of taxes refundable or payable for each of the jurisdictions in which we are subject to tax. In the ordinary course of business, there is inherent uncertainty in quantifying income tax positions. We assess income tax positions and record tax benefits for all years subject to examination based upon our evaluation of the facts, circumstances, and information available at the reporting dates. For those tax positions where it is more likely than not that a tax benefit will be sustained, we record the largest amount of tax benefit with a greater than 50% likelihood of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. For those income tax positions where it is not more likely than not that a tax benefit will be sustained, no tax benefit is recognized in the financial statements. When applicable, associated interest and penalties are recognized as a component of income tax expense. Accrued interest and penalties are included within the related tax asset or liability on the Consolidated Balance Sheets.

Deferred income taxes are provided for temporary differences arising from differences in bases of assets and liabilities for tax and financial reporting purposes. Deferred income taxes are recorded on temporary differences using enacted tax rates in effect for the year in which the temporary differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Significant judgment is required in determining whether and to what extent any valuation allowance is needed on our deferred tax assets. In making such a determination, we consider all available positive and negative evidence including recent results of operations, scheduled reversals of deferred tax liabilities, projected future income, and available tax planning strategies. As of December 31, 2016, we have a valuation allowance of approximately $21.1 million to reduce our deferred income tax assets to the amount expected to be realized. See Note 10 — *“Income Taxes”* for further discussion of the tax valuation allowance.

We have recorded a valuation allowance against all of our U.S. deferred tax assets as of December 31, 2016. We intend to continue maintaining a full valuation allowance on our U.S. deferred tax assets until there is sufficient evidence to support the reversal of all or some portion of this allowance. However, given our current earnings and anticipated future earnings, we believe that there is a reasonable possibility that within the next twelve (12) months, sufficient positive evidence may become available to allow us to reach a conclusion that a significant portion of the valuation allowance will no longer be needed. Release of the valuation allowance would result in the recognition of certain deferred tax assets and a decrease in income tax expense for the period the release is recorded. However, the exact timing and amount of the valuation allowance release are subject to change on the basis of the level of profitability that we are able to actually achieve.

Our operations are subject to income and transaction taxes in the U.S. and in foreign jurisdictions. Significant estimates and judgments are required in determining our worldwide provision for income taxes. Some of these estimates are based on interpretations of existing tax laws or regulations. The ultimate amount of tax liability may be uncertain as a result.

Recent Accounting Pronouncements

Other than as described below, no new accounting pronouncement issued or effective during the fiscal year has had or is expected to have a material impact on our Consolidated Financial Statements.

In November 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2015-17,*Income Taxes (Topic 740) - Balance Sheet Classification of Deferred Taxes*. ASU 2015-17 eliminates the current requirement to present deferred tax assets and liabilities as current and noncurrent in a classified statement of financial position. Instead, ASU 2015-17 requires that deferred tax assets and liabilities be classified as noncurrent in a classified statement of financial position. We adopted this accounting standard update early, on a prospective basis, at the beginning of the second quarter of 2016 to simplify presentation of deferred taxes. The adoption at the beginning of the second quarter of 2016 resulted in a $1.1 million decrease in current deferred tax assets, a $0.8 million increase in non-current deferred tax assets, and a $0.3 million decrease in non-current deferred tax liabilities. No prior periods were retrospectively adjusted.

In May 2014, the FASB issued ASU No. 2014-09,*Revenue from Contracts with Customers (Topic 606).* The update requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers and will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The update also requires more detailed disclosures to enable users of financial statements to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. ASU 2014-09 was originally effective for annual reporting periods beginning after December 15, 2016, including interim periods within that reporting period. On July 9, 2015, the FASB voted to approve a one-year deferral of the effective date of ASU 2014-09. Additionally, the FASB decided to permit early adoption, but not before the original effective date (that is, annual periods beginning after December 15, 2016).

In 2016, the FASB issued ASU No. 2016-08,*Revenue from Contracts with Customers (Topic 606: Principal versus Agent Considerations (Reporting Revenue Gross versus Net)* and ASU No. 2016-10,*Revenue from Contracts with Customers (Topic 606) Identifying Performance Obligations and Licensing,* respectively. The amendments in these updates are intended to improve the operability and understandability of the implementation guidance on principal versus agent considerations and to clarify two aspects of Topic 606: identifying performance obligations and the licensing implementation guidance, while retaining the related principles for those areas. The effective date and transition requirements for both ASU 2016-08 and ASU 2016-10 are the same as those for ASU 2014-09 as deferred.

We expect to adopt the guidance of ASU 2014-09 as of January 1, 2018. ASU 2014-09 permits the use of either the full retrospective or cumulative effect transition (modified retrospective) method. We formed a project team, which has operated since 2014, to evaluate internal processes and to implement the standard. We are still in the process of deciding whether we will use the full retrospective method or the modified retrospective method, and we have not yet selected a transition method. We continue to evaluate the effect that ASU 2014-09 will have on our financial statements and related disclosures. For revenue streams related to water desalination products, we do not expect the impact to be material, however, for transactions accounted for under the percentage-of-completion method, as well as some long-term contracts including our license and development revenue, there may be a material difference in the timing of revenue recognition under the new standard. At this time, we are still performing our analysis and we will continue to assess the impact on our revenue streams in 2017.

In January 2016, the FASB issued ASU No. 2016-01,*Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities*. ASU 2016-01 modifies certain aspects of the recognition, measurement, presentation, and disclosure of financial instruments. For public entities, ASU 2016-01 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017, and early adoption is permitted. We do not expect the adoption of this standard to have a material impact on our financial statements.

In February 2016, the FASB issued ASU No. 2016-02,*Leases (Topic 842).* ASU 2016-02 impacts any entity that enters into a lease with some specified scope exceptions. The guidance updates and supersedes Topic 840, Leases. For public entities, ASU 2016-02 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2018, and early adoption is permitted. We are in the preliminary phases of assessing the effect of this guidance. While this assessment continues, we have not yet selected a transition date nor have we determined the impact of this guidance on our financial statements.

In March 2016, the FASB issued ASU No. 2016-09,*Compensation – Stock Compensation (Topic 718).* ASU 2016-09 requires excess tax benefits and tax deficiencies (the difference between the deduction for tax purposes and the compensation cost recognized for financial reporting purposes) to be recognized as income tax expense or benefit in the income statement. Previously, these amounts were recognized directly to shareholder's equity. The excess tax benefit from share-based compensation, previously classified as a financing activity, will be classified as an operating activity. Additionally, cash paid when directly withholding shares on an employee's behalf for tax withholding purposes, will be classified as a financing activity. For public entities, ASU 2016-09 is effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. We plan to adopt this guidance effective January 1, 2017. The guidance requiring excess tax benefits and tax deficiencies in the income statement are allowed to be adopted prospectively and therefore will not have an impact on past financial statements. The guidance permits the presentation of excess tax benefits on the statement of cash flows either prospectively or retrospectively. We intend to adopt all aspects of this guidance on a prospective basis. The other aspects of this guidance will not have a material impact on our financial statements.

In August 2016, the FASB issued ASU No. 2016-15,*Statement of Cash Flows (Topic 230) – Classification of Certain Cash Receipts and Cash Payments.* ASU 2016-15 impacts all entities that are required to present a statement of cash flows under Topic 230. The amendment provides guidance on eight specific cash flow issues. For public entities, ASU 2016-15 is effective for fiscal periods beginning after December 15, 2017 and interim periods within those years. Early adoption is permitted and should be applied using a retrospective transition method to each period presented. We do not expect the adoption of this standard to have a material impact on our financial statements.

In October 2016, the FASB issued ASU 2016-16,*Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory.*ASU 2016-16 requires recognition of the current and deferred income tax effects of an intra-entity asset transfer, other than inventory, when the transfer occurs, as opposed to current GAAP, which requires companies to defer the income tax effects of intra-entity asset transfers until the asset has been sold to an outside party. The income tax effects of intra-entity inventory transfers will continue to be deferred until the inventory is sold. ASU 2016-16 is effective on January 1, 2018, with early adoption permitted. The update is required to be adopted on a modified retrospective basis with the cumulative-effect adjustment recorded to retained earnings as of the beginning of the period of adoption. We do not expect the adoption of this standard to have a material impact on our financial statements.

In November 2016, the FASB issued ASU 2016-18,*Statement of Cash Flows (Topic 230): Restricted Cash.* ASU 2016-18 is intended to reduce diversity in practice in the classification and presentation of changes in restricted cash on the Consolidated Statement of Cash Flows. ASU 2016-18 requires that the Consolidated Statement of Cash Flows explain the change in total cash and equivalents and amounts generally described as restricted cash or restricted cash equivalents when reconciling the beginning-of-period and end-of-period total amounts. The standard also requires reconciliation between the total cash and equivalents and restricted cash presented on the Consolidated Statement of Cash Flows and the cash and cash equivalents balance presented on the Consolidated Balance Sheet. ASU 2016-18 is effective retrospectively on January 1, 2018, with early adoption permitted. We have not yet selected a transition date. Other than presentation, we do not expect the adoption of this standard to have a material impact on our financial statements.

In January 2017, the FASB issued ASU No. 2017-04,*Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment.*ASU 2017-04 eliminates Step 2 of the goodwill impairment test and allows for the determination of impairment by comparing the fair value of the reporting unit with its carrying amount. The amendments in this updates should be applied on a prospective basis. For public entities which are Securities and Exchange Commission filers, this amendment is effective for annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2019. Early adoption is permitted for testing dates after January 1, 2017. We do not expect the adoption of this standard to have a material impact on our financial statements.

Note 3 — Income (Loss) Per Share

Net income (loss) is divided by the weighted average number of common shares outstanding during the year to calculate basic net income (loss) per common share. Diluted net income (loss) per common share reflects the potential dilution that would occur if outstanding stock options to purchase common stock were exercised for common stock, using the treasury stock method, and the common stock underlying outstanding restricted award was issued. The following table sets forth the computation of basic and diluted income (loss) per share (in thousands, except per share data):

	Years Ended December 31,		
	2016	2015	2014
Numerator:			
Net income (loss)	$ 1,034	$ (11,638)	$ (18,705)
Denominator:			
Basic weighted average common shares outstanding	52,341	52,151	51,675
Weighted average effect of dilutive stock awards	3,110	—	—
Diluted weighted average common shares outstanding	55,451	52,151	51,675
Net income (loss) per share - basic	$ 0.02	$ (0.22)	$ (0.36)
Net income (loss) per share - diluted	$ 0.02	$ (0.22)	$ (0.36)

The following potential common shares were not included in the computation of diluted net income (loss) per share as their effect would have been anti-dilutive (in thousands):

	Years Ended December 31,		
	2016	2015	2014
Restricted awards	183	—	28
Warrants	—	—	200
Stock options	2,804	7,198	6,276

Note 4 — Other Financial Information

Restricted Cash

As of December 31, 2016, we have pledged cash in connection with stand-by letters of credit. We have deposited corresponding amounts into interest-bearing accounts at financial institutions for these items as follows (in thousands):

	December 31,	
	2016	2015
Collateral for stand-by letters of credit	$ 2,297	$ 1,490
Current restricted cash	$ 2,297	$ 1,490
Collateral for stand-by letters of credit	$ 2,087	$ 2,317
Non-current restricted cash	$ 2,087	$ 2,317
Total restricted cash	$ 4,384	$ 3,807

Accounts Receivable

Accounts receivable consisted of the following (in thousands):

	December 31, 2016	December 31, 2015
Accounts receivable	$ 11,889	$ 11,756
Less: allowance for doubtful accounts	(130)	(166)
Accounts receivable, net	$ 11,759	$ 11,590

Unbilled Receivables

We currently have unbilled receivables pertaining to customer contractual holdback provisions, whereby we will invoice the final retention payment(s) due under certain sales contracts in the next six (6) to twenty-four (24) months. The customer holdbacks represent amounts intended to provide a form of security for the customer; accordingly, these receivables have not been discounted to present value.

Unbilled receivables consisted of the following (in thousands):

	December 31, 2016	December 31, 2015
Unbilled receivables, current	$ 190	$ 1,879
Unbilled receivables, non-current	—	6
Total unbilled receivables	$ 190	$ 1,885

Cost and Estimated Earnings in Excess of Billings

Cost and estimated earnings on uncompleted contracts consisted of the following (in thousands):

	December 31, 2016	December 31, 2015
Estimated earnings to date	$ 2,170	$ —
Estimated costs to date	1,496	—
Subtotal	674	—
Net billings to date	82	—
Total	$ 756	$
Included in accompanying balance sheets:		
Cost and estimated earnings in excess of billings	$ 1,825	$ —
Unbilled project costs	(1,069)	—
Total	$ 756	$ —

Unbilled project costs are included in Accrued expenses and other current liabilities on the Consolidated Balance Sheets.

Inventories

Our inventories consisted of the following (in thousands):

	December 31, 2016	December 31, 2015
Raw materials	$ 1,783	$ 2,590
Work in process	1,146	1,689
Finished goods	1,621	2,224
Inventories, net	$ 4,550	$ 6,503

Valuation adjustments for excess and obsolete inventory, reflected as a reduction of inventory at December 31, 2016 and 2015, were $1.4 million and $1.7 million, respectively.

Prepaid and Other Current Assets

Prepaid expenses and other current assets consisted of the following (in thousands):

	December 31, 2016	December 31, 2015
Interest receivable	$ 272	$ 4
Foreign currency put options	—	33
Supplier advances	73	171
Other prepaid expenses and current assets	966	735
Total prepaid and other current assets	$ 1,311	$ 943

Property and Equipment

Property and equipment held for use consisted of the following (in thousands):

	December 31, 2016	December 31, 2015
Machinery and equipment	$ 14,781	$ 14,448
Leasehold improvements	10,326	10,196
Software	2,382	2,344
Office equipment, furniture, and fixtures	1,910	1,848
Automobiles	114	76
Construction in progress	515	48
Total property and equipment	30,028	28,960
Less: accumulated depreciation and amortization	(21,385)	(18,338)
Property and equipment, net	$ 8,643	$ 10,622

Depreciation and amortization expense related to all property and equipment was approximately \$3.0 million, \$3.2 million, and \$3.2 million for the years ended December 31, 2016, 2015, and 2014, respectively.

Unamortized computer software cost was \$0.6 million and \$1.0 million at year end December 31, 2016 and 2015, respectively. Depreciation expense related to computer software was \$0.4 million, \$0.4 million, and \$0.4 million for the years ended December 31, 2016, 2015, and 2014, respectively.

Construction in progress costs at December 31, 2016, primarily relates to software and systems upgrades. As of December 31, 2016, we expect to spend an additional \$0.5 million to complete the project. As the entire project is not ready for its intended use, the project was not subject to depreciation or amortization. The project is expected to be completed and implemented by the first quarter of 2017.

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	December 31, 2016	December 31, 2015
Payroll and commissions payable	$ 5,697	$ 5,086
Other accrued expenses and current liabilities	2,131	2,505
Unbilled project costs	1,069	—
Accrued legal expenses, current	122	217
Total accrued expenses and other current liabilities	$ 9,019	$ 7,808

Deferred revenue

Deferred revenue consisted of the following (in thousands):

	December 31, 2016	December 31, 2015
Deferred license and development revenue, current	$ 5,000	$ 5,000
Deferred product revenue, current	1,201	878
Total current deferred revenue	$ 6,201	$ 5,878
Deferred license and development revenue, non-current	$ 63,958	$ 68,958
Deferred product revenue, non-current	—	42
Total non-current deferred revenue	$ 63,958	$ 69,000
Total deferred revenue	$ 70,159	$ 74,878

Non-Current Liabilities

Non-current liabilities consisted of the following (in thousands):

	December 31, 2016	December 31, 2015
Deferred rent expense, non-current	$ 554	$ 718

Accumulated Other Comprehensive Loss

Changes in accumulated other comprehensive losses by component were as follows (in thousands):

	Foreign Currency Translation Adjustments	Unrealized Gains (Losses) on Investments	Total Accumulated Other Comprehensive Loss
Balance, December 31, 2013	$ (106)	$ (1)	$ (107)
Gross other comprehensive loss (income)	39	(6)	33
Gross reclassification to realized gain	—	1	1
Balance, December 31, 2014	$ (67)	$ (6)	$ (73)
Net other comprehensive income	4	5	9
Balance, December 31, 2015	$ (63)	$ (1)	$ (64)
Net other comprehensive loss	(27)	(27)	(54)
Balance, December 31, 2016	$ (90)	$ (28)	$ (118)

Advertising Expense

Advertising expense is charged to operations during the year in which it is incurred. Total advertising expense amounted to $14,000, $8,000, and $107,000 for the years ended December 31, 2016, 2015, and 2014, respectively.

Note 5 — Investments

Our short-term and long-term investments are all classified as available-for-sale. There were no sales of available-for-sale securities during the years ended December 31, 2016 and 2015.

Available-for-sale securities as of the dates indicated consisted of the following (in thousands):

	December 31, 2016			
	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
Short-term investments				
Corporate notes and bonds	$ 39,100	$ 6	$ (33)	$ 39,073
Total short-term investments	$ 39,100	$ 6	$ (33)	$ 39,073
Total investments	$ 39,100	$ 6	$ (33)	$ 39,073

	December 31, 2015			
	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
Short-term investments				
Corporate notes and bonds	$ 258	$ —	$ (1)	$ 257
Total short-term investments	$ 258	$ —	$ (1)	$ 257
Total investments	$ 258	$ —	$ (1)	$ 257

Gross unrealized losses and fair values of our investments in an unrealized loss position as of the dates indicated, aggregated by investment category and length of time that security has been in a continuous loss position, were as follows (in thousands):

	December 31, 2016					
	Less than 12 months		12 months or greater		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Corporate notes and bonds	$ 29,667	$ (33)	$ —	$ —	$ 29,667	$ (33)
Total	$ 29,667	$ (33)	$ —	$ —	$ 29,667	$ (33)

	December 31, 2015					
	Less than 12 months		12 months or greater		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Corporate notes and bonds	$ —	$ —	$ 257	$ (1)	$ 257	$ (1)
Total	$ —	$ —	$ 257	$ (1)	$ 257	$ (1)

The Company monitors investments for other-than-temporary impairment. It was determined that unrealized gains and losses at December 31, 2016 and 2015, are temporary in nature, because the changes in market value for these securities resulted from fluctuating interest rates, rather than a deterioration of the credit worthiness of the issuers. The Company is unlikely to experience gains or losses if these securities are held to maturity. In the event that the Company disposes of these securities before maturity, it is expected that the realized gains or losses, if any, will be immaterial.

Expected maturities can differ from contractual maturities because borrowers may have the right to prepay obligations without prepayment penalties. The amortized cost and fair value of available-for-sale securities that had stated maturities as of December 31, 2016 are shown below by contractual maturity (in thousands):

	December 31, 2016	
	Amortized Cost	Fair Value
Due in one year or less	$ 39,100	$ 39,073
Total investments	$ 39,100	$ 39,073

Note 6 — Goodwill and Intangible Assets

Goodwill

Goodwill as of December 31, 2016 was the result of our acquisition of Pump Engineering, LLC in December 2009. Our annual impairment test performed as of July 1, 2016 determined that goodwill was not impaired. No impairment of goodwill has been recorded in the accompanying Consolidated Financial Statements.

The net carrying amount of goodwill was $12.8 million for the years ended December 31, 2016 and 2015.

Other Intangible Assets

The components of identifiable intangible assets, all of which are finite-lived, as of the date indicated were as follows (in thousands):

	December 31, 2016					
	Gross Carrying Amount	Accumulated Amortization	Accumulated Impairment Losses	Net Carrying Amount	Weighted Average Useful Life	Amortization Method (1)
Developed technology	$ 6,100	$ (4,321)	$ —	$ 1,779	10	SL
Non-compete agreements	1,310	(1,310)	—	—	4*	SL
Backlog	1,300	(1,300)	—	—	1	SL
Trademarks	1,200	(180)	(1,020)	—	20	SL
Customer relationships	990	(990)	—	—	5	SOYD
Patents	585	(422)	(42)	121	18	SL
Total	$ 11,485	$ (8,523)	$ (1,062)	$ 1,900	9	

	December 31, 2015					
	Gross Carrying Amount	Accumulated Amortization	Accumulated Impairment Losses	Net Carrying Amount	Weighted Average Useful Life	Amortization Method (1)
Developed technology	$ 6,100	$ (3,711)	$ —	$ 2,389	10	SL
Non-compete agreements	1,310	(1,310)	—	—	4*	SL
Backlog	1,300	(1,300)	—	—	1	SL
Trademarks	1,200	(180)	(1,020)	—	20	SL
Customer relationships	990	(990)	—	—	5	SOYD
Patents	585	(401)	(42)	142	18	SL
Total	$ 11,485	$ (7,892)	$ (1,062)	$ 2,531	9	

(1) SL = Straight-Line and SOYD = Sum-of-Year's-Digits
* Average life of two non-compete agreements.

Accumulated impairment losses for trademarks at December 31, 2016, represent impairment charges from 2012. Accumulated impairment losses for patents at December 31, 2016 include impairment losses from 2007 and 2010. No other impairment of intangible assets was identified during the periods presented.

Amortization of intangibles was approximately $0.6 million, $0.6 million, and $0.8 million for the years ended December 31, 2016, 2015, and 2014, respectively.

Future estimated amortization expense on intangible assets is as follows (in thousands):

	December 31,
2017	$ 631
2018	629
2019	575
2020	16
2021	12
Thereafter	37
Total	$ 1,900

Note 7 — Fair Value Measurements

We follow the authoritative guidance for fair value measurements and disclosures that, among other things, defines fair value, establishes a consistent framework for measuring fair value, and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. Fair value is defined as an exit price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability.

Level 1 — Quoted prices (unadjusted) in active markets for identical assets or liabilities;
Level 2 — Inputs other than quoted prices included within Level 1 that are either directly or indirectly observable; and
Level 3 — Unobservable inputs in which little or no market activity exists, therefore requiring an entity to develop its own estimates of assumptions that market participants would use in pricing an asset or liability.

Fair Value of Financial Instruments

For our investments in available-for-sale securities, if quoted prices in active markets for identical investments are not available to determine fair value (Level 1), then we use quoted prices for similar assets or inputs other than the quoted prices that are observable either directly or indirectly (Level 2).

The investments included in Level 2 consist primarily of municipal, corporate, and agency obligations. The asset also included in Level 2 consists of the premium paid for foreign currency put options. The fair value of this asset was determined based on the time value of the options as it was determined there was no intrinsic value of the options.

The fair value of financial assets and liabilities measured on a recurring basis is as follows (in thousands):

	December 31, 2016	Fair Value Measurement at Reporting Date Using		
		Level 1 Inputs	Level 2 Inputs	Level 3 Inputs
Assets:				
Available-for-sale securities	$ 39,073	$ —	$ 39,073	$ —
Total assets	$ 39,073	$ —	$ 39,073	$ —

	December 31, 2015	Fair Value Measurement at Reporting Date Using		
		Level 1 Inputs	Level 2 Inputs	Level 3 Inputs
Assets:				
Available-for-sale securities	$ 257	$ —	$ 257	$ —
Foreign currency put options	33	—	33	—
Total assets	$ 290	$ —	$ 290	$ —

The reconciliation of the beginning and ending balances for financial assets and liabilities measured on a recurring basis using significant unobservable inputs (Level 3) for the years ended December 31, 2016, 2015, and 2014 is as follows (in thousands):

	Contingent Consideration
Balance, December 31, 2013	$ 1,524
Net gain on settlement	(149)
Settlement payment	(1,375)
Balance, December 31, 2014	$ —
Loss due to change in fair value	—
Balance, December 31, 2015	$ —
Loss due to change in fair value	—
Balance, December 31, 2016	$ —

Note 8 — Long-Term Debt and Lines of Credit

Debt

In March 2015, we entered into a loan agreement with a financial institution for a $55,000 fixed-rate installment loan with an annual interest rate of 6.35%. The loan is payable in equal monthly installments and matures on April 2, 2020. The note is secured by the asset purchased.

Long-term debt consisted of the following (in thousands)

	December 31, 2016	December 31, 2015
Loan payable	$ 38	$ 48
Less: current portion	(11)	(10)
Total long-term debt	$ 27	$ 38

Future minimum principal payments due under long-term debt arrangements consist of the following (in thousands):

	December 31,
2017	$ 11
2018	11
2019	12
2020	4
Total	$ 38

Lines of Credit

In June 2012, we entered into a loan agreement with a financial institution. The loan agreement was amended in June 2015, (as amended, the "Loan Agreement"). The Loan Agreement provides for a total available credit line of $16.0 million. Under the Loan Agreement, we are allowed to draw advances not to exceed the lesser of the $16 million credit line or the credit line minus all outstanding revolving loans. Revolving loans may be in the form of a base rate loan that bears interest equal to the prime rate or a Eurodollar loan that bears interest equal to the adjusted LIBOR rate plus 1.25%. Stand-by letters of credit are subject to customary fees and expenses for issuance or renewal. The unused portion of the credit facility is subject to a facility fee in an amount equal to 0.25% per annum of the average unused portion of the revolving line. The Loan Agreement also requires us to maintain a cash collateral balance equal to 101% of all outstanding advances and all outstanding stand-by letters of credit collateralized by the line of credit. The Loan Agreement matures in June 2018 and is collateralized by substantially all of our assets. This Loan Agreement was terminated on January 24 2017. With the termination of the Loan Agreement, the cash collateral requirement was increased to 105% on all outstanding stand-by letters of credit and all outstanding corporate credit cards

As of December 31, 2016 and 2015, there were no advances drawn under the Loan Agreement. Stand-by letters of credit collateralized under the Loan Agreement totaled $3.1 million and $3.8 million as of December 31, 2016 and 2015, respectively. Total cash restricted related to these stand-by letters of credit totaled $3.1 million and $3.8 million as of December 31, 2016 and 2015, respectively.

We are subject to certain financial and administrative covenants under the Loan Agreement. As of December 31, 2016, we were in compliance with these covenants.

At December 31, 2016, we also had stand-by letters of credit collateralized by restricted cash at two other financial institutions totaling $1.3 million. Total cash restricted related to these stand-by letters of credit totaled $1.3 million as of December 31, 2016

Restricted cash related to all stand-by letters of credit at December 31, 2016 and 2015 totaled $4.4 million and $3.8 million, respectively.

On January 27, 2017, we entered into a loan and pledge agreement (the "Loan and Pledge Agreement") with another financial institution. The Loan and Pledge Agreement provides for a committed revolving credit line of $16.0 million and an uncommitted revolving credit line of $4.0 million. Under the Loan and Pledge Agreement we are allowed to borrow and request letters of credit against the eligible assets held from time to time in the pledged account maintained with the financial institution. Stand-by letters of credit are secured by pledged U.S. investments and there is no cash collateral balance required. Stand-by letters of credit are subject to fees, in an amount equal to 0.7% per annum of the face amount of the letter of credit, that are payable quarterly and are non-refundable. Revolving loans incur interest per annum on the base rate equal to the LIBOR rate plus the Margin defined as 1.5%. Any default bears the aforementioned interest plus an additional 2%. The unused portion of the credit line is subject to a fee equal to the product of 0.20% per annum multiplied by the difference, if positive, between $16.0 million and the average daily balance of all advances under the committed facility plus aggregate average daily undrawn amounts of all letters of credit issued under the committed facility during the immediately preceding month or portion thereof.

See Note 9 — *"Commitments and Contingencies,"* for further discussion of restricted cash associated with stand-by letters of credit.

Note 9 — Commitments and Contingencies

Operating Lease Obligations

We lease facilities under fixed non-cancellable operating leases that expire on various dates through July 2021. Future minimum lease payments consist of the following (in thousands):

	December 31,
2017	$ 1,705
2018	1,662
2019	1,460
2020	59
2021	34
Total	$ 4,920

Total rent and lease expense was $1.4 million, $1.5 million, and $1.7 million for the years ended December 31, 2016, 2015, and 2014, respectively.

Warranty

Changes in our accrued warranty reserve incurred under our warranties were as follows (in thousands):

	Years Ended December 31,		
	2016	2015	2014
Balance, beginning of period	$ 461	$ 755	$ 709
Warranty costs charged to cost of revenue	208	135	156
Utilization charges against reserve	(27)	(34)	(110)
Release of accrual related to expired warranties	(236)	(395)	—
Balance, end of period	$ 406	$ 461	$ 755

During the year ended December 31, 2015, we adjusted previously established warranty reserves. The adjustment related to expired warranties which increased gross profit and reduced net loss by $0.4 million.

Purchase Obligations

We have purchase order arrangements with our vendors for which we have not received the related goods or services as of December 31, 2016. These arrangements are subject to change based on our sales demand forecasts, and we have the right to cancel the arrangements prior to the date of delivery. The majority of these purchase order arrangements were related to various raw materials and components parts. As of December 31, 2016, we had approximately $6.8 million of open cancellable purchase order arrangements related primarily to materials and parts.

Guarantees

We enter into indemnification provisions under our agreements with other companies in the ordinary course of business, typically with customers. Under these provisions, we generally indemnify and hold harmless the indemnified party for losses suffered or incurred by the indemnified party as a result of our activities, generally limited to personal injury and property damage caused by our employees at a customer's desalination plant in proportion to the employee's percentage of fault for the accident. Damages incurred for these indemnifications would be covered by our general liability insurance to the extent provided by the policy limitations. We have not incurred material costs to defend lawsuits or settle claims related to these indemnification agreements. As a result, the estimated fair value of these agreements is not material. Accordingly, we had no liabilities recorded for these agreements as of December 31, 2016 and 2015.

In certain cases, we issue warranty and product performance guarantees to our customers for amounts generally equal to 10% or less of the total sales agreement to endorse the execution of product delivery and the warranty of design work, fabrication, and operating performance of our devices. These guarantees are generally stand-by letters of credit that typically remain in place for periods ranging up to twenty-four (24) months, and in some cases, up to sixty-eight (68) months. All stand-by letters of credit, collateralized by restricted cash at December 31, 2016 and 2015, totaled $4.4 million and $3.8 million, respectively.

Litigation

The Company is named in and subject to various proceedings and claims in connection with our business. We are contesting the allegations in these claims, and we believe that there are meritorious defenses in each of these matters. The outcome of matters we have been and currently are involved in cannot be determined at this time, and the results cannot be predicted with certainty. There can be no assurance that these matters will not have a material adverse effect on our results of operations in any future period and a significant judgment could have a material adverse impact on our financial condition, results of operations and cash flows. We may in the future become involved in additional litigation in the ordinary course of our business, including litigation that could be material to our business. Based on currently available information and review with outside counsel, management does not believe that the currently known actions or threats against the Company will result in any material adverse effect on our financial condition, results of operations, or cash flows.

On September 10, 2014, the Company terminated the employment of its Senior Vice President, Sales, Borja Blanco, on the basis of breach of duty of trust and conduct leading to conflict of interest. On October 24, 2014, Mr. Blanco filed a labor claim against ERI Iberia in Madrid, Spain, challenging the fairness of his dismissal and seeking compensation ("Case 1"). A hearing was held on November 13, 2015, after which the labor court ruled that it did not have jurisdiction over the matter. Mr. Blanco has appealed. Based on currently available information and review with outside counsel, the Company has determined that an award to Mr. Blanco is not probable. While a loss may be reasonably possible, an estimate of loss, if any, cannot reasonably be determined at this time.

On November 24, 2014, Mr. Blanco filed a second action based on breach of contract theories in the same court as Case 1, but the cases are separate. In Case 2, Mr. Blanco seeks payment of an unpaid bonus, stock options, and non-compete compensation. The court ruled that this case is stayed until a final ruling is issued in Case 1. Based on currently available information and review with outside counsel, the Company has determined that an award to Mr. Blanco is not probable. While a loss may be reasonably possible, an estimate of loss, if any, cannot reasonably be determined at this time.

On January 20 and 27, 2015, two stockholder class action complaints were filed against the Company in the United States District Court of the Northern District of California, on behalf of Energy Recovery stockholders under the captions, *Joseph Sabatino v. Energy Recovery, Inc. et al.*, Case No. 3:15-cv-00265 EMC, and *Thomas C. Mowdy v. Energy Recovery, Inc, et al.*, Case No. 3:15-cv-00374 EMC. The complaints have now been consolidated under the caption, *In Re Energy Recovery Inc. Securities Litigation*, Case No. 3:15-cv-00265 EMC. The consolidated complaint alleges violations of Section 10(b), Rule 10b-5, and Section 20(a) of the Securities Exchange Act of 1934 based upon alleged public misrepresentations and seeks the recovery of unspecified monetary damages. On October 12, 2016, the Company and the attorneys representing the class reached an agreement in principle to settle all outstanding claims in the case. As part of the settlement agreement, the Company has agreed to pay the class an undisclosed sum, the entirety of which will be borne by the Company's insurer. The settlement agreement is subject to approval by the United States District Court of the Northern District of California.

On February 18, 2016, a complaint captioned *Goldberg v. Rooney, et al.*, HG 16804359, was filed in the Superior Court for the State of California, County of Alameda, naming as defendants Thomas Rooney, Alexander J. Buehler, Joel Gay, Ole Peter Lorentzen, Audrey Bold, Arve Hanstveit, Fred Olav Johannessen, Robert Yu Lang Mao, Hans Peter Michelet, Maria Elisabeth Pate-Cornell, Paul Cook, Olav Fjell, and Dominique Trempont ("Individual Defendants") and naming the Company as a nominal defendant. The complaint is styled as a derivative action being brought on behalf of the Company and generally alleges breach of fiduciary duty, abuse of control, gross mismanagement, and unjust enrichment causes of action against the Individual Defendants. Based on currently available information and review with outside counsel, the Company is not able to estimate a potential loss, if any, due to the early stage of the matter.

On July 27, 2016, a complaint captioned *Gerald McManiman v. Gay, et al.*, RG 16824960, was filed in the Superior Court for the State of California, County of Alameda, naming as defendants Joel Gay, Chris Gannon, Hans Peter Michelet, Alexander Buehler, Arve Hanstveit, Dominique Trempont, Robert Yu Lang Mao, Thomas S. Rooney, Jr., Borja Sanchez-Blanco, Audrey Bold, Paul M. Cook, Marie-Elisabeth Pate -Cornell, Fred Olav Johannessen ("Individual Defendants") and naming the Company as a nominal defendant. The complaint is styled as a derivative action being brought on behalf of the Company and generally alleges breach of fiduciary duties and violations of laws against the Individual Defendants. Based on currently available information and review with outside counsel, the Company is not able to estimate a potential loss, if any, due to the early stage of the matter.

Note 10 — Income Taxes

The following table presents the U.S. and foreign components of consolidated (loss) income before income taxes and the (benefit) provision for income taxes (in thousands):

	Years Ended December 31,		
	2016	**2015**	**2014**
Income (loss) before income taxes:			
U.S.	$ 6,158	$ (7,566)	$ (18,393)
Foreign	(5,514)	(4,406)	(21)
Total income (loss) before income taxes	$ 644	$ (11,972)	$ (18,414)
Current tax provision (benefit):			
Federal	$ —	$ —	$ —
State	16	(3)	2
Foreign	46	20	15
Total current tax provision (benefit)	$ 62	$ 17	$ 17
Deferred tax (benefit) provision:			
Federal	$ 248	$ 225	$ 241
State	3	(17)	33
Foreign	(703)	(559)	—
Total deferred tax (benefit) provision	$ (452)	$ (351)	$ 274
Total (benefit) provision for income taxes	$ (390)	$ (334)	$ 291

A reconciliation of income taxes computed at the statutory federal income tax rate to the effective tax rate implied by the accompanying Statements of Operations is as follows:

	Years Ended December 31,		
	2016	**2015**	**2014**
U.S. federal taxes at statutory rate	34%	34%	34%
Non-benefited losses stemming from valuation allowance on current year	(405%)	(9%)	(35%)
Federal research credits	(64%)	2%	2%
Stock-based compensation	(1%)	(8%)	(3%)
State income tax, net of federal benefit	3%	—	—
Other	13%	1%	—
Foreign rate differential	359%	(17%)	—
Effective tax rate	(61%)	3%	(2%)

Total deferred tax assets and liabilities consist of the following (in thousands):

	Years Ended December 31, 2016		Years Ended December 31, 2015	
Deferred tax assets:				
Net operating loss carry forwards	$	14,082	$	14,972
Accruals and reserves		4,896		4,842
Research and development credit carry forwards		2,609		1,916
Acquired intangibles		1,415		1,459
Charitable contributions		5		6
Total deferred tax assets	$	23,007	$	23,195
Valuation allowance		(21,067)		(21,443)
Net deferred tax assets	$	1,940	$	1,752
Deferred tax liabilities:				
Depreciation on property and equipment	$	(630)	$	(1,152)
Unrecognized gain on translation of foreign currency		(40)		(41)
Goodwill		(2,233)		(1,981)
Total deferred tax liabilities	$	(2,903)	$	(3,174)
Net deferred tax liabilities	$	(963)	$	(1,422)
As reported on the balance sheet:				
Current assets	$	—	$	938
Non-current assets		1,270		—
Non-current liabilities		(2,233)		(2,360)
Net deferred tax liabilities	$	(963)	$	(1,422)

We had gross deferred tax assets of approximately $23.0 million and $23.2 million at December 31, 2016 and 2015, respectively, relating principally to accrued expenses and tax effects of net operating loss and tax credit carry-forwards. In assessing the recoverability of deferred tax assets, we consider whether it is more likely than not that the assets will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible.

We assess the available positive and negative evidence to estimate if sufficient future taxable income will be generated to use the existing deferred tax assets. In making such a determination, we consider all available positive and negative evidence, including recent results of operations, scheduled reversals of deferred tax liabilities, projected future income, and available tax planning strategies. A significant piece of the negative evidence evaluated was the cumulative loss incurred over the three-year period ended December 31, 2016. Such objective evidence limits the ability to consider other subjective evidence, such as our projection for future growth.

On the basis of this evaluation, as of December 31, 2016, a valuation allowance of approximately $21.1 million has been recorded to reduce our deferred income tax assets to the amount that is more likely than not to be realized; a decrease of $0.4 million from December 31, 2015. The valuation allowance represents a provision for uncertainty as to the realization of tax benefits from these deferred income tax assets. We will continue to evaluate the tax benefit uncertainty and will adjust, if warranted, the valuation allowance in future periods to the extent that our deferred income tax assets become more likely than not to be realizable.

At December 31, 2016 and 2015, we had net operating loss carry-forwards of approximately $41.8 million and $41.0 million, respectively, for federal and $14.0 million and $14.9 million, respectively, for California. As of December 31, 2016, the federal and California net operating loss carryovers include $6.5 million and $0.7 million of excess stock based compensation deductions that will result in an increase in Additional Paid in Capital when recognized. The net operating loss carry-forwards, if not utilized, will begin to expire in 2018 for federal and 2029 for California purposes. Utilization of the net operating loss carry-forwards is subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code and similar state provisions. The annual limitation will result in the expiration of the net operating loss carry-forwards before utilization. We estimated the amount which may ultimately be realized and recorded deferred tax assets accordingly. In addition, at December 31, 2016 and 2015, we had net operating loss carry-forwards of approximately $10.0 million and $4.4 million, respectively, for Ireland tax purposes. Ireland net operating losses carryover indefinitely.

At December 31, 2016 and 2015, we had credit carry-forwards of approximately $1.6 million and $1.2 million, respectively, for federal and approximately $1.5 million and $1.1 million, respectively, for California. The credit carry-forwards, if not utilized, will begin to expire in 2030 for federal purposes. The California credit carry-forwards do not expire. Utilization of the credit carry-forwards may be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code and similar state provisions.

Measurement of uncertain tax positions is based on judgment regarding the largest amount that is greater than 50% likely of being realized upon the ultimate settlement with a taxing authority. As of December 31, 2016 and 2015, we had $603,000 and $394,000, respectively, of unrecognized tax benefits, none of which, if recognized, would affect our effective tax rate. The aggregate changes in the balance of the gross unrecognized tax benefit were as follows (in thousands):

	2016	2015
Gross unrecognized tax benefits as of December 31,	$ 394	$ 292
Gross increases related to current year tax position	209	115
Settlement	—	(13)
Gross unrecognized tax benefits as of December 31,	$ 603	$ 394

We recognize interest and/or penalties related to uncertain tax positions in income tax expense. There were no accrued interest or penalties associated with any unrecognized tax benefits as of December 31, 2016 and 2015.

We are subject to taxation in the U.S. and various states and foreign jurisdictions. There are no ongoing examinations by taxing authorities at this time. We believe that, as of December 31, 2016, the gross unrecognized tax benefits will not materially change in the next twelve (12) months, that we have adequately provided for any reasonably foreseeable outcome related to any tax audit, and that any settlement will not have a material adverse effect on the consolidated financial position or results of operation; however, there can be no assurances as to the possible outcomes.

Note 11 — Stockholders' Equity

Preferred Stock

We have the authority to issue 10,000,000 shares of $0.001 par value preferred stock. Our Board of Directors has the authority, without action by our stockholders, to designate and issue shares of preferred stock in one or more series. The Board of Directors is also authorized to designate the rights, preferences, and voting powers of each series of preferred stock, any or all of which may be greater than the rights of the common stock including restrictions of dividends on the common stock, dilution of the voting power of the common stock, reduction of the liquidation rights of the common stock, and delaying or preventing a change in control of the Company without further action by our stockholders. To date, the Board of Directors has not designated any rights, preferences, or powers of any preferred stock, and as of December 31, 2016 and 2015, no shares of preferred stock were issued or outstanding.

Common Stock

We have the authority to issue 200,000,000 shares of $0.001 par value common stock. Subject to the preferred rights of the holders of shares of any class or series of preferred stock as provided by our Board of Directors with respect to any such class or series of preferred stock, the holders of the common stock shall be entitled to receive dividends, as and when declared by the Board of Directors. In the event of any liquidation, dissolution, or winding up of the Company, whether voluntary or involuntary, after the distribution or payment to the holders of shares of any class or series of preferred stock as provided by the Board of Directors with respect to any such class or series of preferred stock, the remaining assets of the Company available for distribution to stockholders shall be distributed among and paid to the holders of common stock ratably in proportion to the number of shares of common stock held by them.

At December 31, 2016, 56,884,207 shares were issued and 53,162,551 shares were outstanding. At December 31, 2015, 54,948,235 shares were issued and 52,468,779 shares were outstanding.

Stock Repurchase Program

In January 2016, our Board of Directors authorized a stock repurchase program under which the Company, at the discretion of management, could repurchase up to $6.0 million in aggregate cost of our outstanding common stock through June 30, 2016 (the “January Authorization”). In May 2016, our Board of Directors rescinded the January Authorization and authorized a new stock repurchase program under which the Company, at the discretion of management, could repurchase up to $10.0 million in aggregate cost of our outstanding common stock through October 31, 2016 (the “May Authorization”). As of December 31, 2016, 673,700 shares, at an aggregate cost of $4.1 million, had been repurchased under the January Authorization and 568,500 shares, at an aggregate cost of $5.3 million, had been repurchased under the May Authorization. We account for stock repurchases using the cost method. Cost includes fees charged in connection with acquiring the outstanding common stock. The May Authorization expired in October 2016 and there was no repurchase authorization in place at December 31, 2016.

A stock repurchase program was not in place during the year ended December 31, 2015, therefore no shares were repurchased during 2015.

In February 2014, our Board of Directors authorized a stock repurchase program under which up to three million shares, not to exceed $6.0 million in aggregate cost, of our outstanding common stock could be repurchased through December 31, 2014 at the discretion of management. During the year ended December 31, 2014, 696,853 shares at an aggregate cost of $2.8 million were repurchased under this authorization. This 2014 repurchase authorization expired on December 31, 2014.

Warrants

There were no warrants outstanding as of December 31, 2016. All outstanding warrants had been exercised as of December 31, 2015.

During the year ended December 31, 2015, warrants to purchase 200,000 shares of common stock were exercised for cash at a price of $1.00 per share. The proceeds received for this exercise totaled $200,000.

During the year ended December 31, 2014, warrants to purchase 450,000 shares of common stock were exercised. Warrants to purchase 50,000 shares of common stock were exercised for cash at a price of $1.00 per share. The proceeds received from this exercise totaled $50,000. Warrant to purchase 400,000 shares of common stock were exercised for 311,111 shares of common stock in lieu of cash proceeds. The remaining 88,889 warrants were cancelled and considered payment for the exercise.

A summary of our warrant activity is as follows (in thousands, except exercise prices and contractual life data):

	Years Ended December 31,		
	2016	**2015**	**2014**
Outstanding, beginning of period	—	200	650
Exercised during the period	—	(200)	(361)
Cancelled during the period	—	—	(89)
Outstanding, end of period	—	—	200
Weighted average exercise price of warrants outstanding at end of period	$ 0	$ 0	$ 1.00
Weighted average remaining contractual life, in years, of warrants outstanding at end of period	0	0	0.5

Note 12 — Stock-Based Compensation

Stock Option Plan

In June 2016, our stockholders approved the 2016 Incentive Plan (the “Plan”), that permits the grant of stock options, stock appreciation rights (“SARs”), restricted stock (“RS, RSAs, or RSUs”), performance units, performance shares, and other stock-based awards to employees, officers, directors, and consultants. Prior to the approval of the Plan, we maintained the Amended and Restated 2008 Equity Incentive Plan (the “Prior Plan”). Stock-based awards granted under the Plan and the Prior Plan, generally vest over four years and expire no more than ten years after the date of grant. Subject to adjustments, as provided in the Plan, the number of shares of common stock initially authorized for issuance under the Plan was 4,441,083 (which consist of 3,830,000 new awards plus 611,083 awards that were authorized and unissued under the Prior Plan) plus up to 7,635,410 awards that were set aside for awards granted under the Prior Plan that are subsequently forfeited. The Plan supersedes all previously issued stock incentive plans (including the Prior Plan) and is currently the only available plan from which awards may be granted.

Shares available for grant under the Plan were 4,532,141 and 1,536,009 at December 31, 2016 and 2015, respectively.

Stock Option Activity

The following table summarizes the stock option activity under the Plan, inclusive of options granted under all previous plans:

	Options Outstanding					
	Shares		Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in Years)		Aggregate Intrinsic Value [2]
Balance December 31, 2013	7,110,622	$	4.28	6.7	$	13,017,000
Granted	1,922,000	$	5.22	-		-
Exercised	(872,997)	$	2.70	-		-
Forfeited	(1,883,596)	$	5.21	-		-
Balance December 31, 2014	6,276,029	$	4.51	7.0	$	8,065,000
Granted	2,611,910	$	3.01	-		-
Exercised	(349,814)	$	3.22	-		-
Forfeited	(1,339,646)	$	3.18	-		-
Balance December 31, 2015	7,198,479	$	3.97	7.0	$	22,875,000
Granted	903,676	$	8.63	-		-
Exercised	(1,935,972)	$	3.41	-		-
Forfeited	(283,322)	$	5.30	-		-
Balance December 31, 2016	5,882,861	$	4.81	6.3	$	32,683,000
Vested and exercisable as of December 31, 2016	3,699,668	$	4.36	4.9	$	22,150,000
Vested and exercisable as of December 31, 2016 and expected to vest thereafter [1]	5,572,475	$	4.76	6.1	$	31,197,000

[1] Options that are expected to vest are net of estimated future option forfeitures in accordance with the provisions of ASC 718, *"Compensation — Stock Compensation."*
[2] The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying options and the fair value of our common stock as of the end of the period. The fair value of our common stock was $10.35, $7.07, and $5.27 per share as of December 31, 2016, 2015, and 2014, respectively

	Years Ended December 31,					
	2016		2015		2014	
Weighted average fair value of options granted to employees (per share)	$	5.25	$	1.50	$	2.41
Aggregate intrinsic value of options exercised (in thousands)	$	14,665	$	942	$	1,842
Fair value of options vested (in thousands)	$	2,977	$	4,657	$	2,027

As of December 31, 2016, total unrecognized compensation cost related to non-vested options was $5.8 million, which is expected to be recognized as expense over a weighted average period of approximately 2.6 years.

On January 9, 2017, we granted 7,952 options to new employees. The options vest over a four-year period, have an exercise price of $10.33, and expire 10 years from the grant date.

On February 2, 2017, we granted 389,224 options to certain officers and other employees. The options vest over a four-year period, have an exercise price of $10.19 per share, and expire 10 years from the grant date.

On February 10, 2017, we granted 122,810 options to an officer. The options vest over a four-year period, have an exercise price of $9.90 per share, and expire 10 years from the grant date.

Restricted Stock

In 2016, we issued 213,514 restricted stock units to key management team members and other employees under the Plan. The restricted stock units vest 25% on the first anniversary of the grant date and 1/48th monthly thereafter dependent upon continued employment. As the restricted stock units vest, the units will be settled in shares of common stock based on a one-to-one ratio. The units were valued based on the market price on the date of grant.

There were no outstanding restricted stock awards as of December 31, 2015.

In 2014, we granted 27,609 shares of restricted stock to a member of its Board of Directors as compensation for services provided in addition to his normal director services. The restricted shares were fully vested in March 2015.

On February 2, 2017, we granted 136,163 restricted stock units to key management team members. The restricted stock units vest over a four-year period. Any unvested restricted stock units are forfeited upon the employee's termination.

On February 10, 2017, we granted 25,252 restricted stock units to an officer. The restricted stock units vest over a four-year period. Any unvested restricted stock units are forfeited upon the employee's termination.

The following table summarizes the restricted stock activity under the Plan:

	Shares	Weighted Average Grant-Date Fair Value
Balance December 31, 2013	—	$ —
Awarded	27,609	$ 5.27
Balance December 31, 2014	27,609	$ 5.27
Vested	(27,609)	$ 5.27
Balance December 31, 2015	—	$ —
Awarded	213,514	$ 8.65
Balance December 31, 2016	213,514	$ 8.65

As of December 31, 2016, total unrecognized compensation cost related to non-vested restricted stock was $1.6 million, which is expected to be recognized as expense over a weighted average period of approximately 3.2 years.

Stock Based Compensation

We applied ASC 718, *"Compensation — Stock Compensation,"* during the years ended December 31, 2016, 2015, and 2014 and recognized related compensation expense of $3.3 million, $4.1 million, and $2.1 million, respectively, related to stock options and restricted stock units.

The fair value of restricted stock units granted to employees is based on our common stock price on the date of grant. The fair value of stock options granted to employees is based on the Black-Scholes option pricing model. To determine the inputs for the Black-Scholes option pricing model, we are required to develop several assumptions, which are highly subjective. We determine these assumptions as follows:

Expected Term: We used only our own historical data to determine the expected term of options based on historical exercise data. As there was no historical exercise data for non-employee directors, the Company determined the expected term based on the simplified method.

***Expected Volatility*:** We determined expected volatility based on our own historical data and the corresponding expected term that was determined using the Company's historical exercise data.

***Risk-Free Interest Rate*:** The risk-free rate is based on U.S. Treasury issues with remaining terms similar to the expected term on the options.

***Dividend Yield*:** We have never declared or paid any cash dividends and do not plan to pay cash dividends in the foreseeable future; therefore, we use an expected dividend yield of zero in the valuation model.

Forfeitures**:** We estimate forfeitures at the time of grant and revise those estimates periodically in subsequent periods if actual forfeitures differ from those estimates. We use historical data to estimate pre-vesting option forfeitures and record stock-based compensation expense only for those awards that are expected to vest. All stock-based payment awards are amortized on a straight-line basis over the requisite service periods of the awards, which are generally the vesting periods. If our actual forfeiture rate is materially different from its estimate, the stock-based compensation expense could be significantly different from what we have recorded in the current period.

Stock-Based Compensation — Employee Stock Options and Restricted Stock Awards

The estimated grant date fair values of stock options granted to employees were calculated using the Black-Scholes option pricing model based on the following assumptions:

	Years Ended December 31,		
	2016	**2015**	**2014**
Weighted average expected life (years)	4.38	4.71	3.87
Weighted average expected volatility	80.35%	61.79%	61%
Risk-free interest rate	1.03% - 1.32%	1.12% - 2.19%	0.98% - 1.28%
Weighted average dividend yield	0%	0%	0 0%

Stock-based compensation expense related to the fair value measurement of awards granted to employees was allocated as follows (in thousands):

	Years Ended December 31,		
	2016	**2015**	**2014**
Cost of revenue	$ 113	$ 130	$ 101
General and administrative	2,057	3,139	1,174
Sales and marketing	524	436	487
Research and development	569	354	342
Total stock-based compensation expense	$ 3,263	$ 4,059	$ 2,104

Note 13 — Business Segment and Geographic Information

We manufacture and sell high-efficiency ERDs and pumps as well as related products and services. Our chief operating decision-maker (“CODM”) is the chief executive officer (“CEO”).

Following the appointment of a new CEO in April 2015, new internal reporting was developed for making operating decisions and assessing financial performance. Beginning July 1, 2015, a new internal organizational and reporting structure was implemented and we began reporting segment information on a basis reflecting this new structure. Prior period amounts have been adjusted retrospectively to reflect this new internal reporting structure.

Our reportable operating segments consist of the Water Segment and the Oil & Gas Segment. These segments are based on the industries in which the products are sold, the type of energy recovery device sold, and the related products and services. The Water Segment consists of revenue and expenses associated with products sold for use in reverse osmosis desalination. The Oil & Gas Segment consists of revenue and expenses associated with products sold or licensed for use in hydraulic fracturing, gas processing, and chemical processing. Operating income for each segment excludes other income and expenses and certain expenses managed outside the operating segment. Costs excluded from operating income include various corporate expenses such as certain share-based compensation expenses, income taxes, and other separately managed general and administrative expenses not related to the identified segments. Assets and liabilities are reviewed at the consolidated level by the CODM and are not accounted for by segment. The CODM allocates resources to and assesses the performance of each operating segment using information about its revenue and operating income (loss).

The following summarizes financial information by segment for the periods presented (in thousands):

	Year Ended December 31, 2016		
	Water	Oil &Gas	Total
Product revenue	$ 47,545	$ 2,170	$ 49,715
Product cost of revenue	16,353	1,496	17,849
Product gross profit	31,192	674	31,866
License and development revenue	—	5,000	5,000
Operating expenses:			
General and administrative	1,081	1,000	2,081
Sales and marketing	5,076	2,985	8,061
Research and development	1,331	8,705	10,036
Amortization of intangibles	631	—	631
Operating expenses	8,119	12,690	20,809
Operating income (loss)	$ 23,073	$ (7,016)	16,057
Less:			
Corporate operating expenses			15,700
Consolidated operating income			357
Non-operating income			287
Income before income taxes			$ 644

	Year Ended December 31, 2015		
	Water	Oil &Gas	Total
Product revenue	$ 43,530	$ 141	$ 43,671
Product cost of revenue	19,045	66	19,111
Product gross profit	24,485	75	24,560
License and development revenue	—	1,042	1,042
Operating expenses:			
General and administrative	936	1,797	2,733
Sales and marketing	4,918	4,070	8,988
Research and development	1,126	6,552	7,678
Amortization of intangibles	635	—	635
Operating expenses	7,615	12,419	20,034
Operating income (loss)	$ 16,870	$ (11,302)	5,568
Less:			
Corporate operating expenses			17,359
Consolidated operating loss			(11,791)
Non-operating expenses			(181)
Loss before income taxes			$ (11,972)

	Year Ended December 31, 2014		
	Water	Oil &Gas	Total
Product revenue	$ 29,643	$ 783	$ 30,426
Product cost of revenue	13,713	—	13,713
Product gross profit	15,930	783	16,713
Operating expenses:			
General and administrative	1,756	917	2,673
Sales and marketing	4,169	5,383	9,552
Research and development	1,453	8,237	9,690
Amortization of intangibles	842	—	842
Operating expenses	8,220	14,537	22,757
Operating income (loss)	$ 7,710	$ (13,754)	(6,044)
Less:			
Corporate operating expenses			12,439
Consolidated operating loss			(18,483)
Non-operating income			69
Loss before income taxes			$ (18,414)

Depreciation and amortization expense by segment was as follows:

	Years Ended December 31		
Segment	2016	2015	2014
Water	$ 3,043	$ 3,192	$ 3,518
Oil & Gas	244	203	105
Corporate	393	443	405
Total depreciation and amortization	$ 3,680	$ 3,838	$ 4,028

The following geographic information includes product revenue to our domestic and international customers based on the customers' requested delivery locations, except for certain cases in which the customer directed us to deliver its products to a location that differs from the known ultimate location of use. In such cases, the ultimate location of use, rather than the delivery location, is reflected in the table below (in thousands, except percentages):

	Years Ended December 31,		
	2016	2015	2014
Domestic product revenue	$ 1,203	$ 2,861	$ 1,273
International product revenue	48,512	40,810	29,153
Total product revenue	$ 49,715	$ 43,671	$ 30,426
Product revenue by country:			
Saudi Arabia	14%	3%	5%
China	13	8	10
Qatar	8	13	*
Egypt	8	6	10
India	7	3	16
Oman	3	12	2
United Arab Emirates	2	10	2
United States	2	7	4
Others(1)	43	38	51
Total	100%	100%	100%

* Represents less than 1%

(1) Includes remaining countries not separately disclosed. No country in this line item accounted for more than 10% of our product revenue during any of the years presented.

All of our long-lived assets were located in the United States at December 31, 2016 and 2015.

Note 14 — Concentrations

Concentration of Credit Risk

We have an investment portfolio of fixed -income marketable debt securities, including amounts classified as cash equivalents, short-term investments, and long-term investments. The primary objective of our investment activities is to preserve principal and liquidity while at the same time maximizing yields without significantly increasing risk. We invest primarily in investment-grade short-term and long-term debt instruments of corporate issuers and the U.S. government and its agencies. These investments are subject to counterparty credit risk. To minimize this risk, we invest pursuant to a Board-approved investment policy. The policy mandates high credit rating requirements and restricts our exposure to any single corporate issuer by imposing concentration limits.

Our accounts receivable are derived from sales to customers located around the world. We generally do not require collateral to support customer receivables, but frequently require export letters of credit securing payment. We perform ongoing evaluations of our customers' financial condition and periodically review credit risk associated with receivables. An allowance for doubtful accounts is determined with respect to receivable amounts that we have determined to be doubtful of collection using specific identification of doubtful accounts and an aging of receivables analysis based on invoice due dates. Actual collection losses may differ from our estimates, and such differences could be material to the financial position, results of operations, and cash flows. Uncollectible receivables are written off against the allowance for doubtful accounts when all efforts to collect them have been exhausted, while recoveries are recognized when they are received.

Customer Concentration

Customers accounting for 10% or more of our combined accounts receivable and unbilled receivables were as follows:

	December 31,	
	2016	2015
Customer A	16%	0%
Customer B	13%	0%
Customer C	3%	26%
Customer D	7%	18%

No other customer accounted for more than 10% of our combined accounts receivable and unbilled receivables during any of these periods.

Product revenue from customers representing 10% or more of product revenue varies from period to period. Customers representing 10% or more of product revenue for the periods indicated were:

	December 31,		
	2016	2015	2014
Customer B	11%	14%	*%
Customer C	*%	1%	14%

* Less than 1%

No other customer accounted for more than 10% of our product revenue during any of these years.

One customer accounts for 100% of our license and development revenue for the years ended December 31, 2016 and 2015. We did not record any license and development revenue for the year ended December 31, 2014.

Vendor Concentration

One vendor accounted for 18% of our accounts payable at December 31, 2016. No vendor accounted for more than 10% of our accounts payable at December 31, 2015.

Note 15 — Related Party

In 2016, the Company entered into a lease agreement with EMS USA, Inc. for the use of office space. The President and Chief Executive Officer of EMS USA, Inc. is also a member of the Board of Directors of the Company. The lease was for a term of ninety (90) days with continuation on a month-to-month basis thereafter, with each month being an "Additional Term." The Company paid EMS USA, Inc. $5,268 related to this agreement during the year ended December 31, 2016. The lease was terminated as of July 2016.

In 2016, the Company extended an employee loan to one of its employees for $21,786. The loan was repayable to the Company monthly over six months and was non-interest bearing. During 2016, the loan was fully paid and another employee loan was extended to this employee for $21,786. The new loan is repayable to the Company monthly over six months and is non-interest bearing. As of December 31, 2016, the new loan balance was $10,894.

In 2016, the Company rented equipment and personnel to perform product testing from the VorTeq Licenseefor $266,000. The Company and the VorTeq Licensee signed a fifteen-year license agreement in 2015 which provides the VorTeq Licensee with exclusive worldwide rights to the Company's VorTeq for use in hydraulic fracturing onshore applications.

Note 16 — VorTeq License Agreement

On October 14, 2015, the Company and the VorTeq Licensee signed a fifteen-year license agreement which provides the VorTeq Licensee with exclusive worldwide rights to the Company's VorTeq for use in hydraulic fracturing onshore applications (the "VorTeq License Agreement").

The VorTeq is made up of cartridges though which hydraulic fracturing fluid passes and a missile that houses the cartridges. The VorTeq License Agreement includes up to $125 million in consideration paid in stages: (i) a $75 million non-refundable upfront exclusivity payment; and (ii) two (2) milestone payments of $25 million each upon achievement of successful tests in accord with KPIs specified in the agreement ("Milestone Payment 1 and 2"). After the milestone tests are achieved, the VorTeq Licensee will begin paying ongoing recurring royalty fees to the Company for supply and service of the cartridges based on the number of VorTeqs in operation which is subject to the greater of a minimum adoption curve or the adoption rate of the technology.

The Company applied the guidance for multi-element arrangements in identifying deliverables, determining units of accounting, allocating total contract consideration to the units of accounting, and recognizing revenue. It was determined that the non-contingent deliverables (fifteen-year license, exclusivity, support services) did not have stand-alone value individually, but did on a combined basis, and therefore represented a unit of accounting. The license will provide access to the technology over the term of the agreement and, along with the support, is the final deliverable in this unit of accounting. The $75 million upfront payment was allocated to this unit of accounting and revenue is recognized on a straight-line basis over the fifteen-year term of the license, starting from the day that the license agreement was signed and all services commenced. We recognized license and development revenue of $5.0 million and $1.0 million in 2016 and 2015, and we had a deferred revenue balance of $69.0 million related to the upfront exclusivity license fee as of December 31, 2016. The cartridge supply and support services are not assessed to have stand-alone value independent of each other and fees for these deliverables will be recognized as earned.

Milestone Payment 1 of $25 million is payable upon a successful five (5) stage yard test at the VorTeq Licensee'stest facility. If a successful yard test is not achieved by the target date, the payment will be delayed until the successful yard test is achieved. The Milestone Payment 2 of $25 million is payable upon a successful twenty (20) stage hydraulic fracturing at one of the VorTeq Licensee's customer's live well. If success is not achieved by the target date, the payment will be delayed until the successful live well test is achieved. The achievement of each milestone and the receipt of each of the related payments are subject to a high degree of uncertainty.

With respect to the Milestone Payments, the Company determined the payments did meet the definition of a substantive milestone. The factors considered in the determination that each milestone was substantive included whether the consideration earned from the achievement of the milestone is commensurate with the vendor's performance or the enhancement of value; the degree of certainty in achieving the milestone; whether the milestone relates solely to past performance; and whether the consideration earned from the achievement of the milestone is reasonable relative to all of the deliverables and payment terms within the arrangement. For the years ending December 31, 2016 and 2015, no revenue was recognized for the Milestones Payments, nor in any other periods presented.

Following Milestone Payment 2, the VorTeq Licensee will begin integrating the technology into its fleets. When the technology is integrated into the VorTeq Licensee's fleets, the Company will begin providing cartridges and servicing those cartridges which will generate ongoing recurring royalty revenue. The recurring royalty fee per VorTeq in use will be paid based on the greater of a minimum adoption curve or the adoption rate of the technology. Further, a provision is made for an advance royalty payment to which recurring royalty fees will be applied.

The exclusive nature of the agreement terminates if the VorTeq Licensee does not meet the specified minimum adoption curves. In the event the Company is not able to achieve successful tests results in accord with the KPIs and to receive the milestone payments, the license continues on an exclusive nature for the full term.

With respect to the cartridges and associated service, royalty revenue will be recognized as royalties are earned, that is, in the period in which the contingency regarding royalties are resolved and the amount of royalties are fixed and determinable based on the cartridges delivered.

Note 17 — Supplementary Data — Quarterly Financial Data (unaudited)

The following table presents certain unaudited consolidated quarterly financial information for each of the eight fiscal quarters in the period ended December 31, 2016. This quarterly information has been prepared on the same basis as the audited Consolidated Financial Statements and includes all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the information for the periods presented. The results for these quarterly periods are not necessarily indicative of the operating results for a full year or any future period.

QUARTERLY FINANCIAL DATA (unaudited)

	Three Months Ended,			
	December 31, 2016	**September 30, 2016**	**June 30, 2016**	**March 31, 2016**
	(In thousands, except per share amounts)			
Quarterly Results of Operations[1]				
Product revenue	$ 16,667	$ 11,024	$ 11,973	$ 10,051
Product cost of revenue	5,971	3,968	4,236	3,674
Product gross profit	10,696	7,056	7,737	6,377
License and development revenue	1,250	1,250	1,250	1,250
Operating expenses:				
General and administrative[2]	3,779	3,971	3,992	4,884
Sales and marketing	2,599	2,512	1,935	2,070
Research and development	2,730	2,319	2,422	2,665
Amortization of intangible assets	158	158	158	157
Income (loss) from operations	$ 2,680	$ (654)	$ 480	$ (2,149)
Net income (loss)	$ 3,123	$ (579)	$ 456	$ (1,966)
Income (loss) per share:				
Basic	$ 0.06	$ (0.01)	$ 0.01	$ (0.04)
Diluted	$ 0.06	$ (0.01)	$ 0.01	$ (0.04)

	Three Months Ended,			
	December 31, 2015	September 30, 2015	June 30, 2015	March 31, 2015
	(In thousands, except per share amounts)			
Quarterly Results of Operations(1)				
Product revenue	$ 15,211	$ 12,112	$ 10,484	$ 5,864
Product cost of revenue	6,796	4,948	4,836	2,531
Product gross profit	8,415	7,164	5,648	3,333
License and development revenue	1,042	—	—	—
Operating expenses:				
General and administrative(3)	4,543	3,590	5,362	6,278
Sales and marketing	2,704	2,195	1,994	2,433
Research and development	2,242	1,474	1,410	2,533
Amortization of intangible assets	159	159	158	159
Loss from operations	$ (191)	$ (254)	$ (3,276)	$ (8,070)
Net income (loss)	$ 312	$ (340)	$ (3,327)	$ (8,283)
Income (loss) per share:				
Basic	$ 0.01	$ (0.01)	$ (0.06)	$ (0.16)
Diluted	$ 0.01	$ (0.01)	$ (0.06)	$ (0.16)

(1) Quarterly results may not add up to annual results due to rounding.
(2) The increase in general and administrative expense in the first quarter of 2016 was substantially related to the termination of the former General Counsel.
(3) The increases in general and administrative expense in the first and second quarters of 2015 were substantially related to the resignation of our former Chief Executive Officer and the termination of the former Senior Vice-President of Sales.

Note 18 — Subsequent Events

See Note 8 — *"Long Term Debt and Lines of Credit"* for discussion of Loan and Pledge Agreement entered into in January 2017.

See Note 11 — *"Stockholders' Equity"* for discussion of grants of options and restricted stock units in January and February 2017.

Item 9 — Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A — Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management has evaluated, with the participation of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, or "Exchange Act") as of the end of the period covered by this Annual Report on Form 10-K. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of such date, our disclosure controls and procedures were effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in Securities and Exchange Commission rules and forms and that such information is accumulated and communicated to management as appropriate to allow for timely decisions regarding required disclosure.

Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives, and our Chief Executive Officer and Chief Financial Officer have concluded that these controls and procedures are effective at the "reasonable assurance" level. Our management, including the Chief Executive Officer and Chief Financial Officer, believes that a control system, no matter how well designed and operated, cannot provide absolute assurance that the objectives of the control system are met, and that no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

Management's Annual Report on Internal Control Over Financial Reporting andAttestation Report of the Registered Accounting Firm

Management is responsible for establishing and maintaining adequate internal control over the Company's financial reporting. Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2016. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control — Integrated Framework (2013)*. Based on the assessment using those criteria, management concluded that, as of December 31, 2016, our internal control over financial reporting was effective.

The Company's independent registered public accountants, BDO USA, LLP, audited the Consolidated Financial Statements included in this Annual Report on Form 10-K and have issued an audit report on the Company's internal control over financial reporting. The report on the audit of internal control over financial reporting appears below.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of
Energy Recovery, Inc.
San Leandro, California

We have audited Energy Recovery, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Energy Recovery, Inc.'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, which is included in the accompanying "Item 9A, Management's Annual Report on Internal Control Over Financial Reporting and Attestation Report of the Registered Public Accounting Firm." Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether 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, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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.

In our opinion, Energy Recovery, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Consolidated Balance Sheets of Energy Recovery, Inc. as of December 31, 2016 and 2015, and the related Consolidated Statements of Operations, Comprehensive Income (Loss), Stockholders' Equity, and Cash Flows for each of the three years in the period ended December 31, 2016, and our report dated March 9, 2017 expressed an unqualified opinion thereon.

/s/ BDO USA, LLP

San Jose, California
March 9, 2017

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B — Other Information

None.

PART III

Item 10 — Directors, Executive Officers and Corporate Governance

The information required by this Item is included in and incorporated by reference from our Definitive Proxy Statement (the "Proxy Statement") which will be filed with the Securities and Exchange Commission prior to April 30, 2017. The Proxy Statement is for our Annual Meeting of Stockholders which will be held on June 22, 2017.

Item 11 — Executive Compensation

The information required by this Item is included in and incorporated by reference from the Proxy Statement.

Item 12 — Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The following table sets forth equity compensation plan information as of December 31, 2016.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants, and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants, and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in the First Column)
Equity compensation plans approved by security holders(1)	6,096,375	$ 4.81	4,532,141

(1) Represents shares of the Company's common stock issuable upon exercise of options outstanding under the following equity compensation plans: the 2006 Stock Option/Stock Issuance Plan, the 2008 Equity Incentive Plan, the Amended and Restated 2008 Equity Incentive Plan, and the 2016 Incentive Plan.

Except as otherwise disclosed, the remaining information required by this Item is included in and incorporated by reference from the Proxy Statement.

Item 13 — Certain Relationships and Related Transactions and Director Independence

The information required by this Item is included in and incorporated by reference from the Proxy Statement.

Item 14 — Principal Accounting Fees and Services

The information required by this item is included in and incorporated by reference from the Proxy Statement.

PART IV

Item 15 — Exhibits and Financial Statement Schedules

(a) The following documents are included as part of this Annual Report on Form 10-K:

(1) Financial Statements

(2) Financial Statement Schedule

SCHEDULE II
VALUATION AND QUALIFYING ACCOUNTS

Description	Balance at Beginning of Period	Additions Charged to Costs and Expenses	Changes in Estimates Charged to Costs and Expenses(1)	Deductions(2)	Balance at End of Years
			(In thousands)		
Year Ended December 31, 2014					
Allowance for doubtful accounts	$ 241	$ 299	$ (383)	$ (2)	$ 155
Year Ended December 31, 2015					
Allowance for doubtful accounts	$ 155	$ 112	$ (101)	$ —	$ 166
Year Ended December 31, 2016					
Allowance for doubtful accounts	$ 166	$ 76	$ (112)	$ —	$ 130

(1) Collections of previously reserved accounts
(2) Uncollectible accounts written off, net of recoveries

All other schedules have been omitted because the information required to be presented in them is not applicable or is shown in the Consolidated Financial Statements or related Notes.

(3) Exhibit Index

See Exhibit Index immediately following the Signature page for a list of Exhibits filed or incorporated by reference as a part of this Report.

(b) Exhibit.

See Exhibits listed under Item 15(a)(3).

(c) Financial Statement Schedules.

All financial statement schedules are omitted because they are not applicable, not required, or because the required information is included in the Consolidated Financial Statements, the Notes thereto, or in the Exhibits listed under Item 15(a)(2).

Item 16 — Form 10-K Summary

None

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Leandro, State of California, on the 9th day of March 2017.

ENERGY RECOVERY, INC.

By: /s/ JOEL GAY
Joel Gay
President and Chief Executive Officer

Pursuant to the requirements of the Securities and Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ JOEL GAY Joel Gay	President and Chief Executive Officer (Principal Executive Officer)	March 9, 2017
/s/ CHRIS GANNON Chris Gannon	Chief Financial Officer (Principal Financial Officer)	March 9, 2017
/s/ HANS PETER MICHELET Hans Peter Michelet	Director and Chairman of the Board	March 9, 2017
/s/ ALEXANDER J. BUEHLER Alexander J. Buehler	Director	March 9, 2017
/s/ OLAV FJELL Olav Fjell	Director	March 9, 2017
/s/ SHERIF FODA Sherif Foda	Director	March 9, 2017
/s/ ARVE HANSTVEIT Arve Hanstveit	Director	March 9, 2017
/s/ OLE PETER LORENTZEN Ole Peter Lorentzen	Director	March 9, 2017
/s/ ROBERT YU LANG MAO Robert Yu Lang Mao	Director	March 9, 2017
/s/ DOMINIQUE TREMPONT Dominique Trempont	Director	March 9, 2017

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Amended and Restated Certificate of Incorporation, as filed with the Delaware Secretary of State on July 7, 2008.	10-K	001-34112	3.1	03/27/2009	
3.2	Amended and Restated Bylaws, effective as of July 8, 2008.	10-K	001-34112	3.2	03/27/2009	
10.1*	Form of Indemnification Agreement between the Company and its directors and officers.	S-1/A	333-150007	10.1	05/12/2008	
10.2*	2006 Stock Option/Stock Issuance Plan of the Company and forms of Stock Option and Stock Purchase Agreements thereunder.	S-1	333-150007	10.5	04/01/2008	
10.3*	Amendment to 2006 Stock Option/Stock Issuance Plan of the Company.	S-1	333-150007	10.5.1	04/01/2008	
10.4*	Second Amendment to 2006 Stock Option/Stock Issuance Plan of the Company.	S-1	333-150007	10.5.2	04/01/2008	
10.5*	2008 Equity Incentive Plan of the Company and form of Stock Option Agreement thereunder.	S-1/A	333-150007	10.6	05/12/2008	
10.6*	Energy Recovery Inc. Amended and Restated 2008 Equity Incentive Plan	DEF14A	001-34112	Appendix A	04/27/2012	
10.7	Modified Industrial Gross Lease Agreement dated November 25, 2008, between the Company and Doolittle Williams, LLC.	10-K	001-34112	10.17	03/27/2009	
10.8	First Amendment to Modified Industrial Gross Lease dated May 28, 2009, between the Company and Doolittle Williams, LLC.	10-Q	001-34112	10.17.1	08/07/2009	
10.9	Second Amendment to Modified Industrial Gross Lease dated June 26, 2009, between the Company and Doolittle Williams, LLC.	10-Q	001-34112	10.17.2	08/07/2009	
10.10	Third Amendment to Modified Industrial Gross Lease dated November 10, 2010 between the Company and Doolittle Williams, LLC	10-K	001-34112	10.14	03/12/2013	
10.11*	Offer Letter dated February 14, 2011, to Mr. Thomas S. Rooney, Jr.	8-K	001-34112	99.2	02/15/2011	
10.12	Control Agreement dated July 7, 2011, between the Company, Citibank, N.A., Citigroup Global Markets Inc., and Morgan Stanley Smith Barney LLC.	10-Q	001-34112	10.43	08/08/2011	
10.13*	Energy Recovery, Inc. Change in Control Severance Plan dated March 5, 2012	8-K	001-34112	10.1	03/09/2012	
10.14	Loan Agreement dated June 5, 2012 between Company and HSBC Bank, USA, National Association	8-K	001-34112	10.1	06/11/2012	
10.15*	Energy Recovery, Inc. Annual Incentive Plan dated January 1, 2014	8-K	001-34112	10.1	04/30/2014	
10.16*	Offer Letter dated June 26, 2014, to Mr. Joel Gay	8-K/A	001-34112	99.2	07/08/2014	
10.17	Radakovich Settlement Agreement	10-Q	001-34112	10.1	11/10/2014	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	File No.	Exhibit	Filing Date	Filed Herewith
10.18*	Amendment to Offer Letter dated as of January 12, 2015 to Mr. Thomas S. Rooney, Jr.	8-K	001-34112	10.1	01/13/2015	
10.19*	Draft Consulting Agreement with Thomas S. Rooney, Jr.	8-K	001-34112	10.2	01/13/2015	
10.20	Resignation, Transition, and Separation Agreement with Audrey Bold	8-K	001-34112	99.1	04/16/2015	
10.21*	Energy Recovery, Inc. 2015 Annual Incentive Plan	8-K	001-34112	10.1	04/29/2015	
10.22*	Offer Letter dated April 22, 2015 to Mr. Joel Gay	8-K	001-34112	99.2	04/29/2015	
10.23*	Promotion Letter dated April 30, 2015 to Ms. Sharon Smith-Lenox	8-K	001-34112	99.1	05/01/2015	
10.24*	Offer Letter dated May 5, 2015 to Mr. Eric Siebert,	10-K	001-34112	10.25	03/03/2016	
10.25	Settlement and Mutual Release Agreement	8-K	001-34112	99.1	05/13/2015	
10.26*	Offer Letter dated May 13, 2015 to Mr. Chris Gannon	8-K	001-34112	99.1	05/15/2015	
10.27	Second Amendment to Loan Agreement with HSBC Bank USA, National Association	10-Q	001-34112	10.7	08/06/2015	
10.28*	Offer Letter dated September 17, 2015 to Ms. Emily Smith	10-K	001-34112	10.30	03/03/2016	
10.29**	License Agreement by and between ERI Energy Recovery Ireland, Ltd. and Schlumberger Technology Corporation	10-K	001-34112	10.31	03/03/2016	
10.30*	Energy Recovery, Inc. Annual Incentive Plan	8-K	001-34112	10.1	03/01/2016	
10.31*	Transition and Separation Agreement dated March 15, 2016 by and between Energy Recovery, Inc. and Mr. Juan Otero	8-K	001-34112	99.1	03/18/2016	
10.32*	Energy Recovery, Inc. 2016 Incentive Plan	DEF14A	001-34112	Appendix A	04/27/2016	
10.33*	Offer Letter dated May 27, 2016 to Mr. William Yeung	8-K	001-34112	99.1	06/22/2016	
10.34	Loan and Pledge Agreement between Energy Recovery, Inc. as Borrower, and Citibank, N.A. as Lender	10-K	001-34112			X
14.1	Code of Ethics of Energy Recovery, Inc. Additional Conduct and Ethics Policies for the Chief Executive Officer and Senior Financial Officers.	10-K	001-34112	14.1	03/27/2009	
18.1	BDO USA, LLP, Letter re Change in Method of Accounting for Inventory Valuation	10-Q	001-34112	18.1	05/08/2014	
21.1	List of subsidiaries of the Company.					X
23.1	Consent of BDO USA, LLP, Independent Registered Public Accounting Firm.					X
31.1	Certification of Principal Executive Officer pursuant to Exchange Act Rule 13a-14(a) or 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X

Exhibit Number	Exhibit Description	Incorporated by Reference Form	File No.	Exhibit	Filing Date	Filed Herewith
31.2	Certification of Principal Financial Officer pursuant to Exchange Act Rule 13a-14(a) or 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
32.1	Certification of Principal Executive Officer and Principal Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
101.INS	XBRL Instance Document					
101.SCH	XBRL Taxonomy Extension Schema Document					
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					

* Indicates management compensatory plan, contract or arrangement.

** Portions of this exhibit have been omitted based on a request for Confidential Treatment submitted to the Securities and Exchange Commission (the "SEC"). The omitted information has been filed separately with the SEC as a part of the confidential treatment request. In the event that the SEC should deny such request in whole or in part, the relevant, previously omitted portions of this exhibit shall be publicly filed.

Exhibit 10.34

LOAN AND PLEDGE AGREEMENT

between

ENERGY RECOVERY, INC.

as Borrower,

and

CITIBANK, N.A.

as Lender,

Dated as of January 27, 2017

TABLE OF CONTENTS

EXHIBITS:

LOAN AND PLEDGE AGREEMENT

THIS LOAN AND PLEDGE AGREEMENT is dated as of January [27], 2017 (the "Closing Date") by and between (i) ENERGY RECOVERY, INC., a Delaware corporation ("Borrower"), and (ii) CITIBANK, N.A., a national banking association ("Citibank" or "Lender").

RECITALS:

WHEREAS, upon the terms and subject to the conditions set forth herein, Lender is willing to make available to Borrower a committed revolving credit line in the amount of Sixteen Million Dollars ($16,000,000) and an uncommitted revolving credit line in the amount of Four Million Dollars ($4,000,000) in each case for the account of Borrower to be used by Borrower in the ordinary course of business;

WHEREAS, Borrower owns, and may own in the future, certain marketable securities (the "Securities") which are held in or will be transferred to certain securities account(s) described on Exhibit A attached hereto (as amended from time to time together with any successor or replacement account and all subaccounts therein, collectively, the "Pledged Account") maintained with Lender;

WHEREAS, Lender has required as a condition to, among other things, issuing the Revolving Credit Loans (including any Letters of Credit thereunder), and in order to secure the prompt and complete payment, observance and performance of all of the Obligations, that Borrower execute and deliver this Agreement to Lender.

NOW, THEREFORE, in respect of the foregoing premises and other valuable consideration, the receipt and sufficiency of which are hereby mutually acknowledged, Borrower and Lender, each intending to be legally bound, hereby agree as follows:

ARTICLE I.
DEFINITIONS

SECTION 1.1 General Definitions. As used herein, the following terms shall have the meanings herein specified (to be equally applicable to both the singular and plural forms of the terms defined):

"Act" has the meaning specified in Section 6.1(i).

"Adjusted Base Rate" shall mean the Base Rate plus the difference, if a positive number, or minus the difference, if a negative number, (in each case expressed as a percentage) between (a) the LIBOR Rate on the date the LIBOR Rate was last applicable to the Advances, and (b) the Base Rate on the date that the LIBOR Rate was last applicable to the Advances; provided that in no event shall "Adjusted Base Rate" exceed the Base Rate plus 1.0%.

"Advance" means a loan or advance of funds made by Lender to Borrower under the Revolving Credit Loan.

"Affiliate" means, as to any Person, any other Person who directly or indirectly controls, is under common control with, is controlled by or is a director, officer, manager or general partner of such Person. As used in this definition, "control" (including its correlative meanings, "controlled by" and "under common control with") means possession, directly or indirectly, of the power to direct or cause the direction of management or policies (whether through ownership of voting securities or partnership or other ownership interests, by contract or otherwise), provided that, in any event, any Person who owns directly or indirectly twenty percent (20.0%) or more of the securities having ordinary voting power for the election of the members of the board of directors or other governing body of a corporation or twenty percent (20.0%) or more of the partnership or other ownership interests of any other Person (other than as a limited partner of such other Person) will be deemed to control such corporation, partnership or other Person.

"Agreement" means this Loan and Pledge Agreement, as amended, restated, supplemented or otherwise modified from time to time.

"Authorized Officer" means, with respect to Borrower, the Chief Executive Officer, President, Chief Financial Officer, Corporate Controller, Treasurer or Assistant Treasurer of Borrower, or such other individuals, designated by written notice to Lender from Borrower, authorized to execute notices, reports and other documents on behalf of Borrower required hereunder.

"Bank Product" means any of the following products, services or facilities extended to Borrower by Lender or any of its Affiliates; (a) Cash Management Services; (b) products under any interest rate protection agreement, foreign currency exchange agreement, commodity price protection agreement or other interest or currency exchange rate or commodity price hedging agreement; (c) commercial credit card and merchant card services; and (d) leases, insurance and other banking products or services as may be requested by Borrower.

"Bank Product Reserve" means the aggregate amount of reserves reasonably established by the Lender from time to time in its discretion in respect of Bank Products.

"Bankruptcy Code" means Title 11 of the United States Code entitled "Bankruptcy," as that title may be amended, restated or supplemented from time to time, or any successor statute.

"Base Rate" means a fluctuating annual rate of interest in effect from time to time that for any day shall be equal to the rate of interest for such day announced publicly by Citibank in New York, New York, as Citibank's base rate (which Borrower acknowledges and agrees is announced by such bank and used by Lender for reference purposes only and may not represent the lowest or best rate available to any of the customers of such bank or Lender).

"Borrowing" has the meaning specified in Section 2.2(a).

“Borrowing Base” means the sum of the amounts determined by multiplying the aggregate fair market value of each type of Collateral held in the Pledged Account which is an Eligible Asset below by the corresponding Loanable Value percentage specified below:

Type of Collateral	Loanable Value
Cash, cash equivalents, and certificates of deposit held at Citibank with maturities less than 5 years, or money market or mutual funds whose investments are limited to those types of investments described above	100%
US Federal government debt instruments (US treasury bills, notes and bonds)	90%
US Federal government agency debt instruments	85%
State, Municipal and Corporate Bonds which are rated greater or equal to BBB	70%
NYSE traded equities	70%
NYSE MKT (formerly American Stock Exchange) traded equities	60%
NASDAQ traded equities	50%

For purposes of this Agreement, the “fair market value” of any of the Eligible Assets at any given time shall mean the fair value of such property at such time, as reasonably determined by Lender from public information sources.

“Borrowing Base Certificate” has the meaning specified in Section 7.1(e)(iii), the form of which is annexed hereto asExhibit B.

“Borrowing Date” means the date on which a Borrowing is obtained.

“BSA” has the meaning specified in Section 6.1(n).

“Business Day” shall mean any day (a) during which Citibank is open for business in New York, New York, other than any Saturday or Sunday and (b) during which dealings in United States dollars are carried on by Citibank in the London interbank market.

“Cash Management Services” means any services provided from time to time by the Lender or any of its Affiliates to Borrower in connection with operating, collections, payroll, trust, or other depository or disbursement accounts, including automated clearinghouse, e-payable, electronic funds transfer, wire transfer, controlled disbursement, overdraft, depository, information reporting, lockbox and stop payment services.

“Change of Control” means that any Person or two or more Persons acting in concert shall have acquired beneficial ownership, directly or indirectly, of voting stock in Borrower (or other securities convertible into such stock) representing more than 50% of the combined voting power of all voting stock of Borrower entitled (without regard to the occurrence of any contingency) to vote for the election of members of the board of directors of Borrower.

"Claims" has the meaning specified in Section 9.4(a).

"Closing Date" means the date of execution and delivery of this Agreement.

"Code" has the meaning specified in Section 1.3.

"Collateral" has the meaning specified in Section 3.1.

"Committed Facility" has the meaning specified in 2.1(a).

"Continuation" has the meaning specified in Section 2.2(b).

"Default" means any of the events specified in Section 8.1, whether or not any of the requirements for the giving of notice, the lapse of time, or both, or any other condition, has been satisfied.

"Dollars" and the sign "$" means freely transferable lawful currency of the United States of America.

"Eligible Assets" equity collateral, debt collateral, and U.S. Treasury or U.S. government-guaranteed obligations which are 100% owned by Borrower in which Lender shall have a first priority perfected security interest and (a) with respect to equity collateral (e.g., common stock), meets the following criteria: (1) the Loanable Value of a single issuer shall not be greater than 5 days' average daily trading volume for the last 6 months; (2) must have a share price of at least $5.00; (3) no equity position can represent 5% or more of total shares outstanding of any single issuer; (4) may be sold on a daily basis by Lender on any Business Day without restriction or volume limitation; and (5) the Loanable Value of the common stock of any single issuer shall not comprise more than 25% of the aggregate Loanable Value of all Eligible Assets, and (b) with respect to debt collateral (e.g., notes or bonds) other than U.S Treasury or U.S government-guaranteed obligations, meets the following criteria: (1) issue size must be $300 million or more; (2) pledged amount not more than $25 million or 2% of outstanding issue, whichever is less; (3) issue must be rated BBB or higher by Standard & Poor's Rating Service, a division of McGraw-Hill, Inc., Baa by Moody's Investor Services, Inc., or other equivalent rating by a rating agency acceptable to Lender; and (4) sale of the securities by Lender may not be subject to any restriction; and (5) the Loanable Value of notes or bonds issued by a single issuer shall not comprise, at any time, more than 25% of the aggregate Loanable Value of all Eligible Assets at such time.

"Event of Default" means the occurrence of any of the events specified in Section 8.1.

"Financial Statements" means the balance sheets, profit and loss statements, statements of cash flow, and statements of changes in intercompany accounts, if any, for the period specified, prepared in accordance with GAAP and consistent with prior practices.

"GAAP" means generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board that are applicable to the circumstances as of the date of determination.

"Governmental Authority" means any nation or government, any state or other political subdivision thereof or any entity exercising executive, legislative, judicial, regulatory or administrative functions thereof or pertaining thereto.

"Highest Lawful Rate" has the meaning specified in Section 9.10.

"Indebtedness" means, with respect to any Person, as of the date of determination thereof (without duplication of the same obligation under any other clause hereof), (i) all obligations of such Person for borrowed money of any kind or nature, including funded and unfunded debt, (ii) all obligations of such Person under hedging agreements or arrangements therefor, regardless of whether the same is evidenced by any note, debenture, bond or other instrument, (iii) all obligations of such Person to pay the deferred purchase price of property or services (other than current trade accounts payable under normal trade terms and accrued expenses and which are incurred in the ordinary course of business that are not overdue for a period greater than six months or that are contested in good faith), (iv) all obligations of such Person to acquire or for the acquisition or use of any fixed asset, including capitalized lease obligations (other than, in any such case, any portion thereof representing interest or deemed interest or payments in respect of taxes, insurance, maintenance or service), or improvements which are payable over a period longer than one year, regardless of the term thereof or the Person or Persons to whom the same are payable, (v) all Indebtedness of others secured by (or for which the holder of such Indebtedness has an existing right to be secured) a Lien on any asset of such Person whether or not the Indebtedness is assumed by such Person, (vii) all Indebtedness of any other Person but only to the extent guaranteed by such Person, (viii) all obligations of such Person created or arising under any conditional sale or other title retention agreement with respect to property acquired by such Person (even though the rights and remedies of the seller or lender under such agreements in the event of default are limited to repossession or sale of such property), (ix) all unconditional and noncontingent obligations of such Person to purchase, redeem, retire, defease or otherwise acquire for value any equity interests of such Person, valued, in the case of redeemable preferred stock, at the greater of its voluntary or involuntary liquidation preference plus accrued and unpaid dividends and (x) all reimbursement or other obligations of such Person in respect of letters of credit, bankers acceptances, surety bonds, performance bonds or similar instruments issued or accepted by banks or other financial institutions for the account of such Person, whether or not matured.

"Indemnified Party" has the meaning specified in Section 9.4(a).

"Information" has the meaning specified in Section 9.18.

"Insolvency Event" means, with respect to any Person, the occurrence of any of the following: (i) such Person shall be adjudicated insolvent or bankrupt or institutes proceedings under the Bankruptcy Code or otherwise to be adjudicated insolvent or bankrupt, or shall generally fail to pay or admit in writing its inability to pay its debts as they become due, (ii) such Person shall seek dissolution or reorganization or the appointment of a receiver, trustee, custodian or liquidator for it or a substantial portion of its property, assets or business or to effect a plan or other arrangement with its creditors, (iii) such Person shall make a general assignment for the benefit of its creditors, or consent to or acquiesce in the appointment of a receiver, trustee, custodian or liquidator for a substantial portion of its property, assets or business, (iv) such Person shall file a voluntary petition under, or shall seek the entry of an order for relief under, any bankruptcy, insolvency or similar law, including the Bankruptcy Code, (v) such Person shall take any corporate, company or similar act in furtherance of any of the foregoing, or (vi) such Person, or a substantial portion of its property, assets or business, shall become the subject of an involuntary proceeding or petition for (A) its dissolution or reorganization or (B) the appointment of a receiver, trustee, custodian or liquidator, and (I) such proceeding shall not be dismissed or stayed within forty-five (45) days or (II) such receiver, trustee, custodian or liquidator shall be appointed, provided, however, that Lender shall have no obligation to make any Advance or issue any Letters of Credit during the pendency of any forty-five (45) day period described in clause (I).

"Interest Period" means the period commencing on the date of a Borrowing or a Continuation and ending one (1) or three (3) months thereafter as selected by Borrower; provided, however, that (i) Borrower may not select any Interest Period that ends after the Termination Date; (ii) whenever the last day of an Interest Period would otherwise occur on a day other than a Business Day, the last day of such Interest Period shall be extended to occur on the next succeeding Business Day, except that, if such extension would cause the last day of such Interest Period to occur in the next following calendar month, then the last day of such Interest Period shall occur on the next preceding Business Day; and (iii) if there is no corresponding date of the month that is one (1) or three (3) months, as the case may be, after the first day of an Interest Period, such Interest Period shall end on the last Business Day of such first or third month, as the case may be.

"Internal Revenue Code" means the Internal Revenue Code of 1986, any amendments thereto, any successor statute and any regulations and guidelines promulgated thereunder.

"Internal Revenue Service" or "IRS" means the United States Internal Revenue Service and any successor agency.

"L/C Exposure" means, at any time, the sum of (a) the undrawn amount outstanding under the Letters of Credit at such time plus (b) the amount of all drawings made on the Letters of Credit that have not yet been reimbursed by Borrower.

"Letters of Credit" means all letters of credit issued for the account of Borrower under Section 2.8, and all amendments, renewals, extensions or replacements thereof.

"LIBOR Rate" means, for any Interest Period, the rate per annum equal to the British Bankers Association LIBOR Rate ("BBA LIBOR"), as it appears in the ICE Benchmark Administration's Secure Financial Transaction Protocol service or through a third-party redistributor of such information, which shall note an average ICE Benchmark Administration Limited Fixing for US Dollar (or another commercially available source providing quotations of BBA LIBOR as designated by Lender from time to time) at approximately 11:00 a.m. (London time) two Business Days prior to the commencement of such Interest Period, for U.S. dollar deposits (for delivery on the first day of such Interest Period) with a term equivalent to such Interest Period. If such rate is not available at such time for any reason, then the "LIBOR Rate" for such Interest Period shall be the rate per annum determined by Lender to be the rate at which U.S. dollar deposits with a term equivalent to such Interest Period would be offered by Citibank in London, England to major banks in the London or other offshore interbank market at approximately 11:00 a.m. (London time) two Business Days prior to the commencement of such Interest Period. If the Board of Governors of the Federal Reserve System (or any successor) imposes a LIBOR Reserve Percentage with respect to LIBOR deposits, then, the LIBOR Rate shall be the foregoing rate divided by 1 minus the LIBOR Reserve Percentage.

"LIBOR Reserve Percentage" means the reserve percentage applicable during such Interest Period under regulations issued from time to time by the Board of Governors of the Federal Reserve System (or any successor) for determining the maximum reserve requirement (including, without limitation, any emergency, supplemental or other marginal reserve requirement) for Lender with respect to liabilities or assets consisting of or including eurocurrency liabilities having a term equal to such Interest Period.

"Lien" means any lien, claim, charge, pledge, security interest, assignment, hypothecation, deed of trust, mortgage, lease, conditional sale, retention of title or other preferential arrangement having substantially the same economic effect as any of the foregoing, whether voluntary or imposed by law.

"Loan Account" has the meaning specified in Section 2.4.

"Loanable Value" has the meaning specified in the definition of Borrowing Base.

"Loan Documents" means this Agreement, the Note, the Letters of Credit, the Standby Letter of Credit Agreement, and all documents and instruments to be delivered by Borrower under or in connection with this Agreement, as each of the same may be amended, supplemented or otherwise modified from time to time.

"Margin" means one and one-half percent (1.5%).

"Material Adverse Effect" shall mean a material adverse effect on the business, operations, assets, liabilities or condition (financial or otherwise) of Borrower.

"Note" means that certain Note dated as of the date hereof in the principal amount of $20,000,000 made by Borrower and payable to the order of Lender, as amended, restated, supplemented or otherwise modified from time to time.

"Notice of Borrowing" has the meaning specified in Section 2.2(a).

"Notice of Continuation" has the meaning specified in Section 2.2(b).

"Obligations" means and includes all loans, advances, debts, liabilities, obligations, covenants and duties owing by Borrower to Lender or any of its Affiliates of any kind or nature, present or future, whether or not evidenced by any note, guaranty or other instrument, which may arise under, out of, or in connection with, the Revolving Credit Loan, the Advances, the Letters of Credit, this Agreement, the Note, the Standby Letter of Credit Agreement, or the other Loan Documents, and also includes all obligations and liabilities under any Bank Products, in each case whether direct or indirect (including those acquired by assignment, purchase, discount or otherwise), whether absolute or contingent, due or to become due, now existing or hereafter arising, and however acquired. The term "Obligations" includes, without limitation, all interest (including interest accruing on or after an Insolvency Event, whether or not such interest constitutes an allowed claim), charges, reasonable and actual expenses, fees, attorneys' fees and disbursements, and any other sum chargeable to Borrower under this Agreement, the Note and the other Loan Documents.

"OFAC" has the meaning specified in Section 6.1(n).

"Other Taxes" has the meaning specified in Section 4.7(b).

"Overadvance" has the meaning specified in Section 2.3(a).

"Patriot Act" has the meaning specified in Section 6.1(n).

"Paid in Full" or "Payment in Full" (or words of similar import) means (i) the full cash payment of the Obligations, including any interest, fees and other charges accruing during an Insolvency Event (whether or not allowed in the proceeding), other than those described in clause (ii) below, contingent indemnification Obligations to the extent no claim giving rise thereto has been asserted, (ii) with respect to any Obligations consisting of the undrawn portion of the Letters of Credit, the depositing of cash with Lender as security for the payment of such Obligations in an amount equal to 105% of the aggregate undrawn amount of the Letters of Credit, and (iii) the full termination of any and all commitments of Lender to make loans or honor other requests of Borrower for the extension of credit.

"Permitted Debt" is defined in Section 7.2(e).

"Permitted Liens" is defined in Section 7.2(f).

"Person" means any individual, sole proprietorship, partnership, limited liability company, joint venture, trust, unincorporated organization, joint stock company, association, corporation, institution, entity, party or government (including any division, agency or department thereof) or any other legal entity, whether acting in an individual, fiduciary or other capacity, and, as applicable, the successors, heirs and assigns of each.

"Pledged Account" is defined in the Recitals and described on Exhibit A attached hereto.

"Pledged Interests" is defined in Section 3.1.

"Requirement of Law" means any law, treaty, rule, regulation, order or determination of an arbitrator, court or other Governmental Authority or any franchise, license, or permit.

"Revolving Credit Loan" has the meaning specified in Section 2.1(a).

"Securities" is defined in the Recitals.

"Securities Act" has the meaning specified in Section 6.1(a).

"Solvent" means, when used with respect to any Person, that as of the date as to which such Person's solvency is to be measured such person is not "insolvent" as defined in the Code and: (i) the fair saleable value of its assets is in excess of (A) the total amount of its liabilities (including contingent, subordinated, absolute, fixed, matured, unmatured, liquidated and unliquidated liabilities) reasonably anticipated to be incurred, and (B) the amount that will be required to pay the probable liability of such Person on its debts as such debts become absolute and matured; (ii) it has sufficient capital to conduct its business; and (iii) it is able to meet its debts as they mature.

"Standby Letter of Credit Agreement" means the standard Citibank Agreement for Standby Letter of Credit by and between Lender, as issuer and Borrower, as applicant, regarding the issuance of the Letters of Credit, as amended, restated, supplemented or otherwise modified from time to time.

"Taxes" has the meaning specified in Section 4.7(a).

"Termination Date" means March 31, 2018.

SECTION 1.2 Accounting Terms and Determinations. Unless otherwise defined or specified herein, all accounting terms used in this Agreement shall be construed in accordance with GAAP, applied on a basis consistent in all material respects with the Financial Statements delivered to Lender on or before the Closing Date. The Financial Statements required to be delivered hereunder from and after the Closing Date, and all financial records, shall be maintained in accordance with GAAP; provided, however, that interim financial statements or reports (but excluding for the avoidance of doubt, annual audited financial statements and reports) shall be deemed in compliance with GAAP despite the absence of footnotes and hedge accounting adjustments, reclassification of operating leases as Capital Leases as a result of changes in GAAP and other fiscal yearend adjustments as required by GAAP.

SECTION 1.3 Other Terms; Headings. Unless otherwise defined herein, terms used herein that are defined in the Uniform Commercial Code, from time to time in effect in the State of New York (the "Code"), shall have the meanings given in the Code. An Event of Default shall "continue" or be "continuing" unless and until such Event of Default has been waived or cured within any grace period specified therefor under Section 8.1. The headings and the Table of Contents are for convenience only and shall not affect the meaning or construction of any provision of this Agreement. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words "include", "includes" and "including" shall be deemed to be followed by the phrase "without limitation". The word "will" shall be construed to have the same meaning and effect as the word "shall". Unless the context requires otherwise (i) any definition of or reference to any agreement, instrument or other document herein or in any other Loan Document shall be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein or in any other Loan Document), (ii) any reference herein to any Person shall be construed to include such Person's successors and assigns, (iii) the words "herein", "hereof" and "hereunder", and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof, (iv) all references herein to Articles, Sections, Exhibits and Schedules shall be construed to refer to Articles and Sections of, and Exhibits and Schedules to, this Agreement, (v) time of day means time of day New York, New York, except as otherwise expressly provided, and (vi) the "discretion" of Lender means the sole and absolute discretion of Lender. No provision of any Loan Documents shall be construed against any party by reason of such party having, or being deemed to have, drafted the provision.

ARTICLE II.
THE CREDIT FACILITIES

SECTION 2.1 The Revolving Credit Loan. Lender agrees, as more fully described in this Agreement and subject to the terms and conditions hereto, to provide for revolving lines of credit to Borrower (collectively, the "Revolving Credit Loan") for which Borrower may borrow and request Letters of Credit against the Eligible Assets held from time to time in the Pledged Account maintained with Lender.

(a) Committed Facility. Lender agrees, subject to the terms and conditions hereof, to provide a committed line of credit (the "Committed Facility") to Borrower to make Advances or to issue for the account of Borrower Letters of Credit of a tenor and containing such terms as may be reasonably acceptable to Lender. Subject to Sections 2.2 and 2.3 below, Lender shall make such Advances and issue such Letters of Credit, from time to time from the Closing Date to but excluding the Termination Date, in an aggregate outstanding amount not to exceed Sixteen Million Dollars ($16,000,000.00); provided that Lender shall not make any Advance nor issue any Letter of Credit if the making of such Advance and/or issuance of such Letter of Credit, together with the aggregate principal amount of all Advances then outstanding, the then outstanding L/C Exposure, and the amount of any Bank Product Reserve will exceed the Borrowing Base.

(b) Fully Discretionary, Uncommitted Facility. In addition to the Committed Facility described above, Lender also agrees, subject to the terms and conditions hereof, to provide a discretionary line of credit to Borrower to make Advance or issue for the account of Borrower Letters of Credit of a tenor and containing such other terms as may be reasonably acceptable to Lender. Lender may, in its sole and exclusive discretion in each instance, make such Advances and issue such Letters of Credit, from time to time from the Closing Date to but excluding the Termination Date, in an aggregate outstanding face not to exceed Four Million Dollars ($4,000,000.00); provided that, Lender shall not make any Advance nor issue any Letter of Credit if the making of such Advance and/or issuance of such Letter of Credit, together with the aggregate principal amount of all Advances then outstanding, the then outstanding L/C Exposure, and the amount of any Bank Product Reserve will exceed the Borrowing Base.

(c) Borrower hereby unconditionally promises to pay all Obligations as and when due hereunder.

(d) The Revolving Credit Loan shall be evidenced by the Note.

(e) All Advances shall be payable in full, with all interest accrued thereon, on the Termination Date. Borrower may borrow, repay and re-borrow the Advances, in whole or in part, in accordance with the terms hereof prior to the Termination Date.

SECTION 2.2 Procedure for Borrowing; Notices of Borrowing; Notices of Continuation.

(a) Each Advance under the Revolving Credit Loan (each, a "Borrowing") shall be made on notice, given not later than 12:00 Noon (New York time) on the third Business Day prior to the date of the proposed Borrowing. Unless otherwise agreed in writing by Lender, each such notice of a Borrowing shall be by telephone, confirmed immediately in writing (by telecopier, e-mail or otherwise as permitted hereunder), substantially in the form of Exhibit C (a "Notice of Borrowing"), specifying therein the requested (i) date of such Borrowing, (ii) aggregate principal amount of such Borrowing, and (iii) the Interest Period. Each Borrowing shall be in an amount equal to One Million Dollars ($1,000,000) or a whole multiple of Five Hundred Thousand Dollars ($500,000) in excess thereof.

(b) Borrower shall elect to maintain such Borrowing or any portion thereof by selecting a new Interest Period for such Borrowing, which new Interest Period shall commence on the last day of the Interest Period then ending. Each selection of a new Interest Period (a "Continuation") shall be made by notice given not later than 12:00 Noon (New York time) on the third Business Day prior to the date of any such Continuation by Borrower to Lender. Unless otherwise agreed in writing by Lender, such notice by Borrower of a Continuation shall be by telephone, confirmed immediately in writing (by telecopier, e-mail or otherwise as permitted hereunder), substantially in the form of Exhibit C-I (a "Notice of Continuation"), specifying whether the Advance subject to the requested Continuation comprises part (or all) of the Revolving Credit Loan and the requested (i) date of such Continuation, (ii) Interest Period and (iii) aggregate amount of the Advance subject to such Continuation, which shall comply with all limitations on the Advances hereunder. Unless, on or before 12:00 Noon (New York time) of the third Business Day prior to the expiration of an Interest Period, Lender shall have received a Notice of Continuation from Borrower for the entire Borrowing outstanding during such Interest Period, any amount of such Advance comprising such Borrowing remaining outstanding at the end of such Interest Period (or any unpaid portion of such Advance not covered by a timely Notice of Continuation) shall, upon the expiration of such Interest Period, be continued for the same Interest Period.

(c) Anything in subsection (b) above to the contrary notwithstanding,

(i) if, at least one (1) Business Day before the date of any requested Borrowing or Continuation, the introduction of or any change in or in the interpretation of any law or regulation makes it unlawful, or any central bank or other Governmental Authority asserts that it is unlawful, for Lender or any of its Affiliates to perform its obligations hereunder to make or maintain a LIBOR Rate loan, Lender shall promptly give written notice of such circumstance to Borrower, and from and after such date all Advances will accrue interest at the Adjusted Base Rate plus the Margin;

(ii) if, at least one (1) Business Day before the first day of any Interest Period, Lender is unable, due to circumstances outside Lender's control, to determine the LIBOR Rate for any requested Borrowing or Continuation, Lender shall promptly give written notice of such circumstance to Borrower and from and after such date all Advances will accrue interest at the Adjusted Base Rate plus the Margin until Lender shall notify Borrower that the circumstances causing such suspension no longer exist; and

(iii) if Lender shall, at least one (1) Business Day before the date of any requested Borrowing or Continuation notify Borrower that the LIBOR Rate will not adequately reflect the cost to Lender of making or funding Advances for such Borrowing, then from and after such date all Advances will accrue interest at the Adjusted Base Rate plus the Margin until Lender shall notify Borrower that the circumstances causing such suspension no longer exist.

(d) Each Notice of Borrowing and Notice of Continuation shall be irrevocable and binding on Borrower. Borrower agrees to indemnify Lender against any loss, cost or expense incurred by Lender as a result of (i) default by Borrower in making a Borrowing or Continuation after Borrower has given notice requesting the same, (ii) default by Borrower in payment when due of the principal amount of or interest on any Advance or (iii) the making of a payment or prepayment of an Advance on a day which is not the last day of an Interest Period with respect thereto, including, without limitation, any loss (including loss of anticipated profits), cost or expense incurred by reason of the liquidation or reemployment of deposits or other funds acquired by Lender to fund such Advance.

(e) Promptly after its receipt of a Notice of Borrowing, and subject to all other terms and conditions hereof, Lender shall make the amount of such requested Borrowing available to Borrower in same day funds, on the Borrowing Date requested by Borrower by wire transferring to the Borrower's Loan Account the amount thereof on the requested Borrowing Date.

SECTION 2.3 Overadvances; Mandatory Prepayments; Optional Prepayments.

(a) If, at any time, the sum of the outstanding amount of the Revolving Credit Loan plus the then outstanding L/C Exposure plus the then outstanding Bank Product Reserve exceeds the Borrowing Base (an "Overadvance"), including, without limitation, as a result of a decrease in the Borrowing Base, then Borrower shall, within five (5) Business Days after written notice by Lender, (i) make a payment, (ii) deposit in the Pledged Account or pledge additional Collateral of a type and nature acceptable to Lender, in its reasonable discretion, or (iii) make a combination of the payments and deposits specified in clauses (i) and (ii) above, in an amount sufficient to cure such Overadvance. If Borrower fails to make such payment and/or deposit in respect of the Overadvance within such five (5) Business Day period, Lender shall have the immediate right, without notice or other action to exercise any or all other remedies available to Lender herein or under any other Loan Document (including, without limitation, the liquidation of the Collateral held in the Pledged Account; provided, however, if no Event of Default exists hereunder, other than the failure to timely cure such Overadvance, only in an amount sufficient to cure such Overadvance). If Borrower makes a payment to eliminate an Overadvance, Lender shall, without effecting Borrower's ability to borrow, repay and re-borrow in accordance with the terms of this Agreement, apply such payment to reduce the aggregate unpaid principal amount outstanding under the Revolving Credit Loan.

(b) Borrower may, at any time and from time to time, prepay any outstanding Advances, in whole or in part, upon at least two (2) days' irrevocable written notice by Borrower to Lender, specifying the date and amount of prepayment, provided that to the extent any Advances are optionally prepaid on a date that is not the last day of any Interest Period with respect thereto, such prepayment shall be accompanied by any amounts due pursuant to Section 2.2(d). If such notice is given, Borrower shall make such prepayment, and the payment amount specified in such notice shall be due and payable, on the date specified therein accompanied by the amount of accrued and unpaid interest thereon.

SECTION 2.4 Maintenance of Loan Account; Statements of Account. Lender shall maintain an account on its books (the "Loan Account") in which Borrower will be charged with all Advances made by Lender to Borrower or for Borrower's account, including the Revolving Credit Loan, interest, fees, expenses and any other Obligations. The Loan Account will be credited with all amounts received by Lender from Borrower or for Borrower's account. Lender shall send Borrower a monthly statement reflecting the activity in the Loan Account.

SECTION 2.5 Payment Procedures. Borrower hereby authorizes Lender to charge the Loan Account with the amount of all principal, interest, fees, expenses and other payments due and payable hereunder and under the other Loan Documents. Each payment by Borrower on account of principal, interest, fees or expenses hereunder shall be made to Lender. All payments to be made by Borrower hereunder, whether on account of principal, interest, fees or otherwise, shall be made without setoff, deduction or counterclaim and shall be made prior to 2:00 p.m. (New York time) on the due date thereof to Lender, in immediately available funds. Whenever any payment to be made hereunder shall be stated to be due on a day that is not a Business Day, the payment may be made on the next succeeding Business Day (except as specified otherwise the definition of Interest Period) and such extension of time shall be included in the computation of the amount of interest due hereunder.

SECTION 2.6 Application of Proceeds. The proceeds of the Advances and the Letters of Credit shall be used by Borrower solely for general corporate purposes, working capital purposes and capital expenditures. Notwithstanding anything to the contrary herein, no proceeds of any Advance will be used (i) to purchase or carry any margin stock (as defined in Regulation U) or to extend credit to others for the purpose of purchasing or carrying margin stock, or (ii) to repay any loan that was used to purchase or carry margin stock.

SECTION 2.7 Letters of Credit.

(a) Generally. The term of any Letter of Credit shall not exceed three hundred sixty-four (364) days from the date of issuance, subject to renewal in accordance with the terms thereof. Lender shall issue the Letters of Credit upon receipt of the documents, instruments, agreements and deliverables set forth in Article V below, and any other documents, instruments, agreements and deliverables reasonably required pursuant the terms of the Standby Letter of Credit Agreement. Upon receipt of such requirements, Lender will issue such Letter of Credit in accordance with its customary procedures to the beneficiary thereof or as otherwise may be agreed by Lender and Borrower. Lender shall furnish a copy of such Letter of Credit to Borrower promptly following the issuance thereof.

(b) Reimbursement. Borrower shall reimburse Lender, on demand, for each draft or other request for payment under any Letter of Credit in accordance with the terms of the Standby Letter of Credit Agreement. Borrower's obligations under this Agreement and the Standby Letter of Credit Agreement to reimburse Lender shall be absolute and unconditional under any and all circumstances and irrespective of any set off, counterclaim or defense to payment which Borrower may have or have had against Lender, any beneficiary of any Letter of Credit or any other Person. Borrower hereby unconditionally promises to pay all Obligations as and when due hereunder.

SECTION 2.8 Bank Products. In addition to the Advances and the Letters of Credit, Lender may, in its sole discretion, enter into agreements with Borrower regarding Bank Products pursuant to its standard documentation for same. Such Bank Products shall be secured by the Collateral.

ARTICLE III.
SECURITY INTEREST

SECTION 3.1 Grant of Security Interest. Borrower hereby grants to Lender as security for the prompt and complete payment, observance and performance of the Obligations, a security interest in all of Borrower's now owned or hereafter acquired right, title and interest in (a) any and all investment property now or hereafter delivered to Lender, any of Lender's Affiliates or any securities intermediary for the purposes of securing the Obligations which includes, without limitation, the Securities and all replacements, renewals, substitutions and proceeds thereof, (b) the Pledged Account and all cash, financial assets and other investment property now and at any time hereafter contained therein including, without limitation, the Securities and all replacements, renewals, substitutions and proceeds thereof (such contents of the Pledged Account collectively, the "Pledged Interests"), (c) all rights, privileges, authority and powers as owner or holder of the Pledged Interests and the Pledged Account, including all contract rights related time to time thereto, (d) all documents, instruments or certificates representing or evidencing the Pledged Interests, (e) all interest, dividends, distributions, cash, instruments and other property from time to time received, receivable or otherwise distributed in respect of, or in exchange for, the Pledged Interests, and (f) any and all proceeds of any of the foregoing described in clauses (a)-(e) (clauses (a)-(f), being referred to collectively as the "Collateral"). Borrower agrees to execute and deliver to Lender from time to time upon Lender's reasonable request such documents of transfer as Lender may from time to time request to enable Lender to transfer in each case after and during the continuance of an Event of Default the Pledged Interests into its name or the name of its nominee, or to register any of the Collateral to Lender or its nominee.

SECTION 3.2 Perfection of Security Interest. Borrower agrees (i) to immediately to take all actions necessary to transfer the applicable Pledged Interests to Lender's account at the Depositary Trust Corporation, if applicable, (ii) to deliver, or cause to be delivered, to Lender or Lender's nominee, all certificates evidencing any of the Collateral together with appropriate transfer powers executed in blank, (iii) Lender is authorized to record such financing statements as Lender may deem necessary or desirable to perfect the security interests granted herein, (iv) to cause any securities intermediary with custody of any Collateral to deliver an agreement in form and substance reasonably satisfactory to Lender, providing Lender with "control" (as defined in Section 9-106 of the Uniform Commercial Code as in effect in the State of New York) of such Collateral, and (v) to take such other steps as Lender may from time to time reasonably request to perfect and maintain Lender's security interest in the Collateral as a first priority security interest under applicable law.

SECTION 3.3 Voting Rights and Trading Authority. During the term of this Agreement, as long as no Event of Default exists Borrower shall have the right to vote and exercise trading authority with respect to the Pledged Interests (which may, subject to Section 3.2 above, be registered on the books and records of the applicable issuer in Borrower's name) and to give consents, ratifications and waivers with respect thereto. Lender shall, at the request of Borrower, provide Borrower with appropriate proxies and any other documents necessary or appropriate to permit Borrower to exercise the rights set forth in the preceding sentence. During the continuance of any Event of Default, Borrower shall not be permitted to execute any trades pertaining to the Collateral and Lender shall be entitled, at Lender's option and without notice from Lender to Borrower, to exercise all trading authority and voting powers pertaining to the Collateral. "Trading authority" as used herein shall mean, with respect to the Pledged Account, the right of Borrower or its representatives to sell Pledged Interests in the Pledged Account and invest the proceeds of such sale, as well as other cash available in the Pledged Account from time to time, in marketable securities, cash or cash equivalents, so long as no Pledged Interest is released from the Pledged Account as a result of such sale without being replaced with marketable securities, cash or cash equivalents with the same fair market value as the Pledged Interest being released exclusive of commissions and transaction costs. However, Borrower hereby acknowledges and agrees that Lender's consent to trading authority in no way constitutes a waiver of any of its rights under this Agreement to require at all times that the type and amount of the Collateral in the Pledged Accounts meet the collateral maintenance requirements set forth in this Agreement, including Section 2.3.

SECTION 3.4 Interest, Dividends and Other Distributions. Until Payment in Full, any and all interest, dividends or distributions paid in respect of any Collateral shall be retained in the Pledged Account and any cash paid, payable or otherwise distributed in redemption of, in exchange for, or as a return of, Borrower's capital investment in any Pledged Interest shall be retained in the Pledged Account and any if any amounts or assets are received by Borrower contrary to the provisions of this Section, such amounts or assets shall be held in trust for the benefit of Lender, segregated from other property or funds of Borrower, and forthwith delivered to Lender as Collateral in the same form as so received (with any necessary endorsement). Such amounts paid directly to Lender as described in the immediately preceding sentence shall be applied by Lender to such Obligations as Borrower shall designate unless any of the Obligations are otherwise due, in which case, Lender may apply such amounts to such Obligations (or to cash collateralize such Obligations, as the case may be).

SECTION 3.5 Additions of Pledged Collateral. Lender may permit Borrower, from time to time, pursuant to Section 2.3 or otherwise, to add additional investment property of Borrower to the Collateral subject to this Agreement by executing an amendment to this Agreement substantially in the form of Exhibit D attached hereto and otherwise complying with Section 3.2 hereof.

ARTICLE IV.
INTEREST, FEES AND EXPENSES

SECTION 4.1 Interest. Borrower shall pay to Lender interest on the Advances, payable monthly in arrears on the first day of each month, commencing with the month immediately following the Closing Date, and on the Termination Date, at a per annum rate which is equal at all times during the Interest Period for such Advance to (i) the LIBOR Rate for the Interest Period selected by Borrower corresponding to such Advances, plus (ii) the Margin.

SECTION 4.2 Interest After Event of Default. From the date of occurrence of any Event of Default (past any applicable notice or cure period) until such Event of Default shall have been waived by Lender, interest on the Advances shall be payable on demand at a rate per annum equal to the rate that would be otherwise applicable thereto plus an additional two percent (2.0%) per annum.

SECTION 4.3 Letter of Credit Fee. Borrower shall pay to Lender with respect to the Letters of Credit issued by Lender an amount equal to 0.70% per annum of the face amount of the Letters of Credit. Such fees shall be nonrefundable and shall be payable quarterly in arrears on the first day of each calendar quarter (January 1, April 1, July 1 and October 1) until all Obligations are Paid in Full. In addition to the foregoing fees, Borrower shall pay or reimburse Lender for such normal and customary costs and expenses as are incurred or charged by Lender to other similarly situated borrowers in issuing, effecting payment under, amending or otherwise administering any Letter of Credit.

SECTION 4.4 Unused Line Fee. Borrower shall pay to the Lender on the first day of each month, commencing with the month immediately following the Closing Date, and on the Termination Date, in arrears, an unused line fee equal to the product of 20/100ths of one percent (0.20%) per annum multiplied by the difference, if positive, between (i) $16,000,000 and (ii) the average daily balance of all Advances under the Committed Facility plus aggregate average daily undrawn amount of all Letters of Credit issued under the Committed Facility during the immediately preceding month or portion thereof.

SECTION 4.5 Closing Fee. On the Closing Date, Borrower shall pay to Lender a non-refundable closing fee in the amount of Sixteen Thousand Dollars ($16,000.00).

SECTION 4.6 Calculations. All calculations of interest and fees hereunder shall be made by Lender on the basis of a year of 360 days for the actual number of days elapsed in the period for which such interest or fees are payable. Each determination by Lender of an interest rate, fee or other payment hereunder shall be conclusive and binding for all purposes, absent manifest error.

SECTION 4.7 Indemnification in Certain Events. If, after the Closing Date, (i) any change in or in the interpretation of any law or regulation is introduced including, without limitation, with respect to reserve requirements, applicable to Lender or any other banking or financial institution from which Lender borrows funds or obtains credit, (ii) Lender complies with any future guideline or request from any central bank or other Governmental Authority or (iii) Lender determines that the adoption of any applicable law, rule or regulation regarding capital adequacy, or any change therein, or any change in the interpretation or administration thereof by any Governmental Authority, central bank or comparable agency charged with the interpretation or administration thereof has or would have the effect described below, or Lender complies with any request or directive regarding capital adequacy (whether or not having the force of law) of any such authority, central bank or comparable agency, and in the case of any event set forth in this clause (iii), such adoption, change or compliance has or would have the direct or indirect effect of reducing the rate of return on Lender's capital as a consequence of its obligations hereunder to a level below that which Lender could have achieved but for such adoption, change or compliance (taking into consideration Lender's policies as the case may be with respect to capital adequacy) by an amount deemed by Lender to be material, and any of the foregoing events described in clauses (i), (ii) and (iii) increases the cost to Lender of funding or maintaining the Advances, or reduces the amount receivable in respect thereof by Lender, then, Borrower shall, upon demand by Lender, within five (5) Business Days after receipt of written notice thereof from the Bank, which notice shall set forth the Bank's supporting calculations in reasonable detail, pay to Lender additional amounts sufficient to indemnify Lender against such increase in cost or reduction in amount receivable, however, only in the event that Lender charges or requests indemnity from all of its other similarly situated borrowers for such amounts. In making the foregoing determination, "change in law" (or words of similar import) shall include, regardless of the date enacted, adopted or issued, all requests, guidelines, requirements or directives (i) under or relating to the Dodd-Frank Wall Street Reform and Consumer Protection Act, or (ii) promulgated pursuant to Basel III by the Bank of International Settlements, the Basel Committee on Banking Supervision (or any similar authority) or any other Governmental Authority.

SECTION 4.8 Taxes.

(a) Any and all payments by Borrower hereunder or under the Note shall be made free and clear of and without deduction for any and all present or future taxes, levies, imposts, deductions, charges or withholdings and penalties, interest and all other liabilities with respect thereto ("Taxes"), including any Taxes imposed under Section 7701(l) of the Internal Revenue Code, excluding in the case of the Lender, taxes imposed on its net income (including, without limitation, any taxes imposed on branch profits) and franchise taxes imposed on the Lender by any applicable jurisdiction. If Borrower shall be required by law to deduct any Taxes from or in respect of any sum payable hereunder or under any Advance to or for the benefit of the Lender, (A) the sum payable shall be increased as may be necessary so that after making all required deductions of Taxes (including deductions of Taxes applicable to additional sums payable under this Section) the Lender receives an amount equal to the sum it would have received had no such deductions been made, (B) Borrower shall make such deductions and (C) Borrower shall pay the full amount so deducted to the relevant taxation authority or other authority in accordance with applicable law.

(b) In addition, Borrower agrees to pay any present or future stamp, documentary, excise, privilege, intangible or similar taxes or levies that arise at any time or from time to time (i) from any payment made under any and all Loan Documents, or (ii) from the execution or delivery by Borrower of, or from the filing or recording or maintenance of, or otherwise with respect to the exercise by the Lender of its rights under, any and all Loan Documents (excluding in the case of the Lender, taxes imposed on its net income (including, without limitation, any taxes imposed on branch profits) and franchise taxes imposed on the Lender by any applicable jurisdiction hereinafter referred to as "Other Taxes").

(c) Borrower indemnifies the Lender for the full amount of (i) Taxes imposed on or with respect to amounts payable hereunder, excluding in the case of the Lender, taxes imposed on its net income (including, without limitation, any taxes imposed on branch profits) and franchise taxes imposed on the Lender by any applicable jurisdiction (ii) Other Taxes and (iii) any Taxes (other than Taxes imposed by any jurisdiction on amounts payable under this Section) paid by the Lender and any liability (including penalties, interest and expenses) arising solely therefrom or with respect thereto;. excluding in the case of the Lender, taxes imposed on its net income (including, without limitation, any taxes imposed on branch profits) and franchise taxes imposed on the Lender by any applicable jurisdiction.

(d) Within thirty (30) days after the date of any payment of Taxes or Other Taxes payable by Borrower hereunder, Borrower will, upon request, furnish to the Lender the original or a certified copy of a receipt evidencing payment thereof.

(e) If Lender receives any refund of any Taxes or Other Taxes paid by Borrower hereunder, Lender shall promptly deliver the amount of such refund to Borrower.

(f) Without prejudice to the survival of any other agreement of Borrower hereunder, the agreements and obligations of Borrower contained in this Section 4.7 shall survive the indefeasible Payment in Full of the Obligations.

ARTICLE V.
CONDITIONS TO LENDING

SECTION 5.1 Conditions to Initial Advance or Letter of Credit. The obligation of Lender to make the initial Advance or to issue the initial Letter of Credit is subject to the satisfaction of the following conditions prior to or concurrent with such initial Advance or Letter of Credit:

(a) Lender shall have received the following, in form and substance satisfactory to Lender and its counsel:

(i) this Agreement duly executed by Borrower;

(ii) the Note duly executed by Borrower;

(iii) a Standby Letter of Credit Agreement duly executed by Borrower;

(iv) Citibank’s standard Alternative Dispute Resolution Agreement duly executed by Borrower;

(v) an executed Reg U-1 Form;

(vi) a Secretary's Certificate of Borrower attaching the organizational documents of Borrower, along with a copy of the resolutions of the board of directors authorizing the execution, delivery and performance of this Agreement and the other Loan Documents, and the incumbency, names and true signatures of the officers of Borrower authorized to sign the Loan Documents;

(vii) an initial Borrowing Base Certificate; and

(viii) such other agreements, instruments, documents and evidence as Lender deems reasonably necessary in its discretion in connection with the transactions contemplated hereby.

(b) There shall be no pending or, to the knowledge of Borrower after due inquiry, threatened litigation, proceeding, inquiry or other action (i) seeking an injunction or other restraining order, damages or other relief with respect to the transactions contemplated by this Agreement or the other Loan Documents or (ii) which would have a Material Adverse Effect.

(c) Borrower shall have paid the closing fee and all reasonable fees and expenses of Lender's counsel in connection with the negotiation, preparation, execution and delivery of the Loan Documents, together with all other out-of-pocket fees and expenses due as of the Closing Date pursuant to the terms of this Agreement.

(d) The Liens in favor of Lender shall have been duly perfected and shall constitute first priority Liens, and the Collateral shall be free and clear of all Liens.

Conditions Precedent to Each Advance and Each Letter of Credit. The obligation of Lender to make any Advance or to issue any Letter of Credit is subject to the satisfaction of the following conditions precedent:(a) all representations and warranties contained in this Agreement and the other Loan Documents shall be true and correct in all material respects on and as of the date of such Advance or Letter of Credit as if then made, other than representations and warranties that expressly relate solely to an earlier date, in which case they shall have been true and correct in all material respects as of such earlier date; and

(b) no Default or Event of Default shall have occurred and be continuing or would result from the issuance of the requested Advance or Letter of Credit as of the date of such request.

ARTICLE VI.
REPRESENTATIONS AND WARRANTIES

SECTION 6.1 Representations and Warranties of Borrower; Reliance by Lender. Borrower represents and warrants, as of the Closing Date and as of the date of any Borrowing and the date of any issuance of a Letter of Credit, as follows:

(a) Organization, Good Standing and Qualification. Borrower (i) is incorporated or duly organized, validly existing and in good standing under the laws of the state of its organization, (ii) has the requisite power and authority to own its properties and assets and to transact the businesses in which it presently is, or proposes to be, engaged and (iii) is duly qualified, authorized to do business and in good standing in each jurisdiction where it presently is, or proposes to be, engaged in business, except where such failure to be so qualified or in good standing would not individually or in the aggregate have a Material Adverse Effect.

(b) Authority. Borrower has the requisite power and authority to execute, deliver and perform its obligations under each of the Loan Documents. Borrower has the power and authority to grant to Lender the security interests in the Collateral. All action necessary for the execution, delivery and performance by Borrower of the Loan Documents has been taken.

(c) Enforceability. This Agreement is and, when executed and delivered, each other Loan Document, will be, the legal, valid and binding obligation of Borrower enforceable in accordance with its terms, except as enforceability may be limited by (i) bankruptcy, insolvency, fraudulent conveyance, fraudulent transfer, reorganization, moratorium or similar laws affecting creditors' rights generally and (ii) general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing, regardless of whether enforcement is considered in proceedings at law or in equity).

(d) No Conflict. The execution, delivery and performance by Borrower of each Loan Document do not and will not contravene (i) any of the organizational documents of Borrower, (ii) any applicable Requirement of Law or (iii) any material contract, agreement, license or permit of Borrower and will not result in the imposition of any Liens upon any of Borrower's properties, except in the case of (ii) and (iii), for such contraventions that would not individually or in the aggregate have a Material Adverse Effect.

(e) Consents and Filings. No consent, authorization or approval of, or filing with or other act by, Borrower, any Governmental Authority or any other Person is required in connection with the execution, delivery, performance, validity or enforceability of this Agreement or any other Loan Document, the consummation of the transactions contemplated hereby or thereby or the continuing operations of Borrower following such consummation, except those that have been obtained or made.

(f) Solvency. As of the Closing Date (after giving effect to all transactions contemplated to occur on or before the Closing Date) and as of the date of each Borrowing, Borrower is Solvent.

(g) Accuracy and Completeness of Information. All written data, reports and information heretofore, contemporaneously or hereafter furnished by or on behalf of Borrower to Lender or its representatives (in each case, taken as a whole and as modified or supplemented by other information so furnished) are or will be true and accurate in all material respects as of the date of such data, reports and information or as of the date of certification of such data, reports and information and none of such data, reports and information (in each case, taken as a whole and as modified or supplemented by other information so furnished) contains any material misstatement of fact or omits to state any material fact in response to any request by Lender. There are no facts now known to Borrower which individually or in the aggregate would reasonably be expected to have a Material Adverse Effect and which have not been specified herein, in the Financial Statements, or in any certificate, opinion or other written statement previously furnished by Borrower to Lender. Lender acknowledges that any projections furnished by Borrower to Lender are based on underlying assumptions which Borrower believes provide a reasonable basis for the projections contained therein and reflect Borrower's judgment based on present circumstances of the most likely set of conditions and course of action for the projected period. Lender further acknowledges that projections as to future events are not to be viewed as facts, that the actual results during the period or periods covered by such projections may differ from the projected results, and that such differences may be material.

(h) No Broker's or Finder's Fees. No broker or finder brought about the obtaining, making or closing of the financial accommodations afforded hereunder. No broker's or finder's fees or commissions will be payable by Borrower to any Person in connection with the transactions contemplated by this Agreement.

(i) Investment Company. Borrower is not an "investment company," or an "affiliated person" of, or "promoter" or "principal underwriter" for, an "investment company," as such terms are defined in the Investment Company Act of 1940, as amended (the "Act").

(j) Margin Stock. Borrower is not engaged in the business of extending credit for the purpose of purchasing or carrying margin stock (as defined in Regulation U) and no proceeds of any credit accommodation hereunder will be used to purchase or carry any margin stock (as defined in Regulation U) or to extend credit to others for the purpose of purchasing or carrying any margin stock, or to repay any loan that was used to purchase or carry any margin stock.

(k) No Judgments or Litigation. Except as disclosed in the Borrower's public filings, no judgments, orders, writs or decrees are outstanding against Borrower, nor is there now pending or, to Borrower's knowledge after due inquiry, threatened litigation, contested claim, investigation, arbitration, or governmental proceeding by or against Borrower that (i) individually or in the aggregate would reasonably be expected to have a Material Adverse Effect or (ii) purports to affect the legality, validity or enforceability of this Agreement, the Note, any other Loan Document or the consummation of the transactions contemplated hereby or thereby.

(l) Compliance with Laws. On the Closing Date, after giving effect to the transactions contemplated hereby, it is not in default under any Requirement of Law applicable to Borrower that individually or in the aggregate would reasonably be expected to have a Material Adverse Effect.

(m) Rights in Collateral; Priority of Liens. All of the Collateral of Borrower is owned by it free and clear of any and all Liens other than Liens in favor of Lender. The Liens granted by Borrower pursuant to this Agreement constitute valid, enforceable and perfected first priority Liens on the Collateral.

(n) Compliance with Anti-Terrorism Laws. Borrower is and will remain in full compliance with all material laws and regulations applicable to it including, without limitation, (i) ensuring that no Person who owns a controlling interest in or otherwise controls Borrower is or shall be (A) listed on the Specially Designated Nationals and Blocked Person List maintained by the Office of Foreign Assets Control ("OFAC"), Department of the Treasury, or any other similar list maintained by the OFAC under any authorizing statute, Executive Order or regulation or (B) a Person designated under Section 1(b), (c) or (d) of Executive Order No. 13224 (September 23, 2001), any related enabling legislation or any similar Executive Order and (ii) compliance with all applicable Bank Secrecy Act ("BSA") laws, regulations and government guidance on BSA compliance and on the prevention and detection of money laundering violations. Borrower acknowledges that Lender has notified Borrower that Lender is required, under the USA Patriot Act, 31 U.S.C. §5318 (the " Patriot Act"), to obtain, verify and record information that identifies Borrower, including, without limitation, the name and address of Borrower and such other information that will allow Lender to identify Borrower in accordance with the Patriot Act.

(o) Pledged Account. Borrower is the sole, direct, legal and beneficial owner of the Pledged Account and the only securities entitlement holder with respect to each of the Pledged Interests which constitute securities entitlements.

(p) Voting. There are no restrictions upon the voting rights associated with any of the Collateral. Borrower has the right, subject to the provisions of this Agreement, (i) to vote the Pledged Interests, and (ii) to pledge and grant a security interest in all or any part of the Collateral, free of any Lien or other charge, encumbrance or restriction.

(q) Right to Transfer. Borrower has acquired each of the Pledged Interests in an open market transaction and all such Pledged Interests are registered under the Securities Act of 1933, as amended (the "Securities Act") and Borrower has the right to transfer all or any part of the Pledged Interests, free of any Liens.

(r) No Affiliated Securities. Borrower is not the beneficial owner (as determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934) of five percent (5%) or more of the issued and outstanding common stock of the issuer of any of the Securities or otherwise considered an "Affiliate" (as defined in Rule 144 promulgated under the Securities Act) of any issuer of the Pledged Interests now or at any time during the three preceding months.

(s) No Indebtedness. Borrower has no Indebtedness other than Permitted Debt.

(t) No Liens. All of the assets and personal property of Borrower are owned or leased by Borrower free and clear of any and all Liens other than Permitted Liens.

All representations and warranties made by Borrower in this Agreement and in each other Loan Document to which it is a party shall survive the execution and delivery hereof and thereof and the closing of the transactions contemplated hereby and thereby. Borrower acknowledges and confirms that Lender are relying on such representations and warranties without independent inquiry in entering into this Agreement.

ARTICLE VII.
COVENANTS OF BORROWER

SECTION 7.1 Affirmative Covenants. Until Payment in Full:

(a) Existence. Borrower shall (i) maintain its corporate existence, and (ii) maintain in full force and effect, as is customarily maintained by companies similarly situated, all material licenses, bonds, franchises, leases, trademarks, qualifications and authorizations to do business, and all material patents, contracts and other rights necessary or advisable to the conduct of its businesses.

(b) Taxes. Borrower shall pay when due, (i) all tax assessments, and other governmental charges and levies imposed against it or any of its property and (ii) all lawful claims that, if unpaid, might by law become a Lien upon its property; provided, however, that, unless such tax assessment, charge, levy or claim has become a Lien on any of the property of Borrower, it need not be paid if it is being contested in good faith, by appropriate proceedings diligently conducted and an adequate reserve or other appropriate provision shall have been established therefor as required in accordance with GAAP.

(c) Requirements of Law. Borrower shall comply with all Requirements of Law applicable to it, except any compliance that individually or in the aggregate would not reasonably be expected to have a Material Adverse Effect.

(d) Books and Records; Inspections. Borrower shall, maintain books and records (including computer records and programs) of account pertaining to the assets, liabilities and financial transactions of Borrower in such detail, form and scope as is consistent with good business practice.

(e) Financial Reporting. Borrower shall deliver to Lender the following:

(i) Annual Financial Statements. As soon as available, but not later than ninety (90) days after the end of each fiscal year, Form 10-K filed with the SEC regarding Borrower's annual audited and certified consolidated Financial Statements of Borrower for or as of the end of the prior fiscal year.

(ii) Quarterly Financial Statements. As soon as available, but not later than forty-five (45) days after the end of each calendar quarter (including the last calendar quarter), Borrower's quarterly interim consolidated Financial Statements of Borrower, as at the end of such quarter and for the fiscal year to date.

(iii) Investment Statements; Borrowing Base Certificate. Together with the Financial Statements delivered in accordance with in clauses (i) and (ii), (A) all investment statements provided to Borrower by Citi Private Bank with respect to the Collateral and the Pledged Account and (B) a certificate signed by an Authorized Officer of Borrower substantially in the form of Exhibit B (a "Borrowing Base Certificate").

(iv) Other Financial Information. Promptly after the request by Lender therefor, such additional financial statements and other related data and information as to the business, operations, results of operations, assets, liabilities or financial condition of Borrower as Lender may from time to time reasonably request. Notwithstanding the foregoing, no additional financial statements and other related data and information shall have to be delivered so long as Borrower is a public reporting company and filing in compliance with SEC filing requirements and complying with clauses (i), (ii) and (iii) above.

(f) Payment of Liabilities. Borrower shall pay and discharge, in the ordinary course of business, all material obligations and liabilities (other than tax liabilities and other governmental charges which shall be governed by clause (b) above), except where the same may be contested in good faith by appropriate proceedings and for which adequate reserves with respect thereto have been established in accordance with GAAP.

(g) Solvency. Borrower shall be and remain Solvent at all times.

(h) Agreements Regarding Collateral:

(i) Borrower represents to Lender that Borrower has made its own arrangements for keeping informed of changes or potential changes affecting the Collateral (including, but not limited to, rights to convert, rights to subscribe, payment of interest, dividends, reorganization or other exchanges, tender offers and voting rights), and Borrower agrees that Lender shall have no responsibility or liability for informing Borrower of any such changes or potential changes or for taking any action or omitting to take any action with respect thereto.

(ii) In the event that, during the term of this Agreement, any stock dividend, reclassification, readjustment or other change is declared or made in the capital structure of any of the issuers of the Pledged Interests (including, without limitation, the issuance of additional shares of capital stock of any of such issuers), then Lender shall have a security interest in all equity and non-equity securities issued to or acquired by Borrower by reason of any such change or exercise with respect to any Pledged Interest, and such shares or other securities shall become part of the Collateral.

(iii) In the event that, during the term of this Agreement, subscription warrants or any other rights or options shall be issued by any issuer of the Pledged Interests on account of such Pledged Interests, then Lender shall have a security interest in such warrants, rights and options, and such warrants, rights and options shall become part of the Collateral.

SECTION 7.2 Negative Covenants. Until Payment in Full:

(a) Sales, Etc. of Collateral. Borrower will not directly or indirectly, sell, pledge, assign, transfer or otherwise dispose of any of the Collateral, or otherwise create, incur, assume or suffer to exist any Lien on or with respect to the Collateral. In furtherance of the foregoing, Borrower agrees that it will not (a) close or attempt to close or liquidate the Pledged Account or withdraw or transfer from the Pledged Account any cash, Securities or other financial asset contained therein without the prior written consent of Lender, or (b) create or permit to exist any Lien upon or with respect to any of the Collateral, except for the security interest granted under this Agreement.

(b) Use of Proceeds. Borrower will not (i) use any portion of the proceeds of any Advance or Letter of Credit in violation of Section 2.7 or for the purpose of purchasing or carrying any "margin stock" (as defined in Regulation U of the Federal Reserve Board) in any manner which violates the provisions of Regulation T, U or X of the Federal Reserve Board or for any other purpose in violation of any applicable statute or regulation, or of the terms and conditions of this Agreement, or (ii) take, or permit any Person acting on its behalf to take, any action which could reasonably be expected to cause this Agreement or any other Loan Document to violate any regulation of the Federal Reserve Board.

(c) Accounting Changes. Borrower will not at any time make or permit any change in accounting policies or reporting practices, except as permitted or required by GAAP.

(d) [Reserved.]

(e) Indebtedness. Borrower will not, directly or indirectly, at any time create, incur, assume or suffer to exist any Indebtedness other than the following (collectively, "Permitted Debt"):

(i) (Indebtedness under the Loan Documents;

(ii) endorsement of negotiable instruments for deposit or collection in the ordinary course of business;

(iii) Indebtedness (including capitalized lease) incurred solely to finance the acquisition of fixed or capital assets in an aggregate principal amount not to exceed $2,500,000 at any time outstanding;

(iv) obligations pursuant to cash secured letters of credit (exclusive of the Letters of Credit provided hereunder) not to exceed $4,100,000; and

(v) other unsecured Indebtedness incurred prior to the date hereof and disclosed in Borrower's most recently filed Form 10-K filed with the SEC.

(f) Liens on Assets, Etc. Borrower will not, directly or indirectly, at any time create, incur, assume or suffer to exist any Lien on or with respect to any assets or personal property, other than the following (collectively, "Permitted Liens"):

(i) Liens created hereunder and by the other Loan Documents;

(ii) Liens securing Indebtedness permitted by Section 7.2(d)(iii) incurred to finance the acquisition of fixed or capital assets,

(iii) Liens for taxes, assessments and other governmental charges or levies or the claims or demands of landlords, carriers, warehousemen, mechanics, laborers, materialmen and other like Persons arising by operation of law in the ordinary course of business for sums which are not yet due and payable,

(iv) Liens on cash collateral securing indebtedness or guarantees of indebtedness of the type mentioned in Section 7.2(d)(iv),

(v) Liens to secure payment of workers' compensation, employment insurance, old-age pensions, social security and other like obligations incurred in the ordinary course of business (other than Liens imposed by ERISA),

(vi) Liens arising from attachments, appeals bonds, or judgments, orders, or decrees in circumstances not constituting an Event of Default,

(vii) leases or subleases of real property granted in the ordinary course of Borrower's business, and leases, subleases, non-exclusive licenses or sublicenses of personal property granted in the ordinary course of Borrower's business, and

(viii) non-exclusive license of intellectual property granted to third parties in the ordinary course of business, and licenses of intellectual property that could not result in a legal transfer of title of the licensed property that may be exclusive in respects other than territory.

ARTICLE VIII.
EVENTS OF DEFAULT

SECTION 8.1 Events of Default. The occurrence of any of the following events shall constitute an "Event of Default":

(a) Borrower shall (i) fail to make any regularly scheduled payment of interest or regularly scheduled fee payment within three (3) days of when due or (ii) fail to make any other payment of principal, interest, fees, expenses or other Obligations when payable, whether at stated maturity, by acceleration, or otherwise; or

(b) Borrower shall (i) default in the performance or observance of any agreement, covenant, condition, provision or term contained in Section 2.3, 7.1, 7.2 or 9.4 hereof; or (ii) default in the performance or observance of any agreement, covenant, condition, provision or term contained in this Agreement or any other Loan Document (other than those referred to in Sections 8.1(a) and (b)(i)) and such default continues for a period of thirty (30) days after written notice by Lender; or

(c) the occurrence of any Change of Control; or

(d) any representation or warranty made by Borrower under or in connection with any Loan Document or amendment or waiver thereof, or in any Financial Statement, report, document or certificate delivered in connection therewith, shall prove to have been incorrect in any material respect when made or deemed made; or

(e) any single judgment or order for the payment of money which, when taken together with all other judgments and orders rendered against Borrower taken together, exceeds Ten Million Dollars ($10,000,000) in the aggregate (unless covered by insurance as to which a solvent and unaffiliated insurance company has acknowledged coverage without a reservation of rights) shall be rendered against Borrower and shall not be stayed, vacated, bonded or discharged within thirty (30) days; or

(f) Borrower shall become the subject of an Insolvency Event; or

(g) Borrower shall: (i) liquidate, wind-up or dissolve itself (or suffer any liquidation or dissolution); or (ii) acquire by purchase or otherwise all or any substantial part of the business or assets of any other Person, or otherwise enter into any transaction of merger or consolidation, unless in each case Borrower is the surviving legal entity; or

(h) the occurrence of any "Event of Default" as defined in the Standby Letter of Credit Agreement.

SECTION 8.2 Acceleration and Termination. Upon the occurrence and during the continuance of an Event of Default, Lender may take any or all of the following actions, without prejudice to the rights of Lender to enforce its claims against Borrower:

(a) Acceleration. To declare all Obligations immediately due and payable (except with respect to any Event of Default specified in Section 8.1(f), in which case all Obligations shall automatically become immediately due and payable) without presentment, demand, protest or any other action or obligation of Lender.

(b) Termination of Commitment. To declare the any commitment to lend or issue Letters of Credit to be immediately terminated (except with respect to any Event of Default with respect to Borrower set forth in Section 8.1(f), in which case any such commitment shall automatically terminate) and, at all times thereafter, any Advance made or Letter of Credit issued by Lender shall be in Lender's sole discretion.

SECTION 8.3 Cash Collateralization. Upon the occurrence and during the continuance of any Event of Default, upon demand by Lender, Borrower shall deposit in a cash collateral account established by or on behalf of Lender sufficient funds to cash collateralize 105% of the L/C Exposure at such time. During the existence of an Event of Default, amounts held in such cash collateral account shall be under the sole dominion and control of Lender and applied by Lender to the payment of drafts drawn under such Letters of Credit, and the balance, if any, in such cash collateral account, after all such Letters of Credit shall have expired or been fully drawn upon shall be applied to repay the other Obligations. During the existence of an Event of Default, after all such Letters of Credit shall have expired or been fully drawn upon and all Obligations shall have been satisfied, the balance, if any, in such cash collateral account shall be returned to Borrower or to such other Person as may be lawfully entitled thereto.

SECTION 8.4 Remedies as a Secured Party. Upon the occurrence and during the continuance of any Event of Default, Lender shall have such powers of sale and other powers as may be conferred by applicable law with respect to the Collateral including, without limitation, all of the rights and remedies with respect to the Collateral of a secured party under the Uniform Commercial Code as in effect in the State of New York. With respect to such Collateral or any part thereof, which shall then be in, or shall thereafter come into, the possession or custody of Lender or which Lender shall otherwise have the ability to transfer under applicable law, Lender may, in its sole discretion, without notice, upon the occurrence and during the continuance of any Event of Default, sell or cause the same to be sold at any broker's board or at public or private sale, in one or more sales or lots, at such price as Lender reasonably may deem best, for cash or on credit or for future delivery, without assumption of any credit risk on the part of Lender and the purchaser of any or all of the Collateral so sold shall thereafter own the same, absolutely free from any claim, encumbrance or right of any kind whatsoever and any sale of the Collateral conducted in conformity with reasonable commercial practices of banks, commercial finance companies, insurance companies or other financial institutions disposing of property similar to the Collateral shall be deemed to be commercially reasonable. Except with respect to any of the Collateral which threatens to decline speedily in value or is, or becomes, of a type sold on a recognized market, Lender will give Borrower reasonable notice of the time and place of any public sale thereof, or of the time after which any private sale or other intended disposition is to be made. Any requirements of reasonable notice shall be met if ten (10) days' prior written notice of such sale or disposition is provided to Borrower. Notwithstanding anything to contrary contained herein, Borrower acknowledges and agrees that each of the Pledged Interests is sold on a recognized market and no notice of sale shall be required in accordance with Section 9-611(d) of the Code. Any other requirement of notice, demand or advertisement for sale is, to the extent permitted by law, waived. Lender may, in its own name or in the name of a designee or nominee, buy all or any part of the Collateral at any public sale and, if permitted by applicable law, buy all or any part of the Collateral at any private sale.

SECTION 8.5 Other Remedies. Upon the occurrence and during the continuance of an Event of Default, Lender shall have all rights and remedies with respect to the Obligations and the Collateral under applicable law and the Loan Documents, including all rights and remedies of a secured party under the Code and Lender may do any or all of the following: (i) remove for copying all documents, instruments, files and records (including the copying of any computer records) relating to the Collateral; and (ii) foreclose the security interests created pursuant to the Loan Documents by any available procedure, or take possession of any or all of the Collateral, without judicial process and enter any premises where any Collateral may be located for the purpose of taking possession of or removing the same.

SECTION 8.6 No Marshalling; Deficiencies; Remedies Cumulative. Upon the occurrence and during the continuance of an Event of Default, Lender shall have no obligation to marshal any Collateral or to seek recourse against or satisfaction of any of the Obligations from one source before seeking recourse against or satisfaction from another source. Upon the occurrence and during the continuance of an Event of Default, the net cash proceeds resulting from Lender's exercise of any of the foregoing rights to liquidate all or substantially all of the Collateral, shall be applied by Lender to such of the Obligations and in such order as Lender shall elect in its discretion, whether due or to become due. Borrower shall remain liable to Lender and Lender for any deficiencies, and Lender and Lender in turn agree to remit to Borrower or its successor or assign any surplus resulting therefrom. All of Lender's and Lender's remedies under the Loan Documents shall be cumulative, may be exercised simultaneously against any Collateral and Borrower or in such order and with respect to such Collateral or Borrower as Lender may deem desirable, and are not intended to be exhaustive.

SECTION 8.7 Waivers. Except as may be otherwise specifically provided herein or in any other Loan Document, Borrower hereby waives any right to a judicial or other hearing with respect to any action or prejudgment remedy or proceeding by Lender during the continuance of an Event of Default to take possession, exercise control over, or dispose of any item of Collateral in any instance (regardless of where the same may be located) where such action is permitted under the terms of this Agreement or any other Loan Document or by applicable law or of the time, place or terms of sale in connection with the exercise of Lender's rights hereunder and also waives any bonds, security or sureties required by any statute, rule or other law as an incident to any taking of possession by Lender of any Collateral. Borrower also waives any damages (direct, consequential or otherwise) occasioned by the enforcement of Lender's rights under this Agreement or any other Loan Document including the taking of possession of any Collateral. These waivers and all other waivers provided for in this Agreement and the other Loan Documents have been negotiated by the parties, and Borrower acknowledges that it has been represented by counsel of its own choice, has consulted such counsel with respect to its rights hereunder and has freely and voluntarily entered into this Agreement and the other Loan Documents as the result of arm's-length negotiations.

SECTION 8.8 Lender Appointed Attorney-in-Fact. Borrower hereby appoints Lender as Borrower's attorney-in-fact, with full authority in the place and stead of Borrower and in the name of Borrower or otherwise, from time to time in Lender's discretion, to take any action and to execute any instrument or agreement which Lender may deem necessary or advisable to accomplish the purposes of this Agreement, including, without limitation, to receive, endorse and collect all instruments made payable to Borrower representing any interest payment, dividend or other distribution in respect of the Collateral or any part thereof and to give full discharge for the same. This power of attorney created under this Section, being coupled with an interest, shall be irrevocable as long as any of the Obligations shall be outstanding. The power of attorney created under this Section may only be exercised during the continuance of an Event of Default.

SECTION 8.9 Lender's Duty. Lender shall not be liable for any acts, omissions, errors of judgment or mistakes of fact or law including, without limitation, those acts, omissions, errors or mistakes with respect to the Collateral, except for those arising out of or in connection with Lender's (a) gross negligence or willful misconduct, or (b) failure to use reasonable care with respect to the safe custody of any certificate or other possessory collateral evidencing any of the Collateral which is in the physical possession of Lender. Without limiting the generality of the foregoing, Lender shall be under no obligation to take any steps necessary to preserve rights in the Collateral against any other parties but may do so at its option, and all reasonable expenses incurred in connection therewith shall be for the sole account of Borrower, and shall be added to the Obligations secured hereby.

SECTION 8.10 Further Assurances. Borrower shall do all things and shall execute and deliver all documents and instruments reasonably requested by Lender to protect or perfect any Lien (and the priority thereof) of Lender on the Collateral.

ARTICLE IX.
GENERAL PROVISIONS

SECTION 9.1 Notices. Except as otherwise provided herein, all notices and other communications hereunder shall be in writing and sent by certified or registered mail, return receipt requested, by overnight delivery service, with all charges prepaid, by hand delivery, or e-mail followed by a hard copy sent by regular mail, as follows:

if to Lender:	Citibank, N.A. One Sansome Street San Francisco, CA 94104 Attn: Ms. Nan Dias
if to Borrower:	Energy Recovery, Inc. 1717 Doolittle Drive San Leandro, CA 94577, Attn: Ms. Sharon Smith-Lennox

or, in each case, to such other address as Lender or Borrower may specify to the other party in the manner required hereunder. All such notices and correspondence shall be deemed given (i) if sent by certified or registered mail, three Business Days after being postmarked, (ii) if sent by overnight delivery service or by hand delivery, when received at the above stated addresses or when delivery is refused and (iii) if sent by e-mail transmission, when such transmission is confirmed.

SECTION 9.2 Delays; Partial Exercise of Remedies. No delay or omission of Lender to exercise any right or remedy hereunder shall impair any such right or operate as a waiver thereof. No single or partial exercise by Lender of any right or remedy shall preclude any other or further exercise thereof, or preclude any other right or remedy.

SECTION 9.3 Right of Setoff. In addition to and not in limitation of all rights of offset that Lender or any of its Affiliates may have under applicable law, and whether or not Lender has made any demand or the Obligations of Borrower have matured, Lender and its Affiliates shall have the right during the continuance of any Event of Default to set off and apply any and all deposits (general or special, time or demand, provisional or final, or any other type) at any time held and any other indebtedness at any time owing by Lender or any of its Affiliates to or for the credit or the account of Borrower against any and all of the Obligations. In the event that Lender exercises any of its rights under this Section 9.3, Lender shall provide prompt written notice to Borrower of such exercise, provided that the failure to give such notice shall not affect the validity of the exercise of such rights.

SECTION 9.4 Indemnification; Reimbursement of Expenses of Collection.

(a) Borrower hereby agrees that, Borrower will indemnify, defend and hold harmless Lender and its successors, assigns, directors, officers, agents, employees, advisors, shareholders, attorneys and Affiliates (each, an "Indemnified Party") from and against any and all losses, claims, damages, liabilities, deficiencies, obligations, fines, penalties, actions (whether threatened or existing), judgments, suits (whether threatened or existing) or expenses (including, without limitation, reasonable fees and disbursements of outside counsel, experts, consultants and other professionals) incurred by any of them (collectively, "Claims") (except, in the case of each Indemnified Party, to the extent that any Claim is determined in a final judgment by a court of competent jurisdiction to have resulted from such Indemnified Party's fraud, bad faith, gross negligence or willful misconduct or a material breach by such Indemnified Party of its obligations under this Agreement or any other Loan Document) arising out of or by reason of (i) any litigation, investigation, claim or proceeding related to (A) this Agreement, any other Loan Document or the transactions contemplated hereby or thereby, (B) any actual or proposed use by Borrower of the proceeds of the Advances or the Letters of Credit, or (C) Lender's entering into this Agreement, the other Loan Documents or any other agreements and documents relating hereto (other than consequential damages and loss of anticipated profits or earnings), including, without limitation, amounts paid in settlement, court costs and the reasonable fees and disbursements of counsel incurred in connection with any such litigation, investigation, claim or proceeding, and (ii) any pending, threatened or actual action, claim, proceeding or suit by any shareholder, director, manager or owner of Borrower or any actual or purported violation of Borrower's organizational documents or any other agreement or instrument to which Borrower is a party or by which any of its properties is bound. In addition, Borrower shall, upon demand, pay to Lender all reasonable out-of-pocket costs and expenses incurred by Lender (including the reasonable fees and disbursements of counsel and other professionals) in connection with the preparation, execution, delivery, administration, modification and amendment of the Loan Documents, and pay to Lender all costs and expenses (including the reasonable fees and disbursements of counsel and other professionals) paid or incurred by Lender in (A) enforcing or defending its rights under or in respect of this Agreement, the other Loan Documents or any other document or instrument now or hereafter executed and delivered in connection herewith, (B) collecting the Obligations or otherwise administering this Agreement and (C) foreclosing or otherwise realizing upon the Collateral or any part thereof. If and to the extent that the obligations of Borrower hereunder are unenforceable for any reason, Borrower hereby agrees to make the maximum contribution to the payment and satisfaction of such obligations that is permissible under applicable law.

(b) Borrower's obligations under this Section 9.4 shall survive any termination of this Agreement and the other Loan Documents, the termination and the Payment in Full of the Obligations, and are in addition to, and not in substitution of, any of the other Obligations.

SECTION 9.5 Amendments, Waivers and Consents. No amendment or waiver of any provision of this Agreement or any other Loan Document, or consent to any departure by Borrower therefrom, shall in any event be effective unless the same shall be in writing and signed by Borrower and Lender and then such amendment, waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

SECTION 9.6 Nonliability of Lender. The relationship among Borrower and Lender shall be solely that of borrower and lender. Lender shall have no fiduciary responsibilities to Borrower. Lender undertakes no responsibility to Borrower to review or inform Borrower of any matter in connection with any phase of Borrower's business or operations.

SECTION 9.7 Assignments and Participations.

(a) No Borrower Assignment. Borrower shall not assign this Agreement or any of its rights or obligations hereunder without the prior written consent of Lender.

(b) Lender Assignments. Lender may assign to one or more other Persons at any time or from time to time all or a portion of its rights and obligations under this Agreement, the Note and the other Loan Documents, without prior notice to, and without any necessity to obtain the consent of, Borrower thereto; provided, however, Lender shall provide notice to Borrower promptly after such assignment.

(c) Lender Participations. Lender may sell participations to one or more parties in or to all or a portion of its rights and obligations under this Agreement, the Note and the other Loan Documents.

(d) Information. In connection with its efforts to assign its rights or obligations or sell participations Lender may disclose any information they have, now or in the future, with respect to the business of Borrower to prospective assignees or purchasers, provided that such disclosure is subject to written confidentiality arrangements customary for assignment or participation transactions of such type.

(e) Pledge to Federal Reserve Bank. Lender may at any time pledge or assign a security interest in all or any portion of its rights under this Agreement to secure obligations of Lender, including any pledge or assignment to secure obligations to a Federal Reserve Bank, and this Section shall not apply to any such pledge or assignment of a security interest, provided that no such pledge or assignment of a security interest shall release Lender from any of its obligations hereunder or substitute any such pledgee or assignee for Lender as a party hereto.

SECTION 9.8 Counterparts; Telecopied Signatures. This Agreement and any waiver or amendment hereto may be executed in counterparts and by the parties hereto in separate counterparts, each of which when so executed and delivered shall be an original, but all of which shall together constitute one and the same instrument. This Agreement and each of the other Loan Documents may be executed and delivered by telecopier or other facsimile transmission (including by electronic imaging) all with the same force and effect as if the same was a fully executed and delivered original manual counterpart.

SECTION 9.9 Severability. In case any provision in or obligation under this Agreement, any Note or any other Loan Document shall be invalid, illegal or unenforceable in any jurisdiction, the validity, legality and enforceability of the remaining provisions or obligations, or of such provision or obligation in any other jurisdiction, shall not in any way be affected or impaired thereby.

SECTION 9.10 Maximum Rate. Notwithstanding anything to the contrary contained elsewhere in this Agreement or in any other Loan Document, the parties hereto hereby agree that all agreements between them under this Agreement and the other Loan Documents, whether now existing or hereafter arising and whether written or oral, are expressly limited so that in no contingency or event whatsoever shall the amount paid, or agreed to be paid, to Lender for the use, forbearance, or detention of the money loaned to Borrower and evidenced hereby or thereby or for the performance or payment of any covenant or obligation contained herein or therein, exceed the maximum non-usurious interest rate, if any, that at any time or from time to time may be contracted for, taken, reserved, charged or received on the Obligations, under the laws of the State of New York (or the laws of any other jurisdiction whose laws may be mandatorily applicable notwithstanding other provisions of this Agreement and the other Loan Documents), or under applicable federal laws which may presently or hereafter be in effect and which allow a higher maximum non-usurious interest rate than under the laws of the State of New York (or such other jurisdiction), in any case after taking into account, to the extent permitted by applicable law, any and all relevant payments or charges under this Agreement and the other Loan Documents executed in connection herewith, and any available exemptions, exceptions and exclusions (the "Highest Lawful Rate"). If due to any circumstance whatsoever, fulfillment of any provision of this Agreement or any of the other Loan Documents at the time performance of such provision shall be due shall exceed the Highest Lawful Rate, then, automatically, the obligation to be fulfilled shall be modified or reduced to the extent necessary to limit such interest to the Highest Lawful Rate, and if from any such circumstance Lender should ever receive anything of value deemed interest by applicable law which would exceed the Highest Lawful Rate, such excessive interest shall be applied to the reduction of the principal amount then outstanding hereunder or on account of any other then outstanding Obligations and not to the payment of interest, or if such excessive interest exceeds the principal unpaid balance then outstanding hereunder and such other then outstanding Obligations, such excess shall be refunded to Borrower. All sums paid or agreed to be paid to Lender for the use, forbearance, or detention of the Obligations and other Indebtedness of Borrower to Lender shall, to the extent permitted by applicable law, be amortized, prorated, allocated and spread throughout the full term of such Indebtedness, until Payment in Full thereof, so that the actual rate of interest on account of all such Indebtedness does not exceed the Highest Lawful Rate throughout the entire term of such Indebtedness. The terms and provisions of this Section shall control every other provision of this Agreement, the other Loan Documents and all other agreements among the parties hereto.

SECTION 9.11 Entire Agreement; Successors and Assigns; Interpretation. This Agreement and the other Loan Documents constitute the entire agreement among the parties, supersede any prior written and verbal agreements among them with respect to the subject matter hereof and thereof, and shall bind and benefit the parties and their respective successors and permitted assigns. This Agreement shall be deemed to have been jointly drafted, and no provision of it shall be interpreted or construed for or against a party because such party purportedly prepared or requested such provision, any other provision, or this Agreement as a whole.

SECTION 9.12 LIMITATION OF LIABILITY. LENDER SHALL HAVE NO LIABILITY TO BORROWER (WHETHER SOUNDING IN CONTRACT, TORT OR EQUITY OR OTHERWISE) FOR LOSSES SUFFERED BY BORROWER IN CONNECTION WITH, ARISING OUT OF, OR IN ANY WAY RELATED TO THE TRANSACTIONS OR RELATIONSHIPS CONTEMPLATED BY THIS AGREEMENT, OR ANY ACT, OMISSION OR EVENT OCCURRING IN CONNECTION THEREWITH, UNLESS IT IS DETERMINED BY A FINAL JUDGMENT OR COURT ORDER BINDING ON LENDER THAT THE LOSSES WERE THE RESULT OF ACTS OR OMISSIONS CONSTITUTING FRAUD, BAD FAITH, GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF THE LENDER. BORROWER HEREBY WAIVE ALL FUTURE CLAIMS AGAINST THE LENDER FOR SPECIAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES.

SECTION 9.13 GOVERNING LAW. THE VALIDITY, INTERPRETATION AND ENFORCEMENT OF THIS AGREEMENT AND THE OTHER LOAN DOCUMENTS AND ANY DISPUTE ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR ANY OF THE OTHER LOAN DOCUMENTS, WHETHER SOUNDING IN CONTRACT, TORT OR EQUITY OR OTHERWISE, SHALL BE GOVERNED BY THE INTERNAL LAWS (AS OPPOSED TO THE CONFLICTS OF LAW PROVISIONS OTHER THAN SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATIONS LAW) AND DECISIONS OF THE STATE OF NEW YORK.

SECTION 9.14 SUBMISSION TO JURISDICTION. ALL DISPUTES BETWEEN BORROWER AND LENDER BASED UPON, ARISING OUT OF, OR IN ANY WAY RELATING TO (A) THIS AGREEMENT; (B) ANY OTHER LOAN DOCUMENT OR (C) ANY CONDUCT, ACT OR OMISSION OF BORROWER OR LENDER OR ANY OF THEIR RESPECTIVE PARTNERS, EMPLOYEES, AGENTS, ATTORNEYS OR OTHER AFFILIATES, IN EACH CASE WHETHER SOUNDING IN CONTRACT, TORT OR EQUITY OR OTHERWISE AND IN EACH CASE WITH RESPECT TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT, SHALL BE RESOLVED ONLY BY STATE AND FEDERAL COURTS LOCATED IN NEW YORK, NEW YORK AND THE COURTS TO WHICH AN APPEAL THEREFROM MAY BE TAKEN; PROVIDED, HOWEVER, THAT LENDER SHALL HAVE THE RIGHT, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, TO PROCEED AGAINST BORROWER OR ITS PROPERTY IN (A) ANY COURTS OF COMPETENT JURISDICTION AND VENUE AND (B) ANY LOCATION SELECTED BY BORROWER TO ENABLE LENDER TO REALIZE ON SUCH PROPERTY, OR TO ENFORCE A JUDGMENT OR OTHER COURT ORDER IN FAVOR OF LENDER. BORROWER AGREES THAT IT WILL NOT ASSERT ANY PERMISSIVE COUNTERCLAIMS, SETOFFS OR CROSS-CLAIMS IN ANY PROCEEDING BROUGHT BY LENDER. BORROWER WAIVES ANY OBJECTION THAT IT MAY HAVE TO THE LOCATION OF THE COURT IN WHICH LENDER HAS COMMENCED A PROCEEDING, INCLUDING, WITHOUT LIMITATION, ANY OBJECTION TO THE LAYING OF VENUE OR BASED ON FORUM NON CONVENIENS.

SECTION 9.15 JURY TRIAL. EACH OF THE PARTIES HERETO HEREBY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT TO A TRIAL BY JURY IN ANY ACTION OR PROCEEDING BASED UPON, ARISING OUT OF, OR IN ANY WAY RELATING TO (A) THIS AGREEMENT; (B) ANY OTHER LOAN DOCUMENT OR (C) ANY CONDUCT, ACT OR OMISSION OF BORROWER, LENDER OR ANY OF THEIR RESPECTIVE PARTNERS, EMPLOYEES, AGENTS, ATTORNEYS OR OTHER AFFILIATES, IN EACH CASE WHETHER SOUNDING IN CONTRACT, TORT OR EQUITY OR OTHERWISE AND IN EACH CASE WITH RESPECT TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT.

SECTION 9.16 Publicity. Lender may (a) publish in any trade or other publication or otherwise publicize to any third party (including its Affiliates) a tombstone, article, press release or similar material relating to the financing transactions contemplated by this Agreement (including the use of company logos) and (b) provide to industry trade organizations related information necessary and customary for inclusion in league table measurements.

SECTION 9.17 No Third Party Beneficiaries. Neither this Agreement nor any other Loan Document is intended or shall be construed to confer any rights or benefits upon any Person other than the parties hereto and thereto

SECTION 9.18 Confidentiality. Lender shall maintain the confidentiality of all Information (as defined below), except that Information may be disclosed by any of them (a) to its Affiliates, and to its and their partners, directors, officers, employees, agents, advisors and representatives (provided such Persons are informed of the confidential nature of the Information and instructed to keep it confidential); (b) to the extent requested by any governmental, regulatory or self-regulatory authority purporting to have jurisdiction over it or its Affiliates; (c) to the extent required by applicable law or by any subpoena or other legal process; (d) to any other party hereto; (e) in connection with any action or proceeding, or other exercise of rights or remedies, relating to any Loan Documents or Obligations; (f) subject to an agreement containing provisions substantially the same as this Section, to any assignee or any actual or prospective party (or its advisors); (g) with the consent of Borrower (not to be unreasonably withheld, conditioned or delayed); or (h) to the extent such Information (i) becomes publicly available other than as a result of a breach of this Section or (ii) is available to Lender or any of its Affiliates on a nonconfidential basis from a source other than Borrower. Notwithstanding the foregoing, Lender may publish or disseminate general information describing this credit facility, including the names and addresses of Borrower and a general description of Borrower's businesses, and may use Borrower's logos, trademarks or product photographs in advertising materials, as provided in Section 9.16. As used herein, "Information" means all information received from Borrower relating to it or its business that is identified as confidential when delivered. Any Person required to maintain the confidentiality of Information pursuant to this Section shall be deemed to have complied if it exercises the same degree of care that it accords its own confidential information. Lender acknowledges that (i) Information may include material non-public information concerning Borrower; (ii) it has developed compliance procedures regarding the use of material non-public information; and (iii) it will handle such material non-public information in accordance with applicable law, including federal and state securities laws.

SECTION 9.19 Patriot Act Notice. Lender hereby notifies Borrower that pursuant to the requirements of the Patriot Act, Lender is required to obtain, verify and record information that identifies Borrower, including its legal name, address, tax ID number and other information that will allow Lender to identify it in accordance with the Patriot Act. Lender will also require information regarding each guarantor, if any, and may require information regarding Borrower's management and owners, such as legal name, address, social security number and date of birth.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by its proper and duly Authorized Officer as of the date first set forth above.

BORROWER
ENERGY RECOVERY, INC.,
a Delaware corporation

By: /s/ Chris Gannon
Name: Christian Gannon
Title: Chief Financial Officer

LENDER

CITIBANK, N.A.

By: /s/ Nanci Dias
Name: Nanci Dias
Title: SVP and Sr. Relationship Manager

EXHIBIT A

PLEDGED ACCOUNTS

Citibank, N.A.

Energy Recovery, Inc.
Account No. 15C108460768

Energy Recovery, Inc.
Account No. C92182556

EXHIBIT B

FORM OF BORROWING BASE CERTIFICATE

Borrower: Energy Recovery, Inc.
Date: [__________________]

Reference is made to that certain Loan and Pledge Agreement (the "Agreement") dated January [__], 2017 by and between ENERGY RECOVERY, INC., a Delaware corporation ("Borrower") and CITIBANK, N.A. ("Lender").

The undersigned officer of Borrower hereby certifies as of the date hereof that he/she is an Authorized Officer of Borrower, and that as such, he/she is authorized to execute and deliver this Borrowing Base Certificate to Lender on behalf of Borrower and further certifies on behalf of Borrower that:

1. The outstanding amount of all Advances as of the date hereof is: $[_______________].

2. The L/C Exposure as of the date hereof is: $[_______________].

3. The attached Schedule I details the Eligible Assets in the Pledged Account and the Loanable Value, along with the aggregate amount of the Borrowing Base.

4. The Borrowing Base is equal to or greater than the aggregate of: the outstanding amount of all Advances, plus the L/C Exposure, plus the amount of any Bank Products Reserve.

5. No Default or Event of Default has occurred or is continuing.

IN WITNESS WHEREOF, Borrower has executed this Borrowing Base Certificate as of the date first written above.

ENERGY RECOVERY, INC.
a Delaware corporation

By: /s/
Name:
Title:

EXHIBIT C

FORM OF NOTICE OF BORROWING

[Citibank to provide standard form]

EXHIBIT C-I

FORM OF NOTICE OF CONTINUATION

[Citibank to provide standard form]

EXHIBIT D

AMENDMENT TO LOAN AND PLEDGE AGREEMENT

This Amendment to Loan and Pledge Agreement (this “Amendment”) is made as of the [_____] day of [____________, 20__], by ENERGY RECOVERY, INC., a Delaware corporation (the “Borrower”), in favor of CITIBANK, N.A. (the “Lender”).

Preliminary Statements

A. Borrower and Lender have executed and delivered that certain Loan and Pledge Agreement dated as of January [__], 2017 (the “Agreement”).

B. Borrower wishes to provide additional “Collateral” (as defined in the Agreement) to Lender as provided in Section 3.5 of the Agreement.

NOW, THEREFORE, in consideration of the foregoing, Borrower and Lender agree to add the following (“New Collateral”) to Exhibit A of the Agreement:

[describe new Pledged Interest or Pledged Accounts]

1. Borrower and Lender agree that as of the date hereof the New Collateral shall become part of the Collateral subject to the terms of the Agreement.

2. Except as specifically amended hereby, the terms and conditions of the Agreement are in all respects ratified and confirmed and remain in full force and effect.

3. Please note that this Amendment may be executed in separate counterparts, each of which shall be an original and all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, Borrower and Lender have executed this Amendment.

BORROWER:

ENERGY RECOVERY, INC.
a Delaware corporation

By: /s/
Name:
Title:

LENDER:

CITIBANK, N.A.

By: /s/
Name:
Title:

Exhibit 21.1

Energy Recovery, Inc.
List of Subsidiaries

Company Name	Country/State of Incorporation/Formation
ERI Energy Recovery Holdings Ireland Limited	Ireland
ERI Energy Recovery Ireland Limited	Ireland
Energy Recovery Iberia, S.L.	Spain
Energy Recovery Canada, Corp.	Canada

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Energy Recovery, Inc.
San Leandro, California

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-152142, 333-165559, 333-180076, and 333-212707) of Energy Recovery, Inc. of our reports dated March 9, 2017, relating to the Consolidated Financial Statements and Financial Statement Schedule, and the effectiveness of Energy Recovery, Inc.'s internal control over financial reporting, which appear in this Form 10-K.

/s/ BDO USA, LLP

San Jose, California
March 9, 2017

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO EXCHANGE ACT RULE 13a-14(a) OR 15d-14(a), AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES OXLEY ACT OF 2002

I, Joel Gay, certify that:

1. I have reviewed this annual report on Form 10-K of Energy Recovery, Inc.;

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 (the registrant's fourth fiscal quarter in the case of an annual report) 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.

Date: March 9, 2017

/s/ JOEL GAY
Name: Joel Gay
Title: President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO EXCHANGE ACT RULE 13a-14(a) OR 15d-14(a), AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES OXLEY ACT OF 2002

I, Chris Gannon, certify that:

1. I have reviewed this annual report on Form 10-K of Energy Recovery, Inc.;

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 (the registrant's fourth fiscal quarter in the case of an annual report) 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.

Date: March 9, 2017

/s/ CHRIS GANNON
Name: Chris Gannon
Title: Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER, PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002*

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities and Exchange Act of 1934, as amended (the "Exchange Act"), and Section 1350 of Chapter 63 of Title 18 of the United States Code, Joel Gay, President and Chief Executive Officer of Energy Recovery, Inc. (the "Company"), and Chris Gannon, Chief Financial Officer of the Company, each hereby certify that, to the best of their knowledge:

1. The Company's Annual Report on Form 10-K for the period ended December 31, 2016, to which this Certification is attached as Exhibit 32.1 (the "Annual Report") fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act, and

2. The information contained in the Annual Report fairly presents, in all material respects, the financial condition of the Company at the end of the period covered by the Annual Report and results of operations of the Company for the period covered by the Annual Report.

IN WITNESS WHEREOF, the undersigned have set their hands hereto as of the 9th day of March 2017.

/s/ JOEL GAY	/s/ CHRIS GANNON
President and Chief Executive Officer	Chief Financial Officer

* This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Energy Recovery, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.