

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, 2020

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

(State or Other Jurisdiction of
Incorporation)

01-0616867

(I.R.S. Employer Identification No.)

**1717 Doolittle Drive
San Leandro, California 94577**
(Address of Principal Executive Offices) (Zip Code)

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

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

<u>Title of each class</u>	<u>Trading Symbol</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$0.001 par value	ERII	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 every Interactive Data File required to be submitted 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 such files). Yes No

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

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

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 \$303 million on June 30, 2020.

The number of shares of the registrant's common stock outstanding as of March 5, 2021 was 57,099,715 shares.

DOCUMENTS INCORPORATED BY REFERENCE

As noted herein, the information called for by Part III is incorporated by reference to specified portions of the registrant's definitive proxy statement to be filed in conjunction with the registrant's 2021 Annual Meeting of Stockholders, which is expected to be filed not later than 120 days after the registrant's fiscal year ended December 31, 2020.

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Forward Looking Information

This Annual Report on Form 10-K for the year ended December 31, 2020 including “Part II, Item 7 – Management’s Discussion and Analysis of Financial Condition and Results of Operations” (the “MD&A”), and certain information incorporated by reference, contain forward-looking statements within the “safe harbor” provisions of the 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. Our forward-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 different from 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 the pressure exchanger is the industry standard for energy recovery in the seawater reverse osmosis (“SWRO”) industry;
- our belief that pressure exchanger technology can provide benefits to our customers, including the reduction of capital expenditures and energy use;
- our belief that we will be able to identify new ways to solve and develop new solutions for solving challenges for critical industries;
- our belief that the integration of Environmental, Social and Governance (“ESG”) principles into our corporate and risk management strategies can strengthen our existing business as well as our efforts to develop new applications of pressure exchanger technology for high-pressure fluid-flow environments;
- our belief that our enhanced safety measures will allow us to help contain the spread of coronavirus (“COVID-19”);
- our belief that our pressure exchanger technology can address inefficiencies and waste within industrial systems and processes that involve high-pressure and low-pressure fluid flows;
- our belief that our PX[®] Pressure Exchanger[®] (“PX”) have helped make SWRO desalination an economically viable and more sustainable option in the production of potable water;
- our belief that our hydraulic turbochargers (“Turbochargers”) deliver substantial savings and ease of integration into desalination systems;
- our belief that markets traditionally associated with desalination, including the United States of America (“U.S.”) will inevitably develop and provide further revenue growth opportunities;
- our belief that, as the existing thermal technology is replaced with reverse osmosis (“RO”) technology, demand for our products will be created;
- our belief that ongoing operating costs rather than capital expenditures is the key factor in the selection of an energy recovery device (“ERD”) solution for megaproject (“MPD”) customers;
- our belief that our PX offers market-leading efficiency and reduction of total lifecycle cost to the end client;
- our estimate that MPD customer projects represent revenue opportunities from approximately \$1 million to \$18 million;
- our belief that initial capital expenditure rather than future ongoing operating costs is the key factor in selection of an ERD solution for original equipment manufacturer (“OEM”) projects;
- our estimate that OEM customer projects represent revenue opportunities up to \$1 million;
- our belief that our solutions offer a competitive advantage compared to our competitors’ solutions because our ERDs provide the lowest life-cycle cost and are, therefore, the most cost-effective ERD solutions for RO desalination applications;

- our belief that our PX has a competitive advantage, as compared to the Flowserve Corporation's ("Flowserve") DWEER product, because our devices are made with highly durable and corrosion-resistant aluminum oxide ("alumina") ceramic parts that are designed for a life of more than 25 years, are warranted for high efficiencies, and cause minimal unplanned downtime, resulting in lower lifecycle costs;
- our belief that our PX has a distinct competitive advantage over Fluid Equipment Development Company's ("FEDCO") turbochargers and Danfoss Group's ("Danfoss") iSave ERD because our devices provide up to 98% efficiency, have lower lifecycle maintenance costs, and are made of highly durable and corrosion-resistant alumina ceramic parts;
- our belief that our Turbochargers compete favorably with FEDCO's turbochargers based on efficiency, price, and because our Turbochargers have design advantages that enhance efficiency, operational flexibility and serviceability;
- our belief that our pump solutions are competitive with our competitors because our pumps are developed specifically for RO desalination, are highly efficient, feature product-lubricated bearings, and are often purchased with our ERDs in small to medium-sized plants;
- our belief that the VorTeq™ can allow site operators to reduce repair and maintenance costs, reduce capital costs by extending hydraulic fracturing pump's life expectancy, and eliminate redundant capital equipment;
- our belief that the Ultra PX™ can address the key challenges associated with treating industrial wastewater in ultra high-pressure reverse osmosis ("UHPRO") applications;
- our belief that the Ultra PX can help make UHPRO the preferred treatment option to achieve zero liquid discharge ("ZLD") and minimal liquid discharge ("MLD") requirements by enhancing UHPRO's affordability and efficiency compared to thermal treatment options;
- our objective of finding new applications for our technology and developing new products for use outside of desalination;
- our belief that our current facilities will be adequate for the foreseeable future;
- our belief that by investing in research and development, the Company will be well positioned to continue to execute on our product strategy;
- our expectation that sales outside of the U.S. will remain a significant portion of our revenue;
- the timing of our receipt of payment for products or services from our customers;
- our belief that our existing cash and cash equivalents, our short and long-term investments, and the ongoing 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 our latest 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 be denominated in foreign currencies and the impact of changes in exchange rates on our cash and operating results;
- our expectation that we will be able to enforce our intellectual property ("IP") rights;
- our expectation that the adoption of new accounting standards will not have a material impact on our financial position or results of operations;
- our share repurchase program will result in repurchases of our common stock or enhance long term stockholder value;
- the outcome of proceedings, lawsuits, disputes and claims;
- the impact of losses due to indemnification obligations;
- the impact of changes in internal control over financial reporting;
- the development of major public health concerns, including the COVID-19 outbreak or other pandemics arising globally, and the future impact of such major public health concerns, and specifically in the short-term the COVID-19 pandemic, on our business and operations; and
- *other factors disclosed under Item 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 additional risks and uncertainties further discussed under "Item 1A – Risk Factors" and are based on information available to us as of March 12, 2021. We assume no obligation to update any such forward-looking statements, certain risks and uncertainties which could cause actual results to differ materially from those projected in the forward-looking statements, as disclosed from time to time in our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as in our Annual Reports to Stockholders and in "Part I, Item 1A – Risk Factors" within this Annual Report on Form 10-K. It is important to note that 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 results to 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 time in our reports on Forms 10-Q and 8-K and our Annual Reports to Stockholders.

We provide our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Proxy Statements, Forms 3, 4 and 5 filed by or on behalf of directors, executive officers and certain large shareholders, and any amendments to those documents filed or furnished pursuant to the Securities Exchange Act of 1934, free of charge on the Investor Relations section of our website, www.energyrecovery.com. These filings will become available as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission ("SEC"). From time to time, we may use our website as a channel of distribution of material company information.

We also make available in the Investor Relations section of our website our corporate governance documents including our code of business conduct and ethics and the charters of the audit, compensation and nominating and governance committees. These documents, as well as the information on the website, are not intended to be part of this Annual Report on Form 10-K. We use the Investor Relations section of our website as a means of complying with our disclosure obligations under Regulation FD. Accordingly, you should monitor the Investor Relations section of our website in addition to following our press releases, SEC filings and public conference calls and webcasts.

PART I

Item 1 — Business

Overview

Energy Recovery, Inc. (the “Company”, “Energy Recovery”, “we”, “our” and “us”) creates technologies that solve complex challenges for industrial fluid-flow markets worldwide. Building on our pressure exchanger technology platform, we design and manufacture solutions that improve operational efficiency by reducing waste, energy consumption and costs across a range of industrial processes. What began as a game-changing invention for desalination has grown into a global business advancing the environmental sustainability of customers’ operations in multiple industries.

We were incorporated in Virginia in 1992 and reincorporated in Delaware in 2001. Our headquarters and principal research and development (“R&D”), and manufacturing facility is located in San Leandro, California.

Engineering and R&D have been, and remain, an essential part of our history, culture and corporate strategy. Since our formation, we have developed leading technology and engineering expertise through the continual evolution of our pressure exchanger technology, which can improve productivity by reducing waste and energy consumption in high-pressure industrial fluid-flow systems. This versatile technology powers several of our products, including our flagship PX® Pressure Exchanger® (“PX”) energy recovery device (“ERD”), which we believe is the industry standard for energy recovery in the seawater reverse osmosis desalination (“SWRO”) industry. Today, we continue to push the boundaries of our pressure exchanger technology to handle different operating environments and industrial applications.

Our pressure exchanger technology efficiently transfers energy between high-pressure and low-pressure liquid or gas through continuously rotating ducts. Our PX can operate in both low-pressure and high-pressure environments, between 1,000 pounds per square inch (“psi”), or 70 bar, and up to approximately 10,000 psi, or 700 bar. Our pressure exchanger technology can also handle a variety of relatively clean to dirty liquids, and we are actively developing capabilities to handle gases.

In January 2020, we opened our Katy, Texas facility for manufacturing, testing and training. In July 2020, we commissioned our manufacturing and warehousing space located in Tracy, California, which supplements the existing manufacturing, warehousing and distribution of our ERDs. We are a global team with sales and on-site technical support available worldwide, and we maintain international direct sales offices and technical support centers to service Europe, the Middle East and Asia.

Environmental, Social & Governance Program

In September 2020, we released our first Environmental, Social and Governance (“ESG”) report, detailing our multi-pronged approach to enhancing sustainability, managing and mitigating ESG related risks, and working to continually improve our company in each of the three ESG areas. While our business and products have always centered on helping our customers achieve more efficient, sustainable operations, our enhanced focus today on ESG, and related stakeholder engagement, positions us to improve our sustainability while also taking a more strategic and defined role in the global effort to create a more sustainable future. With our growing business and expanding global footprint, we believe it is time to formalize our commitment to increasing the resiliency and sustainability of our business.

In addition to focusing on how our innovative products can create a more sustainable future, we see an opportunity to build a better company for our shareholders, customers and employees, and the world. Nearly 90% of our product revenue in fiscal year 2019, the reporting year of our first ESG report, came from renewable and energy efficiency-related products. On average, our products had lowered energy expenses for our desalination customers by \$2 billion per year and helped these customers avoid 21 terawatt hours annually, an amount associated with preventing approximately 12.4 million metric tons of carbon emissions – equivalent to removing more than 2.5 million passenger vehicles from the road annually. In addition, we have historically focused on recycling raw materials in our manufacturing processes. In fiscal year 2019, 96% of our PXs shipped to our customers contained components made from recycled materials.

We pride ourselves on creating products and solutions that address climate change, sustainable industrialization, energy efficiency, and water scarcity. Ultimately, we believe that the integration of ESG principles into our corporate and risk management strategies can strengthen our existing business as well as our efforts to develop new applications of pressure exchanger technology for high-pressure and low-pressure fluid-flow environments.

Our ESG report, in its entirety, can be found on our website at <https://ir.energyrecovery.com/websites/energyrecover/English/6500/esg-at-energy-recovery.html>.

COVID-19 Pandemic

In March 2020, the World Health Organization declared the outbreak of a novel coronavirus (“COVID-19”), a pandemic which has resulted in authorities across the globe implementing numerous measures to contain the virus. In response to measures taken by federal, state and local governments, we have instituted the government minimum masking standards as well as provided enhanced safety measures above and beyond the government minimum, including shift configurations that ensure social distancing between workers, personal safety equipment for each worker, such as gloves, cleanings between shifts, weekly testing of employees and vendors working on site, and limited office activities to essential personnel. In addition, we implemented, where feasible, a work-at-home policy, to allow for continued operation of all support functions. These enhanced safety measures allow us to help contain the spread of COVID-19 and to ensure the health and safety of our employees. Despite a majority of our production staff working on-site since June 2020, we have had no known cases of communal spread of COVID-19 at our facilities.

We are unable to accurately predict the full impact that COVID-19 will have on our long-term financial condition, results of operations, liquidity and cash flows due to uncertainties. Based on current projections, which are subject to numerous uncertainties, including the duration and severity of the COVID-19 pandemic and containment measures and the effect of these on the industries in which we compete, we believe our cash on hand and marketable securities, as well as our ongoing cash generated from operations, will be sufficient to cover our capital requirements for the next 12 months from the issuance of this annual report.

For a discussion of the key trends and uncertainties that have affected our revenues, income and liquidity, see Part I, Item 1A, “Risk Factors” and Part II, Item 7, “Management’s Discussion and Analysis,” of this Annual Report on Form 10-K.

Markets

We are a market leader in the engineering, design, manufacturing, and supply of ERDs and related equipment, and services to the global SWRO desalination market. Leveraging our proven pressure exchanger technology, we are also focused on developing and delivering new solutions for markets outside of seawater desalination, including industrial wastewater, natural gas processing and hydraulic fracturing. We believe our pressure exchanger technology can address inefficiencies and waste within industrial systems and processes that involve high-pressure and low-pressure fluid flows.

Our company was founded to solve energy waste problems in the water desalination industry, which remains our primary source of revenue and profitability. The world’s need for clean water is intensifying, driven by population growth, industrialization, rapid urbanization, and climate change. According to the United Nations’ estimates, the world will only have 60% of the potable water it needs by 2030, and global demand will surge 30% by 2050, further outstripping supply. Apart from seasonal variations, the supply of fresh water generally remains fixed and is decreasing in some geographic areas. These trends make desalinating or filtering seawater, brackish water and the treatment and re-use of industrial wastewater, increasingly vital to satisfy global water demand.

We offer a suite of products for the SWRO desalination and industrial wastewater treatment industries, including ERDs and high-pressure feed pumps and high-pressure recirculation pumps. In addition, we sell a solution to reduce energy consumption in natural gas processing and are developing a new solution to reduce waste, redundancy and indirectly lower emissions associated with hydraulic fracturing.

Seawater Desalination

Reverse osmosis (“RO”) is the preferred technology in most desalination applications, and we deliver efficient, scalable solutions for recovering otherwise wasted energy in the process, thereby allowing our customers to reduce their capital expenditures, as well as lowering operating costs and reducing carbon emissions associated with the production of clean water. We also offer high-pressure multi- and single-stage centrifugal pumps designed to complement our ERDs for a wide range of RO plant capacities.

Solutions

Our ERDs are categorized into two technology groups: positive displacement isobaric ERDs, such as our flagship PX, which is generally used in SWRO, and centrifugal-type ERDs, such as our hydraulic turbochargers (“Turbochargers”), which are used primarily in brackish water reverse osmosis (“BWRO”) desalination.

Prior to the introduction of ERDs, the SWRO process was often cost prohibitive when compared to more traditional water treatment processes due to the high energy needs required by the process. Generally speaking, energy intensive pumps are used to pressurize feed waters with varying concentrations of salts, minerals and contaminants, which is then forced through a semi-permeable membrane to achieve the desired water quantity and quality. The SWRO process results in fresh water, suitable for potable, agricultural and industrial use and a concentrated and pressurized concentrate or brine stream. Prior to the adoption of ERDs, the concentrated residual pressure energy was dissipated through a throttle valve before the fluid was returned to the ocean. The pressurization of the feed water and subsequent dissipation of the pressure energy in the discharge water was inefficient and resulted in tremendous amounts of wasted pressure energy that made SWRO substantially more expensive than alternative water production options.

When introduced, ERDs fundamentally altered this paradigm by capturing and reusing this wasted pressure energy. The Pelton wheel was one of the first ERDs, followed by the development of hydraulic turbochargers, both of which provide suboptimal efficiencies in the reuse of wasted pressure energy. In the late 1990s, our PX was introduced, delivering efficiencies up to 98%. Rather than dissipating or “wasting” the pressure energy from the discharge brine, our PX, which is the most widely used energy recovery solution, can transfer the pressure energy from the discharge water directly to a portion of the low-pressure filtered feed water, thereby reducing the amount of flow required by the main high-pressure processes’ pumps. This results in a much more efficient process as the size of the high-pressure pumps and the corresponding energy usage can be reduced by up to 60%. As a result, our PXs have helped make SWRO desalination an economically viable and more sustainable option in the production of potable water.

The BWRO process is essentially the same as the SWRO process. Brackish water typically has lower salt, mineral and contaminant content than seawater, therefore, fewer solids need to be removed and less energy is expended on pressurizing the feed water. The amount of salts in the feed water will ultimately determine the system design and operating conditions which, in turn, will drive decisions related to the specification or type of ERD to be employed, if any. Due to the lower cost and available pressure energy involved, our Turbochargers generally have characteristics more applicable to the BWRO process. The BWRO process is typically focused on maximizing membrane recovery and thus reducing the amount of brine generated throughout the process. In doing so, multiple membrane stages and “interstage boost” designs are being widely used which can incorporate our Turbocharger ERDs.

PX, high efficiency isobaric ERDs. Our patented PX family of products, which includes the 4S series, 65 series and PX Q300, leverages our pressure exchanger technology. In this application, the pressure exchanger used in the PX products is made of a ceramic rotor supported by a highly efficient hydrodynamic and hydrostatic bearing system. All products in this family are designed for use in the SWRO industry, or in higher salinity BWRO applications, and enable desalination plant operators to recover otherwise wasted hydraulic pressure energy from a high-pressure fluid flow and transfer the energy to a low-pressure fluid flow, reducing energy costs and carbon emissions associated with the SWRO and BWRO processes.

Turbochargers, high efficiency centrifugal ERD. Our Turbochargers consist of a single-stage turbine runner connected to a single-stage pump impeller via a common shaft. All hydraulics are housed within the casing, with no seals required. The turbine runner absorbs the hydraulic energy of the concentrate stream and converts it into mechanical energy. This energy is then transferred to the pump impeller. The impeller converts the mechanical energy back to hydraulic energy, providing an additional pressure boost to the feed stream of the BWRO or SWRO desalination systems. Our Turbochargers are used for both low-pressure BWRO and high-pressure SWRO systems, as well as various other water treatment applications. Our AT and LPT Turbocharger product lines provide high efficiency with state-of-the-art engineering utilizing a compact configuration. We believe our Turbochargers deliver substantial savings and ease of integration into desalination systems. With custom-designed hydraulics that allow for optimum performance over a wide range of operating conditions, our Turbocharger technology offers solutions to capital cost constrained single-stage SWRO applications, as well as inter-stage boost desalination applications typically found in BWRO systems.

Pumps. High efficiency pumps, high-pressure feed and high-pressure circulation pumps. In addition to ERDs, SWRO desalination requires specialized high-pressure membrane feed and, in PX applications, high-pressure circulation pumps. These devices, in combination with ERDs, must efficiently pressurize and circulate feed water to the membranes to purify water. Plant operators require specialized pumps with performance matched to the requirements of the membranes and ERDs. To minimize plant costs, these pumps must provide high energy efficiency and reliability with low maintenance requirements.

We manufacture and/or supply specialized high-pressure feed and circulation pumps for only a portion of the markets served by our ERD solutions. Our high-pressure feed pumps are designed to pressurize the membrane feed flow and overcome the osmotic pressure requirements of the feed water resulting in the production of permeate water. Our high-pressure circulation pumps are designed to “circulate” and control the high pressure flow through our PX and to compensate for small pressure losses across the membranes, PX and associated process piping.

Markets

SWRO and BWRO have been our primary markets for revenue generation. The water market ranges from small desalination plants, such as those used in cruise ships and resorts, to megaproject scale desalination plants, defined as those which produce over 50,000 cubic meters of water per day (“m³/day”). Because of the geographical location of many significant water desalination projects, geopolitical and economic events can influence the timing of expected projects. We anticipate that markets traditionally not associated with desalination, including the United States of America (“U.S.”), will inevitably develop and provide further revenue growth opportunities.

Greenfield. The greenfield market represents newly constructed RO desalination projects. These facilities vary in size, scope and geography. Large scale greenfield projects are typically public in nature and involve a formal tendering process. Smaller greenfield projects may be private in nature, but typically still involve a formal tendering process. We work directly with the project bidders, generally large engineering, procurement and construction (“EPC”) firms, end-users and industry consultants, to specify our products prior to the project being awarded, where possible. Once the project is awarded to an EPC firm, our normal sales process ensues. The greenfield market has been the key market for our water business. This market is highly competitive, and the tendering process pays close attention to the cost to desalinate water (i.e., dollars per cubic meter of water produced). Our PX’s industry-leading efficiency for ERDs in the desalination industry has allowed us to remain a market leader in the global ERD market.

Retrofit (or Brownfield). The retrofit market represents existing water facilities that are currently in operation utilizing legacy ERD technologies, alternative technologies or no ERDs at all. These facilities and their owners not only face higher energy consumption and reduced plant availability due to these legacy technologies, but also encounter capital expenditure and “know-how” issues that may prevent them from retrofitting plants. Typical retrofits include improvements to existing operations, equipment upgrades and potential expansions of existing capacity. We leverage our best-in-class solutions and “know how” to unseat legacy technology in Brownfield plants by implementing water production efficiency measures to reduce overall power consumption, repair and maintenance costs and avoid costly capital upgrades, as well as increase throughput and/or plant uptime. These retrofit opportunities may or may not have a formal tendering process. We typically approach the plant operators, owners and/or end-users of these facilities to present our leading life-cycle cost value-proposition.

Technology Conversion

The thermal desalination process was the dominant seawater desalination technology employed throughout the 1990’s. In this process, thermal energy is used to evaporate water from heated seawater and subsequently condense the vapor to produce pure water. Starting in the early 1990’s, due to many factors including the introduction and greater usage of ERDs, the process of choice for the desalination industry shifted from thermal to membrane based RO desalination.

Over the past decade RO desalination technology became the predominant technology, supplanting thermal desalination technology as today’s desalination technology of choice. From 1980 through 2019, over 22 million m³/day of potable or desalinated water capacity was installed with much of the older capacity utilizing thermal technology. As water desalination plants that use the thermal desalination technology age, the industry expects the majority of these plant owners to replace their existing thermal technology with RO technology. These conversions are driving new demand for RO process equipment, which creates demand for our products.

Service & Aftermarket

Service & aftermarket is comprised of existing water facilities that have our solutions installed and in operation. We provide spare parts and repair services, field services and various commissioning activities to our global customer base. We leverage our industry expertise in supporting our existing installed base to ensure that our solutions are being operated effectively and efficiently. Readily available aftermarket products and services are required by our industry partners and customers in order to maximize plant availability and overall profitability of their operations.

Customers

We separate our sales into three distinct channels due to financial and other commercial and technical aspects of the projects. We identify these sales channels as megaproject ("MPD"), original equipment manufacturers ("OEM") and aftermarket ("AM").

Megaproject. MPD customers are major firms that develop, design, build, own and/or operate large-scale desalination plants. A significant portion of our revenue has historically come from these customers. Our MPD customers have the required desalination expertise to engineer, undertake procurement for, construct, and sometimes own and operate, large-scale desalination plants or megaprojects. Due to the project structures and capacities of these megaprojects, ongoing operating costs and life cycle costs, rather than the initial capital expenditures is the key factor in the MPD customers' selection of an ERD solution. As such, MPD customers most often select our PX, which we believe offers market-leading value with the highest technological and economic benefit. We work with these MPD customers to specify and optimize our PX solutions for their plant designs. The average time between project tender and shipment ranges from 16 to 36 months, or more. Each megaproject represents revenue opportunities ranging from approximately \$1 million to \$18 million. We estimate that the total capital investments by MPD customers in these large-scale infrastructure projects may range between \$50 million to over \$1 billion.

Original Equipment Manufacturer. OEM customers are companies that supply equipment, packaged systems, and various operating and maintenance solutions for small to medium-sized desalination plants, utilized by commercial and industrial entities, as well as national, state and local municipalities worldwide. We sell to our OEM customers a broad set of our products, including our PX, Turbochargers, high-pressure pumps and circulation "booster" pumps, and associated services. OEM projects comprise of desalination plants processing up to 50,000 m³/day, such as desalination plants located in local municipalities, hotels and resorts, power plants, cruise ships, and farm operations, among others. In addition, these OEM customers purchase our solutions for mobile, decentralized "quick water" or emergency water solutions. Unlike megaprojects, OEM projects are smaller in scope and, as such, the initial capital expenditure, rather than future ongoing operating costs, is often more of a factor in selection of an ERD solution. Accordingly, we sell not only our PX, but also our Turbochargers, which offer a lower cost alternative to our PX. The typical OEM project timeline from project tender to shipment ranges from one to 12 months. Each OEM project typically represents revenue opportunities up to \$1 million. We estimate that the total capital investments by OEM customers in these projects are typically up to \$50 million.

Aftermarket. AM customers are desalination plant owners and/or operators who can utilize our technology to upgrade or keep their plant running. Our existing and expanding installed base of ERDs and pump products in water plants has created a growing AM customer base comprised of plant operators and service providers. These AM customers purchase spare parts, replacement parts, and service contracts, as well as utilize our field service expertise to perform maintenance and repairs.

Competition

The market for ERDs, Turbochargers, high-pressure pumps, and circulation "booster" pumps, 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 believe our solutions offer a competitive advantage compared to our competitors' solutions because our ERDs provide the lowest life-cycle cost and are, therefore, the most cost-effective ERD solutions for the RO desalination application.

In the market for large megaprojects, our PX competes primarily with Flowserve's DWEER product. We believe our PX has a competitive advantage, as compared to the DWEER product, because our devices are made with highly durable and corrosion-resistant aluminum oxide ("alumina") ceramic parts that are designed for a life of more than 25 years, are warranted for high efficiencies, and cause minimal unplanned downtime, resulting in lower lifecycle costs. Additionally, our PX offers optimum scalability with a quick startup, as well as no scheduled maintenance.

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

In the applicable market and flow ranges that we serve for high-pressure pumps and circulation pumps, our solutions compete with pumps manufactured by 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 RO desalination, are highly efficient, feature product-lubricated bearings, and are often purchased with our ERDs in small to medium-sized plants.

Sales and Marketing

Our strategically located direct sales force offers our products through capital sale to our customers around the world. We have sales offices in the U.S.; Madrid, Spain; Shanghai, Peoples Republic of China; and Dubai, United Arab Emirates, and we maintain a sales and service footprint in strategic territories, allowing rapid response to our customers' needs. Our team is composed of individuals with many years of desalination and water industry expertise. Aligning to the geographic breadth of our current and potential future customers, our product marketing approach includes a strategic presence at water industry events across various regions. In addition, we leverage our industry and market intelligence to develop new solutions and services that can be adopted by our growing customer base.

A significant portion of our revenue is from outside of the U.S. Additional segment and geographical information regarding our product revenue is included in Note 2, "Revenue," Note 12, "Segment Reporting," and Note 13, "Concentrations," of the Notes to Consolidated Financial Statements in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10-K.

Seasonality

There is no specific seasonality to highlight that occurs throughout a calendar year. 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 MPD customers for a particular plant is based upon each customer's project planning, which varies from year to year.

Emerging Technologies

Over the past few years, our oil & gas R&D efforts have largely focused on the development of applications of our technology for the oil & gas market, which includes hydraulic fracturing and natural gas processing, as well as expanding the technical aperture of the pressure exchanger technology to unlock future commercial opportunities. We have since identified multiple markets that would be enhanced by applying our pressure exchanger technology and have begun disciplined R&D efforts in these areas. All of these R&D efforts are geared towards unlocking future commercial opportunities.

Hydraulic Fracturing

Oilfield service operators, our targeted customers, have long sought ways to ruggedize or extend the life of pumps, thereby reducing costs in both the hydraulic fracturing and drilling processes. We believe the most efficient method of extending the life of these pumps is to isolate the high-pressure pumps from the abrasive fluids completely, thereby enabling these operators to realize immediate and long-term savings in the form of reduced downtime, repairs and maintenance costs and capital equipment redundancy.

Our in-development VorTeq technology, a pressure exchanger-based solution for hydraulic fracturing, seeks to reduce equipment failure common during well completion operations by re-routing the abrasive proppants that can cause pump failure away from fracturing pumps, and ultimately enabling a more efficient pumping model. The pressure exchanger technology at the heart of the VorTeq works as a pump. Fracturing fluid is pressurized in the VorTeq before being sent downhole. This process ensures that high-pressure fracturing pumps handle water, not abrasive proppants, protecting the fracturing pumps from erosion and reducing operational downtime. Our goal for the VorTeq is to allow site operators to reduce repair and maintenance costs, reduce capital costs by extending the fracturing pump's life expectancy, and eliminate redundant capital equipment. By minimizing the fracturing pump redundancy and increasing equipment lifespan, the VorTeq could lower costs and reduce the resources required for oil & gas well completion operations. This in turn would indirectly lower emissions associated with manufacturing and transporting spare parts. Increasing equipment lifespan can also help reduce safety risks exposure related to equipment failures on site. We continue to work with our partner and other potential customers to commercialize the VorTeq. In early fiscal year 2021, we began testing the VorTeq in the field at live wells, an important step towards commercialization.

Natural Gas Processing

Natural gas is typically processed by removing acid gases, such as carbon dioxide (“CO₂”) and hydrogen sulfide before it is ready for distribution and use. A common acid gas removal process uses an amine solvent to absorb acid gases in a high-pressure contactor column. Having absorbed the CO₂ and hydrogen sulfide, the pressurized (rich) amine is then depressurized and processed into regenerated (lean) amine for reuse. Our technology has enabled gas processing plant owners and operators, our targeted customers, to achieve immediate and long-term energy savings with little or no operational disruption. Our IsoBoost™ product, an ERD solution based on our Turbocharger technology, can recover the energy wasted during the depressurization of the amine. This recovery of amine pressure energy allows the use of fewer high-pressure pumps which reduces energy consumption and thereby the carbon footprint of the plant, capital expenditures, and energy and maintenance costs. In addition, reduced downtime and maintenance can positively impact plant availability. Within the gas processing, the IsoBoost technology enables the recovery of pressure energy in the fluid flows either through the exchange of pressure within the application or by converting it to electricity.

Our first major purchase order for multiple units of our IsoBoost for integration into a major gas processing plant occurred in 2016. This plant, located in Saudi Arabia, was recently commissioned in the Spring of 2020. After receiving positive results from the implementation of our IsoBoost into this plant, we have begun to focus our efforts on selling our IsoBoost to customers we have identified in the North American market.

Several companies manufacture hydraulic turbochargers, which could eventually develop into competitive technology to our IsoBoost. However, none of the companies that currently manufacture turbochargers have significant experience within gas processing. In order to utilize a turbocharger in gas processing, expertise is required to validate the system level design and integration within a gas processing application.

Industrial Wastewater

An adjacent water market we serve is the industrial wastewater treatment market. In this market, ultra high-pressure reverse osmosis (“UHPRO”) is often utilized with other technologies to recover clean water from an industrial wastewater stream and concentrate pollutants to a level where they can be economically utilized or safely disposed, rather than reintroduced into waterways. Many industrial wastewater treatment plants can concentrate the dissolved pollutants to an extent that they produce zero liquid discharge (“ZLD”). These treatment facilities are often associated with the mining, textile, pulp and paper, power generation, and chemical manufacturing industries.

As fresh water sources continue to decline and population and industrial growth intensify the need for clean water, ZLD and minimal liquid discharge (“MLD”) is of growing importance for the global water industry, which is increasingly prioritizing the reuse and recycling of existing water sources and the reduction of pollution levels. China and India are two countries that have mandated ZLD and MLD requirements for industry in the future, and we expect this trend to expand and grow throughout the world in response to the growing gap between water availability and water demand.

In 2020, we introduced the Ultra PX™ ERD, which we believe addresses key challenges, such as energy intensity and environmental impacts, associated with treating industrial wastewater in UHPRO applications. Designed with the pressure exchanger technology that powers our PX ERD for SWRO, the Ultra PX functions similarly to our PX ERD but can withstand higher pressures of up to 1,740 psi, or 120 bar. The Ultra PX recovers up to 60 percent of wasted energy when applied to UHPRO systems, reducing energy use and operating costs.

As in seawater desalination, thermal technologies have been the technology of choice for ZLD and MLD systems in the industrial wastewater space. Similar to desalination, thermal technologies are also an energy intensive and cost-intensive method for cleaning water; in traditional ZLD and MLD configurations, up to fifty percent of costs typically come from cost and energy-intensive thermal treatments. A growing trend in these markets is to add a RO section in the filter process, which further increases overall water recovery before sending the resulting brine to the final stage consisting of an energy-intensive evaporation process. UHPRO can be applied to ZLD and MLD systems to reduce the size of the thermal portion of the treatment process while achieving the same water treatment objectives. While adoption of UHPRO in industrial wastewater treatment is in its early stage, we believe our Ultra PX can help make UHPRO the preferred treatment option to achieve ZLD and MLD requirements by enhancing UHPRO’s affordability and efficiency compared to thermal treatment options, similar to the impact of our PX in the seawater desalination market.

We signed our first commercial purchase order for the Ultra PX in 2020 to support the industrial wastewater treatment operations of a chemical manufacturer in central India. These Ultra PXs were shipped in late 2020. We expect this project to be commissioned by the second quarter of 2021.

Manufacturing

Our products, including our PX, Turbochargers, high-pressure pumps, and circulation “booster” pumps, are designed, produced, assembled and tested in our facilities located in California and Texas. Our California facilities include advanced ceramics manufacturing and testing laboratories, multiple hydraulic performance testing loops, computer numerical control (“CNC”) machines, assembly stations and warehouse.

Alumina ceramic components for our PX are manufactured in-house from high-grade alumina to the final product. Components for our other products also undergo final precision finishing to protect the proprietary nature of our manufacturing methods and product designs and to maintain premium quality standards. The availability of multiple test loops allows us to test every water product we manufacture to its full operating conditions.

We obtain raw, processed and certain pre-machined materials from various suppliers to support our manufacturing operations. A limited number of these suppliers are near sole source to maintain material consistency and support new product development. A qualified redundant material source exists in most cases, or whenever feasible.

Through our vertically integrated ceramics precision manufacturing process, we ensure that all components meet our high standards for quality, durability, and reliability.

Our Texas facility is focused on the manufacturing and testing of tungsten carbide. We source our tungsten carbide cartridges from global manufacturers and finalize machining, assembly and testing at Texas facility. This facility can also be used to augment alumina ceramics manufacturing as, and if, needed.

Our production facilities operate under the principles of Lean Manufacturing, and we continuously seek ways to improve product and process performance. Our quality management system is certified to ISO9001:2015 standards, and we are in the process of qualifying our safety management system to the ISO45001 standard. In addition, we are pursuing the path to ISO14001 certification for our environmental management system.

Research, Development and Technology

Our unique pressure exchanger technology provides benefits when applied to industrial fluid-flow systems with pressure differentials and functions as a technology platform upon which different product applications can be built. R&D of our pressure exchanger technology is a key driver of our future evolution. When developing products, we seek three distinct process criteria: (1) high rates of liquid or gas flow; (2) large pressure differentials; and (3) high degrees of capital and energy intensity, specifically in the form of pumping and/or compression assets. Using these criteria, our product development strategy is to identify liquid and gas applications where equipment is being destroyed or adversely affected and/or where pressure energy is being wasted. We maintain a product development road map, which guides R&D resource allocation across all business units. Our R&D team guides products through defined development stages with structured toll-gate reviews throughout the process.

We have invested in R&D to support our product development strategy and have significantly grown our R&D organization. We maintain advanced testing capabilities to test our PX, Turbocharger, and pump solutions at our various company sites.

Our engineers specialize in a range of technical fields critical to supporting our current product lines and advancing our incubation initiatives, including core engineering competencies of fluid mechanics and aerodynamics, solid mechanics with expertise in computational fluid dynamics and finite element analysis, bearings design (roller-element, hydrostatic, and hydrodynamic), multi-phase flow, dynamics and controls, acoustics and vibrations, tribology, material science and coatings, pumps and turbines, turbo-machinery, and rotating equipment.

We have invested in advanced numerical modeling and analytical tools that allow for 3-dimensional (“3D”), multi-phase, multi-physics, and multi-scale, computational fluid dynamics and fluid structure interactions. Leading-edge modeling and analytical techniques coupled with extensive experimental capabilities allow us to further refine our existing water and oil & gas technologies, as well as developing new derivatives of our pressure exchanger technology for complex systems and applications.

Our R&D investments are focused on: (1) advances to our existing pressure exchanger solutions to better service our water end markets; (2) applications of pressure exchanger technology within and outside of the water markets; and (3) fundamental research into new applications of our pressure exchanger technology in existing and new verticals, including gas processing applications. All projects are managed through a disciplined new product development process and project managed to ensure we remain within scope, budget, and commercial timing as we proceed.

Information Technology

We rely on our information technology (“IT”) and data systems in connection with many of our business activities. As the role of technology in our business expands, so too does the importance of cybersecurity. We take protecting our brand, systems, data, intellectual property, and customer and employee information, seriously. We actively monitor and manage our IT for security risks (e.g., cybersecurity risks), and look to mitigate these risks through enterprise-wide programs, annual employee training and vulnerability assessments. We have made, and continue to make, investments in a skilled IT workforce and leadership, and critical technologies.

Our enterprise-wide programs include endpoint security and encryption, network intrusion prevention and detection, a system for managing and installing patches for third-party applications, and security information and event management (“SIEM”) systems that monitor our infrastructure and alert our security operations center of potential cybersecurity issues. We strictly regulate and limit all access to servers and networks at our facilities. Local network access is restricted by domain authentication, using stringent access control lists and virtual local area networks (“VLAN”). Multi-factor authentication is used to build an additional layer of security for remote-work access to critical applications. Our information security department regularly performs penetration testing and we engage a third-party penetration testing company to conduct penetration tests to identify and remediate any issues.

Under our enterprise-wide approach to risk management, cybersecurity is “high-level” risk that is reported to, and overseen by, our Audit Committee of the Board of Directors, which consists of three non-employee independent directors, of which one of these directors has information systems experience. In addition to the enterprise-wide initiatives, we purchase cybersecurity insurance to protect against a wide range of costs that could be incurred in connection with cybersecurity-related incidents. We continually strengthen and enhance our programs and controls around people, process and technology, and apply risk-based strategies to enhance prevention, detection, and response efforts.

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 (“IP”) 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,” “Ultra PX,” “PX PowerTrain,” the Energy Recovery logo, “Making Desalination Affordable,” and “IsoBoost.” Applications are pending for “VorTeq.” We have also applied for and received registrations in international trademark offices.

Human Capital Resources

Our employees are the key to our success; our unparalleled PX ingenuity, our sales growth, and our ability to meet production growth. This is all enabled by our employees who challenge the status quo, actively partner to resolve challenges, and continuously improve. As of December 31, 2020, we had 216 employees. We also engage a relatively small number of independent contractors, primarily as sales and service agents worldwide. We experienced limited manufacturing disruptions at the onset of the COVID-19 pandemic, but have otherwise been largely unaffected. Our employees are not unionized. We consider our relations with our employees to be good.

Our Code of Business Conduct ensures that our core values of integrity, ingenuity, teamwork, safety and continuous improvement are applied throughout our operations. Our Code of Business Conduct serves as a critical tool to help all of us recognize and report unethical conduct, while preserving and nurturing our culture.

We are committed to maintaining a diverse workforce and working toward a more inclusive work environment. Employees are treated with dignity and respect in an environment free from harassment and discrimination. We know that diversity is truly a competitive advantage that helps drive innovation, and we strive to continuously improve a best-in-class work environment that respects individual's ideas and contributions. We benefit from the innovation that results when people with differing experiences, perspectives and cultures work together. Our Code of Business Conduct is reflected in our employee manual and training programs, including our policies against harassment and bullying, and the elimination of bias in the workplace, which we provide to all of our employees.

Our ability to create an engaged employee experience, throughout the process of attracting, onboarding, developing, and retaining employees, is our focus. We are committed to supporting employees' development as well as providing competitive benefits and a safe workplace.

Our employee engagement efforts include newsletters and all-employee town hall meetings, through which we aim to keep our employees well-informed and to increase transparency and open communication. In addition, we provide periodic employee training and development through which we strive to educate and enhance our employee's financial, mental, and physical wellness. In addition to managing the pandemic and all the ways it has impacted our employees' lives, we took the virtual meeting opportunity to connect and engage our company leaders and technical project influencers, from across the globe, by facilitating numerous leadership development sessions. These sessions empower our company leaders to improve their communication and recognize diversity of thought as a true benefit to teamwork.

Our compensation and benefit programs are designed to recognize our employees' contributions to value ingenuity and business results, including variable pay, which rewards each employee for company and individual performance. In addition, employees are included in share-based equity award grants, health and welfare benefits, time-off, development programs and training, and opportunities to give back to our communities through donations of time and money.

Employee safety remains our top priority, and to accomplish this goal, we developed, administered, and maintain company-wide policies to ensure the safety of each employee, as well as compliance with Occupational Safety and Health Administration ("OSHA") standards. During fiscal year 2020, in response to the COVID-19 pandemic, we implemented safety protocols and new procedures to protect our employees, and subcontractors and customers who work at, or visit, our facilities. These protocols include complying with social distancing and other health and safety standards as required by federal, state and local government agencies, taking into consideration guidelines of the Centers for Disease Control and Prevention and other public health authorities. In addition, we modified the way we conduct many aspects of our business to reduce the number of in-person interactions. For example, we significantly expanded the use of virtual interactions in all aspects of our business, including customer facing activities. We have also implemented weekly COVID-19 testing which provide an added layer of trust and comfort for our employees.

Additional Information

Our website is www.energyrecovery.com. In addition, we maintain an Investor Relations website as a routine channel for distribution of important information, including news releases, presentations, and financial statements (<https://ir.energyrecovery.com>). We intend to use the Investor Relations 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. Our headquarters and primary manufacturing center is located at 1717 Doolittle Drive, San Leandro, California 94577, and our main telephone number is (510) 483-7370. The SEC maintains an internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC and the address of that site (<http://www.sec.gov>).

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 us or our 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 we may face. We may amend or supplement these risk factors from time to time in other reports we file with the SEC.

Risks Related to our Water Segment

Our Water segment depends on the construction of new desalination plants, and the retrofit of existing 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 or the retrofit of existing plants, declines for political, economic, or other factors, especially in these dry or drought-ridden regions. In addition, the desalination industry has been experiencing a technology shift from thermal desalination plants to SWRO production. If this technology shift does not continue or we are unable to capture a portion of the market created by this shift, our Water segment sales and revenue can be negatively impacted.

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 EPC firms generally contain holdback provisions that typically delay final installment payments for our products by up to 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 contract assets. 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 several 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.

A sustained downturn in the economy or prolonged lower oil prices, could impact future desalination plants and the retrofit of existing plants, which could result in decreased demand for our water products and services.

The demand for our water products and services depends primarily on the continued construction of new large scale desalination plants and the retrofit of existing plants, particularly in the countries that make up the Gulf Cooperation Council ("GCC"). The recent economic decline caused by the spread of COVID-19 or a prolonged decrease in oil prices, may have a negative economic impact on these and other countries, which may impact the availability of project financing for new desalination and retrofit projects, such as the ability to secure credit for these projects, which would result in the postponement or cancellation, and/or change government priorities or otherwise reduce spending for desalination projects, each of which could result in decreased demand for our water products and services, which could have an adverse effect on our entire business, financial condition or results of operations.

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 18 to 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.

Risks Related to our Emerging Technologies

The VorTeq License Agreement with Schlumberger Technology Corporation (“Schlumberger”) was mutually terminated, effective June 1, 2020. We will continue the development of the VorTeq technology without the collaboration of Schlumberger and we may not be able to successfully develop and subsequently commercialize the VorTeq technology.

In October 2015, we entered into the VorTeq License Agreement with Schlumberger, which provided Schlumberger with exclusive worldwide rights to our VorTeq technology for hydraulic fracturing onshore applications. In performing the obligations under the license, we provided research and development services to commercialize the technology in accordance with the Key Performance Indicators (“KPIs”), as defined in the VorTeq License Agreement. In order to commercialize the VorTeq technology, the VorTeq License Agreement provided, among other things, that we successfully meet certain specified milestones against key performance indicators set forth in the VorTeq License Agreement. We received a non-refundable up-front \$75.0 million exclusivity fee in connection with the VorTeq License Agreement, and the agreement provided for two additional milestone payments of \$25.0 million each if the KPIs related to those two milestones would have been achieved. Effective June 1, 2020, we entered into an agreement to terminate the VorTeq License Agreement. As a result, we will pursue the development and commercialization of the VorTeq technology without the collaboration of Schlumberger, and we will not receive the two additional \$25.0 million milestone payments that were contemplated by the VorTeq License Agreement. However, there is no exclusivity with respect to the VorTeq technology, and we will be able to pursue the entire hydraulic fracturing market if we successfully commercialize it.

The VorTeq technology 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 or find suitable collaboration partners, we may not be able to successfully commercialize the VorTeq technology, which could have an adverse effect on our business, financial condition, or results of operation. The successful commercialization of the VorTeq depends heavily on the support of fracking operators and ultimate adoption of the technology by these companies. If the hydraulic fracturing operators fail to adopt the VorTeq technology, for any reason, we may not be able to successfully commercialize the VorTeq technology and we may not receive any return on our significant research and development investment. Failure to commercialize the VorTeq technology could have an adverse effect on our entire business, financial condition, or results of operation.

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

A deflationary oil and gas environment, as a result of decreased demand or lower oil prices, may delay and even stall adoption and deployment of our products for customers within the oil & gas industry, including but not limited to the VorTeq and IsoBoost. 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.

Our diversification into new fluid flow markets, such as oil & gas, and industrial wastewater, 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 industrial wastewater. 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 in part 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, 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.

Risks Related to our General Business

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 average sales cycle for our OEM customers, which are involved with smaller desalination plants, ranges from one to 12 months. The average Water segment sales cycle for our international EPC firm customers, which are involved with larger desalination plants, range from 16 to 36 months, or more. 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 system; 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 may not generate positive returns on our research and development strategy.

Developing our products is expensive and the investment in product development may involve a long payback cycle. For the years ended December 31, 2020, 2019 and 2018, our R&D expenses were \$23.4 million, or approximately 20% of our total revenue, \$23.4 million, or approximately 27% of our total revenue, and \$17.0 million, or approximately 23% of our total revenue, respectively. We believe one of our greatest strengths lies in our innovation and our product development efforts. By investing in R&D, we believe we are well positioned to continue to execute on our product strategy, take into consideration our customers' cost and efficiency sensitivities and take advantage of other market opportunities. We expect that our results of operations may be impacted by the timing and size of these investments. In addition, these investments may take several years to generate positive returns, if ever.

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 headquarters in California is located near major earthquake faults and has experienced earthquakes in the past. In addition, our facilities in California are located in areas that are subject to public safety power shutdowns ("PSPS"). If a natural disaster occurs or we are subject to PSPS, 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.

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 the IP 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 8, "Commitments and Contingencies – Litigation," of the Notes to Consolidated Financial Statements in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report on 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 actual operating results may differ significantly from our guidance.

We release guidance in our quarterly earnings conference calls, quarterly earnings releases, or otherwise, regarding our future performance that represents our management's estimates as of the date of release. This guidance, which includes forward-looking statements, will be based on projections prepared by our management. These projections will not be prepared with a view toward compliance with published guidelines of the American Institute of Certified Public Accountants, and neither our registered public accountant nor any other independent expert or outside party compiles or examines the projections. Accordingly, no such person will express any opinion or any other form of assurance with respect to the projections.

Projections are based upon a number of assumptions and estimates that, while presented with numerical specificity, are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond our control and are based upon specific assumptions with respect to future business decisions, some of which will change. We will continue to state possible outcomes as high and low ranges which are intended to provide a sensitivity analysis as variables are changed but are not intended to imply that actual results could not fall outside of the suggested ranges. The principal reason that we release guidance is to provide a basis for our management to discuss our business outlook with analysts and investors. We do not accept any responsibility for any projections or reports published by any such third parties.

Guidance is necessarily speculative in nature, and it can be expected that some or all of the assumptions underlying the guidance furnished by us will not materialize or will vary significantly from actual results. Accordingly, our guidance is only an estimate of what management believes is realizable as of the date of release. Actual results may vary from our guidance and the variations may be material. In light of the foregoing, investors are urged not to rely upon our guidance in making an investment decision regarding our common stock.

Any failure to successfully implement our operating strategy or the occurrence of any of the events or circumstances set forth in this “Risk Factors” section in this Annual Report on Form 10-K could result in the actual operating results being different from our guidance and the differences may be adverse and material.

In preparing our financial statements we make certain assumptions, judgments and estimates that affect amounts reported in our consolidated financial statements, which, if not accurate, may significantly impact our financial results.

We make assumptions, judgments and estimates for a number of items, including the fair value of financial instruments, goodwill, long-lived assets and other intangible assets, the realizability of deferred tax assets, the recognition of revenue and the fair value of stock awards. We also make assumptions, judgments and estimates in determining the accruals for employee-related liabilities, including commissions and variable compensation, and in determining the accruals for uncertain tax positions, valuation allowances on deferred tax assets, allowances for doubtful accounts, and legal contingencies. These assumptions, judgments and estimates are drawn from historical experience and various other factors that we believe are reasonable under the circumstances as of the date of the consolidated financial statements. Actual results could differ materially from our estimates, and such differences could significantly impact our financial results.

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 U.S. 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. 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 U.S. 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.

Uncertainty in the global geopolitical landscape may impact our operations outside the U.S.

There is uncertainty as to the position the U.S. will take with respect to world affairs. This uncertainty may include such issues as U.S. support for existing treaty and trade relationships with other countries, including, notably, China. This uncertainty, together with other recent key global events, such as recently enacted currency control regulations and tariff regimes in or against China, ongoing terrorist activity, and potential hostilities in the Middle East, may adversely impact (i) the ability or willingness of non-U.S. companies to transact business in the U.S., including with us; (ii) our ability to transact business in other countries, including the Middle East, where many of the water megaprojects are planned; (iii) regulation and trade agreements affecting U.S. companies; (iv) global stock markets (including The Nasdaq Global Market on which our common shares are traded); and (v) general global economic conditions. All of these factors are outside of our control, but may nonetheless cause us to adjust our strategy in order to compete effectively in global markets.

Acts of War or Terrorism.

Threats or acts of war or terrorism can adversely affect our business. Terrorist attacks in the U.S., Europe and in other countries, and continuing hostilities in the Middle East and elsewhere have created significant instability and uncertainty in the world. These and future events may have a material adverse effect on world financial markets as well as the water industry, as many large existing and planned water desalination plants are located in the Middle East. In addition, threats or acts of war or terrorism can cause our customers to curtail their purchase of our products. These factors or any combination of these factors may adversely affect our revenue or our overall financial performance.

Changes in the method of determining the London Interbank Offered Rate (“LIBOR”), or the replacement of LIBOR with an alternative reference rate, may adversely affect our financial condition and results of operations.

Certain of our financial obligations and instruments, including our Loan and Pledge Agreement with Citibank N.A., dated January 27, 2017, are, or may be, made at variable interest rates that use LIBOR (or metrics derived from or related to LIBOR) as a benchmark for establishing the interest rate. On July 27, 2017, the United Kingdom’s Financial Conduct Authority announced that it intends to stop persuading or compelling banks to submit LIBOR rates after 2021. These reforms may cause LIBOR to perform differently than in the past or to disappear entirely. These reforms may also result in new methods of calculating LIBOR to be established, or alternative reference rates to be established. For example, the Federal Reserve Bank of New York has begun publishing a Secured Overnight Funding Rate, or SOFR, which is intended to replace U.S. dollar LIBOR, and central banks in several other jurisdictions have also announced plans for alternative reference rates for other currencies. The potential consequences of these actions cannot be fully predicted and could have an adverse impact on the market value for or value of LIBOR-linked securities, loans, and other financial obligations or extensions of credit held by or due to us. Changes in market interest rates may influence our financing costs, and the returns on financial investments and could reduce our earnings and cash flows. In addition, any transition process may involve, among other things, increased volatility or illiquidity in markets for instruments that rely on LIBOR, reductions in the value of certain instruments or the effectiveness of related transactions such as hedges, increased borrowing costs, uncertainty under applicable documentation, or difficult and costly consent processes. This could materially and adversely affect our results of operations, cash flows, and liquidity.

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.

The integration of businesses that we may acquire is likely to be a complex, time-consuming, and expensive process and we may not realize the anticipated revenues or other benefits associated with our acquisitions if we fail to successfully manage and operate the acquired business. If we fail in any acquisition integration efforts and are unable to efficiently operate as a combined organization utilizing common information and communication systems, operating procedures, financial controls, and human resources practices, our business, financial condition, and results of operations may be adversely affected.

In connection with certain acquisitions, we may agree to issue common stock or assume equity awards that dilute the ownership of our current stockholders, use a substantial portion of our cash resources, assume liabilities, record goodwill and amortizable intangible assets that will be subject to impairment testing on a regular basis and potential periodic impairment charges, incur amortization expenses related to certain intangible assets, and incur large and immediate write-offs and restructuring and other related expenses, all of which could harm our financial condition and results of operations.

Risks Related to COVID-19

We have global operations and face risks related to health epidemics, including the COVID-19 global pandemic, that could materially impact our results of operations.

Our business could be materially adversely affected by the effects of a widespread outbreak of contagious disease, including the COVID-19 pandemic. Any new outbreak of contagious diseases and other adverse public health developments could have a material and adverse effect on our business operations. These could include disruptions or restrictions on our ability to travel or to distribute our products, as well as temporary closures of our facilities or the facilities of our suppliers or customers. Any disruption of our suppliers or customers would likely impact our sales and operating results. In addition, a significant outbreak of contagious diseases in the human population could result in a widespread health crisis that could adversely affect the economies and financial markets of many countries, resulting in an economic downturn that could impact our operating results.

Our business may be further impacted by the COVID-19 global pandemic.

During 2020, COVID-19 spread throughout the world, resulting in widespread travel restrictions and extended shutdowns, occupancy limits or other restrictions of non-essential businesses, including manufacturing. The ultimate impact of the COVID-19 pandemic on our business is uncertain at this time and will depend on future developments, including the availability, efficacy and distribution of various vaccines, but further prolonged closures or restrictions throughout the world or the further rollback of reopening measures due to the resurgence of COVID-19 cases and continued decreases in the general level of economic activity may further disrupt our operations and the operations of our suppliers and customers. If significant portions of our workforce are unable to work effectively due to illness, quarantines, government actions or orders, facility closures or other reasons in connection with the COVID-19 pandemic, our operations will likely be impacted. We may be unable to manufacture sufficient products to perform fully on our contracts and some of our costs may not be fully recoverable or adequately covered by insurance. The severity and longevity of the COVID-19 pandemic may also cause customers to suspend their decisions on using our products and/or services, and give rise to significant changes in regional and global economic conditions that could interfere with the planning and construction of large desalination plants, which we rely on. Similarly, the COVID-19 pandemic has adversely affected and may further affect our supply base and increase the potential for one or more of our suppliers to experience financial distress or bankruptcy, which could impact our ability to fulfill orders on time or at anticipated cost. Additionally, it is unclear what longer term effects the virus will have on the global economy. Any of these factors could have a material adverse effect on our business, results of operations, cash flows and financial condition.

Risks Related to Information Technology

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. For example, on October 2, 2020, we detected a cyberattack on our network that temporarily disrupted access to some systems. In accordance with our ESG enterprise risk management policies related to financial and cybersecurity risks, we immediately took steps to isolate affected systems and contain the disruption to our information technology infrastructure. We implemented measures to prevent additional systems from being affected, including taking systems off-line as a precaution. We engaged third party information technology experts to restore and recover those affected systems to full functionality as quickly as possible. We believe there has been no material impact to our operating activities or controls over financial reporting nor have we found any evidence to indicate that any data was compromised or stolen from the affected systems. We do not believe that this incident will have a long-term material adverse impact on our business, results of operations or financial condition. Although we have sufficient controls in place, we have implemented additional enhanced security features and monitoring procedures.

There is a risk of industrial espionage, cyberattacks, 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 IP, 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. In addition, we must frequently expand our internal information system to meet increasing demand in storage, computing and communication, which may result in increased costs. Our internal information system is expensive to expand and must be highly secure due to the sensitive nature of our customers' information that we transmit. Building and managing the support necessary for our growth places significant demands on our management and resources. These demands may divert these resources from the continued growth of our business and implementation of our business strategy.

Our actual or perceived failure to adequately protect personal data could adversely affect our business, financial condition and results of operations.

A wide variety of provincial, state, national, foreign, and international laws and regulations apply to the collection, use, retention, protection, disclosure, transfer, and other processing of personal data. These privacy and data protection-related laws and regulations are evolving, with new or modified laws and regulations proposed and implemented frequently and existing laws and regulations subject to new or different interpretations. Further, our legal and regulatory obligations in foreign jurisdictions are subject to unexpected changes, including the potential for regulatory or other governmental entities to enact new or additional laws or regulations, to issue rulings that invalidate prior laws or regulations, or to increase penalties significantly. Compliance with these laws and regulations can be costly and can delay or impede the development and offering of new products and services.

For example, the General Data Protection Regulation, which became effective in May 2018, imposes more stringent data protection requirements, and provides for significantly greater penalties for noncompliance, than the European Union laws that previously applied. Additionally, California recently enacted legislation, the California Consumer Privacy Act, which became effective January 1, 2020. We may also be subject to additional obligations relating to personal data by contract that industry standards apply to our practices. Our actual or perceived failure to comply with applicable laws and regulations or other obligations to which we may be subject relating to personal data, or to protect personal data from unauthorized access, use, or other processing, could result in enforcement actions and regulatory investigations against us, claims for damages by customers and other affected individuals, fines, damage to our reputation, and loss of goodwill, any of which could have a material adverse effect on our operations, financial performance, and business. Further, evolving and changing definitions of personal data and personal information, including the classification of internet protocol addresses, machine identification information, location data, and other information, may limit or inhibit our ability to operate or expand our business, including limiting business relationships and partnerships that may involve the sharing or uses of data, and may require significant costs, resources, and efforts in order to comply.

Risks Related to Intellectual Property

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 IP 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 IP laws may not protect our proprietary rights as fully as those in the U.S. 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 IP rights or to determine the validity and scope of the proprietary rights of others. IP 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 IP rights. In addition, we or our customers may be contacted by third parties suggesting that we obtain a license to certain of their IP 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 IP 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 IP, 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.

Risks Related to Tax and Governmental Regulations

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

In 2015, we implemented an international tax optimization structure. While we continue to conclude that uncertain tax positions are unlikely, it is possible that the 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 us.

The enactment of legislation implementing changes in taxation of international business activities, the adoption of other corporate tax reform policies, or changes in tax legislation or policies could materially impact our financial position and results of operations.

Our future effective tax rates could be subject to volatility or adversely affected by changes in tax laws, regulations, accounting principles, or interpretations thereof. In addition, the U.S. Tax Cuts and Jobs Act ("Tax Act") made significant changes to the taxation of U.S. business entities that may have a meaningful impact to our provision for income taxes. These changes included a reduction to the federal corporate income tax rate, the current taxation of certain foreign earnings, the imposition of base-erosion prevention measures which may limit the deduction of certain transfer pricing payments, and possible limitations on the deductibility of net interest expense or corporate debt obligations. Accounting for the income tax effects of the Tax Act required significant judgments and estimates that are based on current interpretations of the Tax Act. The U.S. Department of the Treasury continues to issue regulations that affect various components of the Tax Act. Our future effective tax rate may be impacted by changes in interpretation of the regulations, as well as additional legislation and guidance regarding the Tax Act.

In addition, many countries are beginning to implement legislation and other guidance to align their international tax rules with the Organisation for Economic Co-operation's Base Erosion and Profit Shifting recommendations and action plan that aim to standardize and modernize global corporate tax policy, including changes to cross-border tax, transfer-pricing documentation rules, and nexus-based tax incentive practices. As a result of the heightened scrutiny of corporate taxation policies, prior decisions by tax authorities regarding treatments and positions of corporate income taxes could be subject to enforcement activities, and legislative investigation and inquiry, which could also result in changes in tax policies or prior tax rulings. Any such changes in policies or rulings may also result in the taxes we previously paid being subject to change.

Due to the scale of our international business activities any substantial changes in international corporate tax policies, enforcement activities or legislative initiatives may materially and adversely affect our business, the amount of taxes we are required to pay and our financial condition and results of operations generally.

New or revised tax regulations could have a material effect on our financial statements

New tax laws or regulations could be enacted at any time, and existing tax laws or regulations could be interpreted, amended, or applied in a manner that has a material effect on us, which could materially impact our business and financial condition. For example, on March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") was enacted in response to the macroeconomic environment conditions posed by the COVID-19 pandemic. The CARES Act is a sweeping stimulus bill intended to bolster the U.S. economy, among other things, and provide emergency assistance to qualifying businesses and individuals. Based on available guidance, we anticipate that the legislative changes will have a negligible effect on our earnings and cash flow. As the enacted legislation includes provisions that would expire after certain periods of time, the fact that our business has the potential to change its operating situation, and the existence of potential changes by state tax authorities related to conformity with federal tax regulations, the possibility exists that the future benefit of the legislation could change. In addition, it is uncertain if, and to what extent, various states will conform to the CARES Act, or any newly enacted or revised federal tax legislation. For more information related to the CARES Act, see Note 9, "Income Taxes," of the Notes to Consolidated Financial Statements in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10-K.

The U.S. Congress may make substantial changes to fiscal, regulation and other federal policies that may adversely affect our business, financial condition, operating results and cash flows.

Changes in general economic conditions in the U.S. or other regions could adversely affect our business. There have been and may be significant changes in, and uncertainty with respect to, legislation, regulation and government policy. While it is not possible to predict whether and when any such changes will occur, changes at the local, state or federal level could impact our business. Specific legislative and regulatory proposals that could have a material impact on us include, but are not limited to, modifications to international trade policy; public company reporting requirements; and environmental regulation.

Beginning in 2018, the U.S. imposed additional duties, ranging from 10% to 25%, on a variety of goods imported from China. Effective in September 2018, the Office of the U.S. Trade Representative (“USTR”) imposed tariffs of 10% on approximately \$200 billion worth of goods imported from China (“List 3 products”), including categories of products we import from China and increased these tariffs to 25% effective in May 2019. In August 2019, the U.S. administration directed the USTR to increase tariffs on List 3 products from 25% to 30%, effective October 2019, which were subsequently delayed indefinitely. China responded to the multiple U.S. tariff lists by announcing several lists of products from the U.S. that are subject to additional tariffs upon import to China. The first round of Chinese retaliatory tariffs went into effect on July 6, 2018, and a second set was implemented on August 23, 2018. Our products are not impacted by these tariffs. A third group of items subject to 5% to 10% tariff went into effect on September 24, 2018, which includes our PX, Turbocharger and pump products.

We cannot predict what actions may ultimately be taken with respect to tariffs or trade relations between the U.S. and other countries, what products may be subject to such actions, or what actions may be taken by the other countries in retaliation. Accordingly, it is difficult to predict how such actions may impact our business, or the business of our customers. Our business operations, as well as the businesses of our customers on which we are substantially dependent, are located in various countries at risk for escalating trade disputes, including the U.S. and China. Any resulting trade wars could have a significant adverse effect on world trade and could adversely impact our revenues, gross margins and business operations.

Regulations related to conflict minerals could adversely impact our business.

The SEC adopted annual disclosure and reporting requirements for those companies who use conflict minerals mined from the Democratic Republic of Congo (also referred to as 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. 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.

Risks Related to our Internal Control

Changes in U.S. generally accepted accounting principles (“GAAP”) could adversely affect our financial results and may require significant changes to our internal accounting systems and processes.

We prepare our consolidated financial statements in conformity with U.S. GAAP. These principles are subject to interpretation by the Financial Accounting Standards Board (“FASB”), the SEC and various bodies formed to interpret and create appropriate accounting principles and guidance. The FASB periodically issues new accounting standards on a variety of topics. For information regarding new accounting standards, please refer to Note 1, “Description of Business and Significant Accounting Policies – Recent Accounting Pronouncements,” of the Notes to Consolidated Financial Statements in Part II, Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K. These and other such standards generally result in different accounting principles, which may significantly impact our reported results or could result in variability of our financial results.

We are required to evaluate the effectiveness of our internal control over financial reporting and publicly disclose material weaknesses in our controls. Any adverse results from such evaluation may adversely affect investor perception, and our stock price.

Section 404 of the Sarbanes-Oxley Act of 2002 requires our management to assess the effectiveness of our internal control over financial reporting and to disclose in our filing if such controls were unable to provide assurance that a material error would be prevented or detected in a timely manner. We have an ongoing program to review the design of our internal controls framework in keeping with changes in business needs, implement necessary changes to our controls design and test the system and process controls necessary to comply with these requirements. If in the future, our internal controls over financial reporting are determined to be not effective resulting in a material weakness or significant deficiency, investor perceptions regarding the reliability of our financial statements may be adversely affected which could cause a decline in the market price of our stock and otherwise negatively affect our liquidity and financial condition.

Risks Related to our Common Stock

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 our company's 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, 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.

Our business could be negatively affected as a result of actions of activist shareholders, and such activism could impact the trading value of our securities.

In recent years, shareholder activists have become involved in numerous public companies. Shareholder activists frequently propose to involve themselves in the governance, strategic direction and operations of the company. Such proposals may disrupt our business and divert the attention of our Board of Directors, management and employees, and any perceived uncertainties as to our future direction resulting from such a situation could result in the loss of potential business opportunities, interfere with our ability to execute our strategic plan, be exploited by our competitors, cause concern to our current or potential customers, and make it more difficult to attract and retain qualified personnel and business partners, all of which could adversely affect our business. A proxy contest for the election of directors at our annual meeting could also require us to incur significant legal fees and proxy solicitation expenses. In addition, actions of activist shareholders may cause significant fluctuations in our stock price based on temporary or speculative market perceptions or other factors that do not necessarily reflect the underlying fundamentals and prospects of our business.

Our share repurchase program may not be the most effective use of our capital and, if shares are repurchased under the program, could increase the volatility of the price of our common stock.

Periodically, our Board of Directors approves programs to repurchase our common stock. Considered in this decision is the effect any such repurchases may have on our cash balances and needs, cash flow, and short and long-term borrowing. Share repurchases under the program may be made from time to time at the Board of Director's discretion through open market purchases or privately negotiated transactions in accordance with applicable federal securities laws. The share repurchase program is subject to a periodic review by the Board of Directors and may be suspended periodically or discontinued at any time. We plan to fund repurchases from our existing cash balance. There can be no assurance that we will buy shares of our common stock under the share repurchase program or that any repurchases will have a positive impact on our stock price or earnings per share. We could discontinue or decrease our share repurchases due to unfavorable market conditions, the market price of our common stock, the nature of other investment opportunities presented to us from time to time that would require significant cash outlays, and the availability of funds necessary to continue purchasing shares.

Our shareholders may experience future dilution as a result of future equity offerings.

In the future, we may offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock in order to raise additional capital. We cannot assure our shareholders that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share our shareholders paid for our shares. Investors purchasing shares or other securities in the future could have rights, preferences or privileges senior to those of our shareholders and our shareholders may experience dilution. Our shareholders may incur additional dilution upon the exercise of any outstanding stock options or warrants, the issuance of shares of restricted stock, the vesting of restricted stock units, or the issuance, vesting or exercise of other equity awards.

We do not intend to pay cash dividends in the foreseeable future and, consequently, our shareholders' ability to achieve a return on their investment will depend on the appreciation in the price of our common stock.

We have never declared or paid cash dividends on our common stock and we do not intend at this time to pay any cash dividends on our common stock in the foreseeable future. We currently expect to utilize any future earnings for use in the operation and expansion of our business. In addition, the terms of our revolving credit facility restrict our ability to pay dividends and any future credit facilities, loan agreements, debt instruments or other agreements may further restrict our ability to pay dividends. Payments of future dividends, if any, will be at the discretion of our Board of Directors after taking into account various factors, including our business, results of operations and financial condition, current and anticipated cash needs, plans for expansion and any legal or contractual limitations on our ability to pay dividends. As a result, capital appreciation, if any, of our common stock will be our shareholders' sole source of potential gain for the foreseeable future.

Item 1B — Unresolved Staff Comments

None.

Item 2 — Properties

We lease approximately 171,000 square feet (“sq.Ft.”) of space located in San Leandro, California for product manufacturing, research and development, and executive headquarters under a lease that expires on December 31, 2028.

On January 10, 2019, we entered into an industrial lease agreement for property located in Katy, Texas, which commenced on January 1, 2020 and expires in 2029. This new lease includes an additional 25,200 sq.Ft. of office, manufacturing and warehouse space and approximately 4.5 acres of land, to test the VorTeq technology at scale and in real world conditions on a regular, uninterrupted basis, as well as testing and manufacturing new applications for our pressure exchanger technology.

On February 10, 2020, we entered into a lease agreement for an additional manufacturing and warehousing space located in Tracy, California. This new lease commenced on March 1, 2020 and expires in 2030. This manufacturing and warehousing space is approximately 54,429 sq.Ft. and supplements the existing manufacturing, warehousing and distribution of our ERDs.

Additionally, we lease offices located in Dubai, United Arab Emirates; and Shanghai, Peoples Republic of China. We believe that these facilities will be adequate for our purposes for the foreseeable future.

Item 3 — Legal Proceedings

See Note 8, “Commitments and Contingencies – Litigation” of the Notes to Consolidated Financial Statements in Part II, Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K, 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 listed on The Nasdaq Global Select Market under the symbol “ERII.”

Stockholders

As of December 31, 2020, there were approximately 22 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.

Sales of Unregistered Securities

None.

Stock Repurchase Program

Our Board of Directors has authorized various share repurchase programs since 2012. Since the initial authorization of the share repurchase programs, we have spent an aggregate \$30.5 million, including commissions, to repurchase 5,455,935 shares. On March 9, 2021, our Board of Directors authorized a share repurchase program (the “March 2021 Authorization”) under which we, at the discretion of management, may repurchase up to \$50.0 million in aggregate cost of our outstanding common stock. Under the newly authorized repurchase program, purchases of shares of common stock may be made from time to time in the open market, or in privately negotiated transactions, in compliance with applicable state and federal securities laws. The March 2021 Authorization does not have an expiration date. The timing and amounts of any purchases will be based on market conditions and other factors including price, regulatory requirements, and capital availability. The share buyback program does not obligate us to acquire any specific number of shares in any period, and may be expanded, extended, modified or discontinued at any time without prior notice.

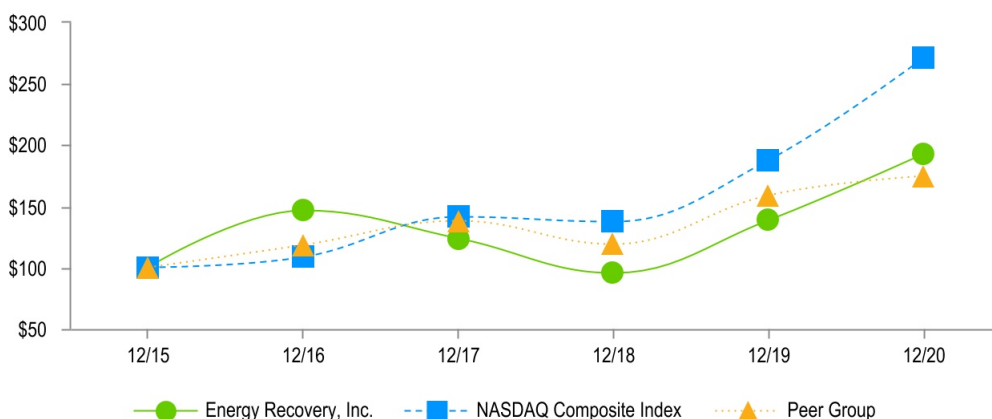
Stock Performance Graph

The following graph shows the cumulative total stockholder return of an investment of \$100 on December 31, 2015 in (i) our common stock, (ii) the NASDAQ Composite Index, and (iii) common stock of a selected group of peer issuers (“Peer Group”). 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 capitalization as of the end of each quarterly period. For each reported year, the reported dates are the last trading dates of our annual year.

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 Securities Act of 1933, as amended or the Securities Exchange Act of 1934, as amended, 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**



	December 31, 2015	December 31, 2016	December 31, 2017	December 31, 2018	December 31, 2019	December 31, 2020
Energy Recovery, Inc.	\$ 100.00	\$ 146.39	\$ 123.76	\$ 95.19	\$ 138.47	\$ 192.93
NASDAQ Composite Index	100.00	108.87	141.13	137.12	187.44	271.64
Peer Group	100.00	118.33	138.12	119.12	158.96	174.86

Item 6 — Selected Financial Data

The selected financial data previously required by Item 301 of Regulation S-K has been omitted in reliance on SEC Release No. 33-10890.

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 Part II, Item 8, “Financial Statements and Supplementary Data,” in this Annual Report on Form 10-K.

Overview

Our reportable operating segments consist of the water and oil & gas segments. These segments are based on the industries in which the technology solutions are sold, the type of ERD or other technology sold and the related solution and service. In addition, our corporate operating expenses include expenditures in support of the water and oil & gas segments, as well as R&D expenditures applicable to potential future industry verticals, or enabling technologies that could benefit either or both existing business units.

Highlights

Water Segment

- In 2020, we announced significant project awards, including plants in Chile, China, Egypt, the Middle East, North Africa and Saudi Arabia. When completed, our PXs in these facilities are expected to recycle hydraulic energy equivalent to over 2.4 terawatt hours of energy annually, an amount associated with over 1.5 million metric tons of carbon emissions.
- We opened our new manufacturing and warehousing facility in Tracy, California. Our new Tracy facility supplements the existing manufacturing, warehousing and distribution of our PX, Turbochargers and pumps located in San Leandro, California. We commissioned our Tracy facility in July 2020.
- In late 2020, we shipped our Ultra PX to support the operations of a chemical manufacturer in central India, which is expected to be commissioned by the second quarter of 2021.

Oil & Gas Segment

- On June 24, 2020, we and Schlumberger Technology Corporation (“Schlumberger”) entered into an agreement to terminate the VorTeq License Agreement (“VorTeq License Agreement”).
- As a result of the termination of the VorTeq License Agreement, we are now free to market our VorTeq technology to all companies in the broader pressure pumping market.
- In January 2020, we opened our commercial development center for oil & gas field testing, manufacturing, and training, located in Katy, Texas.

Results of Operations

A discussion regarding our financial condition and results of operations for the year ended December 31, 2019, compared to the year ended December 31, 2018, can be found under Item 7 in our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on March 6, 2020, as amended on June 10, 2020, which is available free of charge on the SEC’s website at <http://www.sec.gov> and at our investor relations website (<https://ir.energyrecovery.com>).

Total Revenue

	Years Ended December 31,				Change
	2020		2019		
	\$	% of Total Revenue	\$	% of Total Revenue	
	<i>(In thousands, except percentages)</i>				
Product revenue	\$ 92,091	77 %	\$ 72,834	84 %	\$ 19,257 26 %
License and development revenue	26,895	23 %	14,108	16 %	12,787 91 %
Total revenue	<u>\$ 118,986</u>	100 %	<u>\$ 86,942</u>	100 %	<u>\$ 32,044</u> 37 %

Product Revenue

Product revenue by channel customer is presented in the following table.

	Years Ended December 31,					
	2020			2019		
	\$	% of Total Product Revenue		\$	% of Total Product Revenue	Change
	<i>(In thousands, except percentages)</i>					
Megaproject	\$ 66,763	73 %	\$ 38,164	52 %	\$ 28,599	75 %
Original equipment manufacturer	15,834	17 %	23,014	32 %	(7,180)	(31 %)
Aftermarket	9,494	10 %	11,656	16 %	(2,162)	(19 %)
Total product revenue	\$ 92,091	100 %	\$ 72,834	100 %	\$ 19,257	26 %

Our MPD channel continues to be the main driver of our revenue growth. In fiscal year 2020, our large-scale desalination projects were largely unaffected by the COVID-19 pandemic and the decline in economic conditions. The MPD channel revenue benefited from the long project cycle, despite the COVID-19 pandemic and the decline in economic conditions, and where we were expecting there might be project delays. Our OEM and AM channels, which contain projects of shorter duration, were negatively affected by the COVID-19 pandemic and the resulting decline in the economic conditions in fiscal year 2020, which ultimately delayed certain new installation and upgrade projects, as well as non-critical plant maintenance. Specifically, in our OEM channel, we sell into a number of industries, including tourism and hospitality, which were greatly affected by the COVID-19 pandemic.

License and Development Revenue

The change in license and development revenue was due to the termination of the VorTeq License Agreement. In June 2020, we and Schlumberger entered into an agreement to terminate the VorTeq License Agreement effective June 1, 2020. During the second quarter of fiscal year 2020, as there were no future performance obligations to be recognized under the VorTeq License Agreement after the effective date, we recognized in full the remaining deferred revenue balance of \$24.4 million, and therefore, no license and development revenue were recognized based on this contract in the third and fourth quarter of fiscal year 2020. In addition, no future license and development revenue will be recognized on the VorTeq License Agreement.

Concentration of Revenue

Product revenue attributable to domestic and international sales as a percentage of total product revenue is presented in the following table.

	Years Ended December 31,	
	2020	2019
United States	2 %	2 %
International	98 %	98 %
Total product revenue	100 %	100 %

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The following table presents customers accounting for 10% or more of our product revenue by segment. Although certain customers might account for greater than 10% of our product revenue at any one point in time, the concentration of product revenue between a limited number of large MPD customers shifts regularly, depending on contract negotiations. The percentages by customer reflect specific relationships or contracts that would concentrate our product revenue for the periods presented and does not indicate a trend specific to any one customer.

	Segment	Years Ended December 31,	
		2020	2019
Customer A	Water	27%	**
Customer B	Water	23%	19%

** Zero or less than 10%.

One international Oil & Gas segment customer accounted for 100% of the Company's license and development revenue for each of the years ended December 31, 2020 and 2019.

Product Gross Profit and Gross Margin

	Years Ended December 31,					
	2020		2019		Change in Product Gross Profit	
	\$	Gross Margin	\$	Gross Margin		
<i>(In thousands, except percentages)</i>						
Product gross profit and gross margin	\$ 63,842	69.3 %	\$ 52,499	72.1 %	\$ 11,343	21.6 %

The increase in product gross profit was due primarily to increased product sales to MPD customers. The decrease in product gross margin was due primarily to costs related to reduced utilization of our manufacturing facilities related to COVID-19, costs related to new COVID-19 safety protocols, overhead costs of our newly commissioned Tracy, California, facility, and lower average selling prices due primarily to higher MPD channel size and volume.

Operating Expenses

Total Operating Expenses

	Years Ended December 31,					
	2020		2019		Change	
	\$	% of Total Revenue	\$	% of Total Revenue		
<i>(In thousands, except percentages)</i>						
General and administrative	\$ 25,519	21 %	\$ 22,832	26 %	\$ 2,687	12 %
Sales and marketing	8,127	7 %	9,434	11 %	(1,307)	(14 %)
Research and development	23,449	20 %	23,402	27 %	47	— %
Amortization of intangible assets	16	— %	575	1 %	(559)	(97 %)
Impairment of long-lived assets	2,332	2 %	—	— %	2,332	— %
Total operating expenses	\$ 59,443	50 %	\$ 56,243	65 %	\$ 3,200	6 %

General and administrative ("G&A") expenses. The increase in G&A expenses was due primarily to higher employee-related costs of \$1.0 million, an increase in professional services costs of \$0.5 million related to our ESG report and legal fees, higher software licensing and support fees of \$0.5 million, an increase in other costs of \$0.5 million, and an increase in bad debt expense of \$0.2 million. Employee-related costs, as compared to the prior year, increased due primarily to higher compensation expense related to inflation and a slight increase in headcount, and higher recruiting costs, partially offset by lower travel costs related to decreased travel due to the COVID-19 pandemic, lower severance costs, and a decrease in share-based compensation expense.

Sales and marketing (“S&M”) expenses. The decrease in S&M expenses was due primarily to lower marketing costs of \$0.8 million, including trade shows and marketing materials, a decrease in employee-related costs of \$0.3 million, and lower other costs of \$0.2 million, including commissions and professional services costs. Employee-related costs, as compared to the prior year, decreased due primarily to lower travel costs related to decreased travel due to the COVID-19 pandemic, partially offset by an increase in employee compensation and benefits, and higher share-based compensation expense.

Research and development (“R&D”) expenses. R&D expenses remained relatively flat in 2020. R&D expenditures related to the development of the VorTeq fell in 2020 decreased; however, was partially offset by costs to support incubation initiatives. R&D expenses in the current year, as compared to the prior year, included lower testing supplies expenditures of \$0.7 million, partially offset by an increase in employee-related costs of \$0.4 million and professional engineering services of \$0.2 million. Employee-related costs, as compared to the prior year, increased due primarily to higher employee compensation and benefits, partially offset by lower travel costs related to decreased travel due to the COVID-19 pandemic and a decrease in share-based compensation expense.

Amortization of intangible assets. Amortization of intangible assets was lower due primarily to certain finite-lived intangible assets that were fully expensed in the prior year.

Impairment of long-lived assets. We conducted an analysis on certain VorTeq long-lived assets that were directly related to obligations under the VorTeq License Agreement and determined that certain of those assets were impaired. The net carrying value of the impaired VorTeq-related machinery and equipment of \$2.3 million was recognized in the year ended December 31, 2020.

Segment and Corporate Operating Expenses

	Year Ended December 31, 2020				Year Ended December 31, 2019			
	Water	Oil & Gas	Corporate	Total	Water	Oil & Gas	Corporate	Total
	<i>(In thousands)</i>							
Operating expenses								
General and administrative	\$ 2,196	\$ 2,058	\$ 21,265	\$ 25,519	\$ 1,501	\$ 1,576	\$ 19,755	\$ 22,832
Sales and marketing	5,958	112	2,057	8,127	7,072	741	1,621	9,434
Research and development	2,973	15,859	4,617	23,449	3,825	19,085	492	23,402
Amortization of intangible assets	16	—	—	16	575	—	—	575
Impairment of long-lived assets	—	2,332	—	2,332	—	—	—	—
Total operating expenses	\$ 11,143	\$ 20,361	\$ 27,939	\$ 59,443	\$ 12,973	\$ 21,402	\$ 21,868	\$ 56,243

Water segment. The decrease in the Water segment operating expenses was due primarily to lower employee-related costs, R&D costs to support further development of our PX, Turbocharger and pump, amortization of intangible assets related to fully amortized intangible assets in 2019, marketing costs, and commission costs, partially offset by an increase in bad debt expense related to increased sales.

Oil & Gas segment. The decrease of Oil & Gas segment operating expenses, excluding the impairment of long-lived assets, was due primarily to reduced development expenditures of the VorTeq, which resulted in a shift of employee-related costs to other future R&D initiatives, that are captured in corporate expenses, and lower testing supply expenditures, as well as lower equipment depreciation.

Corporate operating expenses. The increase of corporate operating expenses was due primarily to higher employee-related costs and costs to support our future R&D initiatives, software and licensing costs, facility and office expenses, and professional service costs.

Other Income, Net

	Years Ended December 31,		Change
	2020	2019	
	<i>(In thousands)</i>		
Interest income	\$ 913	\$ 2,010	\$ (1,097)
Other non-operating expense, net	(74)	(118)	44
Total other income, net	<u>\$ 839</u>	<u>\$ 1,892</u>	<u>\$ (1,053)</u>

Total other income, net decreased due primarily to lower interest income. Our investment strategy in fiscal year 2020 shifted from equity investments to cash and cash equivalents due primarily to the uncertainty caused by the COVID-19 pandemic and following the drop in liquidity during the initial months of the outbreak.

Income Taxes

	Years Ended December 31,		Change
	2020	2019	
	<i>(In thousands, except percentages)</i>		
Provision for income taxes	\$ 5,746	\$ 1,343	\$ 4,403
Effective tax rate	18 %	11 %	

The fiscal year 2020 tax expense included a tax benefit of \$ 0.7 million related to tax deductions from stock-based compensation.

The fiscal year 2019 tax expense included a deferred tax benefit of \$1.0 million related to an increase in prior year U.S. federal R&D credits and a tax benefit of \$0.5 million related to tax deductions from stock-based compensation, partially offset by deferred tax expense of \$0.4 million due primarily to a remeasurement of our state deferred tax assets due to an adjustment to our estimated blended state effective tax rate.

On March 18, 2020, the U.S. government enacted the "Families First Coronavirus Response Act" ("FFCRA"). The FFCRA provides, among other things, a refundable payroll tax credit for emergency sick and family and medical leave required to be paid to employees under the FFCRA. On March 27, 2020, the U.S. government also enacted the "Coronavirus Aid, Relief and Economic Security Act" ("CARES Act"). The CARES Act, among other things, includes provisions relating to net operating losses, acceleration of alternative minimum tax credit refunds, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property. As a result of the alternative minimum tax credit refund acceleration provision, we will receive an additional \$0.1 million of tax refund of minimum tax credits carried over from fiscal year 2018 on our fiscal year 2019 U.S. federal income tax return. Additionally, the CARES Act provides a refundable payroll tax credit against the employer's share of social security tax (the "Employee Retention Credit"), and permits employers to defer, until fiscal years 2021 and 2022, payment of their remaining payroll tax liability ("Payroll Tax Deferral"). On December 21, 2021, the U.S. Congress passed the Bipartisan-Bicameral Omnibus COVID Relief Deal, which extends the deadline of many provisions under the CARES Act to new deadlines that will expire between April 30, 2021 through December 31, 2021. To date, we have applied for both the Employee Retention Credit and the Payroll Tax Deferral, which will defer federal social security tax payments. These federal social security taxes payments will in turn be paid out in equal installments in fiscal years 2021 and 2022.

Liquidity and Capital Resources

Overview

From time to time, management and our Board of Directors reviews our liquidity and future cash needs and may make a decision on (1) the return of capital to our shareholders through a share repurchase program or dividend payout; or (2) seek additional debt or equity financing. As of December 31, 2020, our principal sources of liquidity consisted of: (i) unrestricted cash and cash equivalents of \$94.3 million; (ii) short-term investments of \$20.4 million that are primarily invested in marketable debt instruments such as corporate notes and bonds and U.S. Treasury securities; and (iii) accounts receivable, net of allowances of \$11.8 million. As of December 31, 2020, there were unrestricted cash and cash equivalents of \$1.0 million held outside the U.S. We invest cash not needed for current operations predominantly in high-quality, investment-grade, marketable debt instruments with the intent to make such funds available for operating purposes as needed. Although these securities are available for sale, we generally hold these securities to maturity, and therefore, do not currently see a need to trade these securities in order to support our liquidity needs in the foreseeable future. The risk of this portfolio to us is in the ability of the underlying companies to cover their obligations at maturity, not in our ability to trade these securities at a profit. Based on current projections, we believe existing cash balances and future cash inflows from this portfolio will meet our liquidity needs for at least the next 12 months.

As of December 31, 2020, we had \$1.3 million of short-term contract assets which only represents unbilled trade receivables from certain Water segment contract sales which includes contractual holdback provisions, pursuant to which we will invoice the final retention payment due within the next 12 months. The customer holdbacks represent amounts intended to provide a form of security for the customer; and accordingly, these contract assets have not been discounted to present value. The retention payments with no performance conditions are recorded as trade receivables.

Loan and Pledge Agreement

We entered into a loan and pledge agreement with a financial institution on January 27, 2017. Since inception, this loan and pledge agreement has been amended multiple times to accommodate our growth (the as amended loan and pledge agreement is hereinafter referred to as the "Loan and Pledge Agreement"). The Loan and Pledge Agreement, which will expire on June 30, 2022, provides for a committed revolving credit line of \$16.0 million and an uncommitted revolving credit line of \$4.0 million. The covenants of the Loan and Pledge Agreement allow us to incur indebtedness owed to a foreign subsidiary in an aggregate amount not to exceed \$66.0 million, which amount is subordinated to any amounts outstanding under the Loan and Pledge Agreement. We are in compliance with all covenants related to this Loan and Pledge Agreement.

Revolving Loans

Revolving loans under the Loan and Pledge Agreement incur interest per annum at a base rate equal to the London Inter-bank Offered Rate ("LIBOR") plus 1.5%. Any default bears the aforementioned interest rate plus an additional 2%. The unused portion of the credit line is subject to a fee equal to the product of 0.2% 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. As of December 31, 2020, there was no debt outstanding under the Loan and Pledge Agreement.

Letters of Credit

Under the Loan and Pledge Agreement, we are allowed to borrow and request letters of credit, which are limited to a term of three years, against the eligible assets held from time to time in the pledged account maintained with the financial institution. As of December 31, 2020, there were no letters of credit outstanding under the Loan and Pledge Agreement.

Stand-By Letters of Credit

Under the Loan and Pledge Agreement, we are allowed to issue stand-by letters of credit ("SBLCs") up to one year past the expiration date of the Loan and Pledge Agreement and to hold SBLCs with other financial institutions up to \$5.1 million. SBLCs have a term limit of three years, are secured by pledged U.S. investments, and do not have any cash collateral balance requirement. SBLCs are deducted from the total revolving credit line under the Loan and Pledge Agreement and are subject to a non-refundable quarterly fee that is in an amount equal to 0.7% per annum of the face amount of the outstanding SBLCs. As of December 31, 2020, outstanding SBLCs totaled \$13.3 million.

CARES Act

We have not availed ourselves of any loans made available under the CARES Act, including both the Payroll Protection Program and the Economic Injury Disaster Loan Program. We continue to monitor the programs the Federal government and the State of California are putting in place, and will participate in those programs for which we are eligible, if the need arises.

Share Repurchase Program

On March 9, 2021, our Board of Directors authorized a share repurchase program (the "March 2021 Authorization") under which we, at the discretion of management, may repurchase up to \$50.0 million in aggregate cost of our outstanding common stock. The March 2021 Authorization does not have an expiration date.

Cash Flows

	Years Ended December 31,		Change
	2020	2019	
	<i>(In thousands)</i>		
Net cash provided by operating activities	\$ 16,870	\$ 5,268	\$ 11,602
Net cash provided by (used in) investing activities	46,600	(6,881)	53,481
Net cash provided by financing activities	4,374	5,963	(1,589)
Effect of exchange rate differences on cash and cash equivalents	26	—	26
Net change in cash, cash equivalents and restricted cash	<u>\$ 67,870</u>	<u>\$ 4,350</u>	<u>\$ 63,520</u>

Cash Flows from Operating Activities

Net cash provided by operating activities in fiscal year 2020 increased over fiscal year 2019, due primarily to higher adjusted net income, partially offset by changes in assets and liabilities. The higher adjusted net income was largely driven by strong revenue growth. The lower cash used for operating assets and liabilities in fiscal year 2020, as compared to fiscal year 2019, was due primarily to higher sales of products and strong collections of our accounts receivable. Our greatest risks to our operating cash flows in this crisis are the strength of our existing and projected backlog, as well as customer receivables in a time when many companies are experiencing stress to their operating cash flows.

Due to the project driven, non-cyclical nature of our business, operating cash flow can fluctuate significantly from year to year, due to the timing of receipts of large project orders. Operating cash flow may be negative in one year and significantly positive in the next, consequently individual quarterly results and comparisons may not necessarily indicate a significant trend, either positive or negative.

Cash Flows from Investing Activities

Net cash provided by (used in) investing activities primarily relates to maturities and purchases of marketable securities, and capital expenditures supporting our growth. Our investments in marketable securities are structured to preserve principal and liquidity while at the same time maximizing yields without significantly increasing risk. The significant increase in cash from investing activities in fiscal year 2020, as compared to cash used in investing activities in fiscal year 2019, was due primarily to the movement of our investments in debt securities to cash and cash equivalents during the COVID-19 pandemic.

Cash Flows from Financing Activities

Net cash provided by financing activities primarily relates to the issuance of equity from our employee equity incentive plans, which in fiscal year 2020 was lower than fiscal year 2019.

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 12 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 and/or to fund investments in our latest technology arising from rapid market adoption. These needs could require us to seek additional equity or debt financing. 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 R&D, manufacturing and S&M 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

Lease Facilities. We lease facilities and equipment under fixed noncancelable operating leases that expire on various dates through fiscal year 2030.

Purchase Order Arrangements. We have purchase order arrangements with our vendors for which we have not received the related goods or services. These arrangements are subject to change based on our sales demand forecasts. We have the right to cancel the arrangements prior to the date of delivery. The purchase order arrangements are related to various raw materials and component parts, as well as capital equipment.

See Note 8, "Commitments and Contingencies," of the Notes to Consolidated Financial Statements in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10-K for additional information related to our fixed noncancelable operating leases and our purchase order arrangements.

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.

Critical Accounting Policies and Estimates

Our Consolidated Financial Statements are prepared in accordance with U.S. GAAP. 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; valuation of stock options; valuation and impairment of goodwill; inventory; and deferred taxes and valuation allowances on deferred tax assets.

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 1, "Description of Business and Significant Accounting Policies," of the Notes to Consolidated Financial Statements in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10-K.

Revenue Recognition

Revenues are recognized when control of the promised goods or services is transferred to our customers in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services. At the inception of each contract, performance obligations are identified and the total transaction price is allocated to the performance obligations.

Our contracts with customers may include multiple performance obligations. For such arrangements, we allocate revenue to each performance obligation based on its relative stand-alone selling price. We generally determine standalone selling prices based on the prices charged to customers.

With respect to termination, we do not have the ability to cancel a contract for convenience. In general, customers can cancel for convenience upon the payment of a termination fee that covers costs and profit. It is rare for customers to cancel contracts.

See Note 1, "Description of Business and Significant Accounting Policies – Significant Accounting Policies," of the Notes to Consolidated Financial Statements in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10-K for more detail on product and service revenue recognition – Water segment, cost-to-total cost ("CTC") revenue recognition – Oil & Gas segment, license and development revenue recognition – Oil & Gas segment.

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") and incentive stock options, over the requisite service period (typically the vesting period of the awards). The fair value of RSUs is based on our common 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 11, "Stock-based Compensation," of the Notes to Consolidated Financial Statements in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report on 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.

Goodwill is not amortized but is evaluated annually (July 1) 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. The forecast of future cash flows, which are based on our best estimate of future net sales and operating expenses, are based primarily on expected category expansion, pricing, market segment, and general economic conditions. In addition, we incorporate other significant inputs to our fair value calculations, including discount rate and market multiples, to reflect current market conditions, and also considered the impact of the COVID-19 pandemic and the termination of the VorTeq License Agreement in our calculations.

Acquired intangible assets with determinable useful lives are amortized on a straight-line or accelerated basis over the estimated periods benefited, ranging from one to 20 years. Acquired intangible assets with contractual terms are amortized over their respective legal or contractual lives. Other non-contractual intangible assets with determinable lives are amortized over periods ranging from five to 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.

Inventories

Inventories are stated at the lower of cost (using the first-in, first-out "FIFO" method) or net realizable value. 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. During fiscal year 2020, due to the COVID-19 pandemic, we expensed the reduced utilization of our manufacturing facilities to product cost of revenue.

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 our company is 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 the Company's 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. See Note 9, "Income Taxes," of the Notes to Consolidated Financial Statements in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10-K for further discussion of the tax valuation allowance.

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

Refer to Note 1, "Description of Business and Significant Accounting Policies – Recent Accounting Pronouncements," of the Notes to Consolidated Financial Statements in Part II, Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10-K.

Item 7A — Quantitative and Qualitative Disclosures About Market Risk

Our exposure to market risk may be found primarily in two areas, foreign currency and interest rates.

Foreign Currency Risk

Our foreign currency exposures are due to fluctuations in exchange rates for U.S. dollar ("USD") versus the British pound, Saudi riyal, Emirati dirham, European euro, Chinese yuan, Indian rupee and Canadian dollar. Changes in currency exchange rates could adversely affect our consolidated operating results or financial position.

Our revenue contracts have been denominated in USD. At times, our international customers may have difficulty in obtaining USD to pay our receivables, thus increasing collection risk and potential doubtful account expense. As we expand our international sales, a portion of our revenue could be denominated in foreign currencies. As a result, our cash and operating results could be increasingly affected by changes in exchange rates.

In addition, we pay many vendors in foreign currency and, therefore, are subject to changes in foreign currency exchange rates. Our international sales and service operations incur expense that is denominated in foreign currencies. This expense could be materially affected by currency fluctuations. Our international sales and services operations also 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 and Credit Risks

We have an investment portfolio of fixed-income marketable debt securities including amounts classified as cash equivalents, and short 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 and long-term debt instruments of high-quality corporate issuers and instruments of the U.S. government and its agencies. These investments are subject to counter-party credit risk. To minimize this risk, we invest pursuant to an investment policy approved by our board of directors. The policy mandates high credit rating requirements and restricts our exposure to any single corporate issuer by imposing concentration limits.

As of December 31, 2020, our total debt security investments which totaled approximately \$20.4 million, are presented in short-term investments and long-term investments on our Consolidated Balance Sheets. 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 a weighted average maturity of less than five months. As of December 31, 2020, a hypothetical 1% increase in interest rates would have resulted in an approximately \$0.1 million decrease in the fair value of our fixed-income debt securities.

Item 8 — Financial Statements and Supplementary Data

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Energy Recovery, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Energy Recovery, Inc. and subsidiaries (the "Company") as of December 31, 2020 and 2019, the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows, for each of the three years in the period ended December 31, 2020, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 12, 2021, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

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

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

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

License and Development Revenue – Refer to Notes 1, 2 and 14 to the financial statements

Critical Audit Matter Description

In 2015, the Company and Schlumberger Technology Corporation ("Schlumberger") entered into a VorTeq License Agreement, which provided Schlumberger with exclusive rights to the Company's VorTeq technology for use in hydraulic fracturing onshore applications. The contract included a \$75.0 million non-refundable upfront exclusivity payment. The Company had been recognizing license and development revenue associated with the non-refundable exclusivity payment under the cost-to-total cost method of revenue accounting.

On June 24, 2020, the Company entered into an agreement with Schlumberger to terminate the existing VorTeq License Agreement. Pursuant to the terms of the agreement, each party's rights, duties and obligations under the VorTeq License Agreement had been terminated. The Company accounted for the termination as a contract modification, which resulted in the Company recognizing the remaining amounts of the original \$75.0 million non-refundable upfront exclusivity payment of \$24.4 million during the second quarter of fiscal year 2020 as license and development revenue.

We identified the VorTeq License Agreement termination and the associated license and development revenue recognized as a critical audit matter due to the complexity of the agreement and because of the judgments necessary in determining the recognition of the remaining contract liability as revenue during the year ended December 31, 2020. This required a high degree of auditor judgment and an increased extent of effort when performing audit procedures to audit the Company's accounting treatment associated with the termination.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the termination of the VorTeq License Agreement included the following:

- We tested the effectiveness of controls over the Company's accounting treatment of the VorTeq License Agreement termination.
- With the assistance of professionals in our firm having expertise in revenue, we evaluated the Company's conclusions regarding the revenue accounting treatment applied to the VorTeq License Agreement termination by performing the following:
 - Inspected the VorTeq License Agreement termination for terms and conditions requiring ongoing performance obligations, including the evaluation whether (i) there were any requirements to refund the \$75.0 million non-refundable upfront exclusivity payment, or (ii) there were any remaining Schlumberger exclusivity rights associated with the research & development and licensing efforts of the VorTeq technology.
 - Evaluated the Company's conclusions regarding the revenue accounting treatment applied to the VorTeq License Agreement termination.

/s/ DELOITTE & TOUCHE LLP

San Francisco, California

March 12, 2021

We have served as the Company's auditor since 2018.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Energy Recovery, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Energy Recovery, Inc. and subsidiaries (the "Company") as of December 31, 2020, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2020, of the Company and our report dated March 12, 2021, expressed an unqualified opinion on those financial statements.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

San Francisco, California

March 12, 2021

**ENERGY RECOVERY, INC.
CONSOLIDATED BALANCE SHEETS**

	December 31,	
	2020	2019
	(In thousands, except shares and per share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 94,255	\$ 26,387
Short-term investments	20,446	58,736
Accounts receivable, net	11,792	12,979
Inventories, net	11,748	10,317
Prepaid expenses and other current assets	4,950	4,548
Total current assets	143,191	112,967
Long-term investments	—	15,419
Deferred tax assets, non-current	11,030	16,897
Property and equipment, net	20,176	18,843
Operating lease, right of use asset	16,090	11,195
Goodwill and other intangible assets	12,839	12,855
Other assets, non-current	988	598
Total assets	\$ 204,314	\$ 188,774
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 1,118	\$ 1,192
Accrued expenses and other current liabilities	11,816	9,869
Lease liabilities	1,243	1,023
Contract liabilities	1,552	15,746
Total current liabilities	15,729	27,830
Lease liabilities, non-current	16,443	11,533
Contract liabilities, non-current	88	13,120
Other non-current liabilities	430	278
Total liabilities	32,690	52,761
Commitments and contingencies (Note 8)		
Stockholders' equity:		
Preferred stock, \$0.001 par value; 10,000,000 shares authorized; no shares issued or outstanding at December 31, 2020 and 2019	—	—
Common stock, \$0.001 par value; 200,000,000 shares authorized; 61,798,004 shares issued and 56,342,069 shares outstanding at December 31, 2020 and 60,717,702 shares issued and 55,261,767 shares outstanding at December 31, 2019	62	61
Additional paid-in capital	179,161	170,028
Accumulated other comprehensive income (loss)	53	(37)
Treasury stock, at cost, 5,455,935 shares repurchased at December 31, 2020 and 2019	(30,486)	(30,486)
Retained earnings (accumulated deficit)	22,834	(3,553)
Total stockholders' equity	171,624	136,013
Total liabilities and stockholders' equity	\$ 204,314	\$ 188,774

See Accompanying Notes to Consolidated Financial Statements

ENERGY RECOVERY, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands, except per share data)</i>		
Product revenue	\$ 92,091	\$ 72,834	\$ 61,025
Product cost of revenue	28,249	20,335	17,873
Product gross profit	63,842	52,499	43,152
License and development revenue	26,895	14,108	13,490
Operating expenses:			
General and administrative	25,519	22,832	21,476
Sales and marketing	8,127	9,434	7,546
Research and development	23,449	23,402	17,012
Amortization of intangible assets	16	575	630
Impairment of long-lived assets	2,332	—	—
Total operating expenses	59,443	56,243	46,664
Income from operations	31,294	10,364	9,978
Other income (expense):			
Interest income	913	2,010	1,543
Interest expense	—	—	(1)
Other non-operating expense, net	(74)	(118)	(80)
Total other income, net	839	1,892	1,462
Income before income taxes	32,133	12,256	11,440
Provision for (benefit from) income taxes	5,746	1,343	(10,653)
Net income	\$ 26,387	\$ 10,913	\$ 22,093
Earnings per share:			
Basic	\$ 0.47	\$ 0.20	\$ 0.41
Diluted	\$ 0.47	\$ 0.19	\$ 0.40
Number of shares used in per share calculations:			
Basic	55,709	54,740	53,764
Diluted	56,637	56,067	55,338

See Accompanying Notes to Consolidated Financial Statements

ENERGY RECOVERY, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Net income	\$ 26,387	\$ 10,913	\$ 22,093
Other comprehensive income (loss), net of tax			
Foreign currency translation adjustments	26	(23)	(12)
Unrealized gain on investments	64	119	4
Total other comprehensive income (loss), net of tax	90	96	(8)
Comprehensive income	<u>\$ 26,477</u>	<u>\$ 11,009</u>	<u>\$ 22,085</u>

See Accompanying Notes to Consolidated Financial Statements

ENERGY RECOVERY, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands, except shares)</i>		
Common stock			
Beginning balance	\$ 61	\$ 59	\$ 58
Issuance of common stock, net	1	2	1
Ending balance	62	61	59
Additional paid-in capital			
Beginning balance	170,028	158,404	149,006
Issuance of common stock, net	4,373	5,960	4,138
Stock-based compensation	4,760	5,664	5,260
Ending balance	179,161	170,028	158,404
Accumulated other comprehensive income (loss)			
Beginning balance	(37)	(133)	(125)
Other comprehensive income (loss)			
Foreign currency translation adjustments	26	(23)	(12)
Unrealized gain on investments	64	119	4
Total other comprehensive income (loss), net	90	96	(8)
Ending balance	53	(37)	(133)
Treasury stock			
Beginning balance	(30,486)	(30,486)	(20,486)
Repurchase of common stock for treasury	—	—	(10,000)
Ending balance	(30,486)	(30,486)	(30,486)
Retained earnings (accumulated deficit)			
Beginning balance	(3,553)	(14,466)	(36,559)
Net income	26,387	10,913	22,093
Ending balance	22,834	(3,553)	(14,466)
Total stockholders' equity	\$ 171,624	\$ 136,013	\$ 113,378
Common stock issued (shares)			
Beginning balance	60,717,702	59,396,020	58,168,433
Issuance of common stock, net	1,080,302	1,321,682	1,227,587
Ending balance	61,798,004	60,717,702	59,396,020
Treasury stock (shares)			
Beginning balance	5,455,935	5,455,935	4,262,833
Repurchase of common stock for treasury	—	—	1,193,102
Ending balance	5,455,935	5,455,935	5,455,935

See Accompanying Notes to Consolidated Financial Statements

ENERGY RECOVERY, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Cash flows from operating activities:			
Net income	\$ 26,387	\$ 10,913	\$ 22,093
Adjustments to reconcile net income to cash provided by operating activities			
Stock-based compensation	4,787	5,676	5,240
Depreciation and amortization	5,299	4,395	3,869
Amortization of premiums and discounts on investments	390	65	362
Deferred income taxes	5,867	1,421	(10,385)
Provision for warranty claims	403	402	326
Impairment of long-lived assets	2,332	—	—
Other non-cash adjustments	(8)	92	751
Changes in operating assets and liabilities:			
Accounts receivable, net	1,098	(2,679)	1,917
Contract assets	(1,200)	3,391	2,196
Inventories, net	(1,622)	(3,256)	(1,872)
Prepaid and other assets	415	(263)	(682)
Accounts payable	(205)	(373)	(2,274)
Accrued expenses and other liabilities	164	(600)	87
Income taxes	(11)	27	(447)
Contract liabilities	(27,226)	(13,943)	(13,616)
Net cash provided by operating activities	<u>16,870</u>	<u>5,268</u>	<u>7,565</u>
Cash flows from investing activities:			
Sales of marketable securities	10,573	7,608	—
Maturities of marketable securities	55,667	78,100	81,268
Purchases of marketable securities	(12,855)	(85,207)	(86,192)
Capital expenditures	(6,785)	(7,382)	(5,235)
Net cash provided by (used in) investing activities	<u>46,600</u>	<u>(6,881)</u>	<u>(10,159)</u>
Cash flows from financing activities:			
Net proceeds from issuance of common stock	4,397	6,073	4,291
Tax payment for employee shares withheld	(23)	(110)	(150)
Repayment of long-term debt	—	—	(27)
Repurchase of common stock	—	—	(10,000)
Net cash provided by (used in) financing activities	<u>4,374</u>	<u>5,963</u>	<u>(5,886)</u>
Effect of exchange rate differences on cash and cash equivalents	26	—	(8)
Net change in cash, cash equivalents and restricted cash	<u>67,870</u>	<u>4,350</u>	<u>(8,488)</u>
Cash, cash equivalents and restricted cash, beginning of year	26,488	22,138	30,626
Cash, cash equivalents and restricted cash, end of year	<u>\$ 94,358</u>	<u>\$ 26,488</u>	<u>\$ 22,138</u>
Supplemental disclosure of cash flow information:			
Cash paid for interest	\$ —	\$ —	\$ 1
Cash received for income tax refunds	13	438	13
Cash paid for income taxes	52	52	610
Supplemental disclosure on non-cash investing and financing transactions:			
Purchases of property and equipment in trade accounts payable, and accrued expenses and other liabilities	\$ 322	\$ 1,080	\$ 30
Non-cash lease liabilities arising from obtaining right of use assets	6,384	—	10,411

See Accompanying Notes to Consolidated Financial Statements

**ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

Note 1 — Description of Business and Significant Accounting Policies

Energy Recovery, Inc. and its wholly-owned subsidiaries (the “Company” or “Energy Recovery”) creates technologies that solve complex challenges for industrial fluid-flow markets worldwide. The Company designs and manufactures solutions that improve operational efficiency by reducing waste, energy consumption and costs across a range of industrial processes. The Company’s solutions are marketed and sold in fluid flow markets such as water, oil & gas and chemical processing under the trademarks ER[®], Ultra PX[™], PX[®], Pressure Exchanger[®], PX Pressure Exchanger[®] (“PX”), PX PowerTrain[™], VorTeq[™], IsoBoost[®], AT[™] and AquaBold[™]. The Company owns, manufactures and/or develops its solutions, in whole or in part, in the United States of America (“U.S.”).

Basis of Presentation

The Company’s Consolidated Financial Statements include the accounts of Energy Recovery, Inc. and its wholly-owned subsidiaries. All significant inter-company accounts and transactions have been eliminated in consolidation.

Reclassifications

Certain prior period amounts have been reclassified in the Consolidated Balance Sheets, Consolidated Statements of Cash Flows and certain notes to the Consolidated Financial Statements to conform to the current period presentation.

Use of Estimates

The preparation of Consolidated Financial Statements, in conformity with U.S. generally accepted accounting principles (“GAAP”), requires the Company’s management to make judgments, assumptions and estimates that affect the amounts reported in the Consolidated Financial Statements and accompanying notes.

The accounting policies that reflect the Company’s more significant estimates and judgments and that the Company believes are the most critical to aid in fully understanding and evaluating its reported financial results are revenue recognition; valuation of stock options; valuation and impairment of goodwill; inventory; deferred taxes and valuation allowances on deferred tax assets; and evaluation and measurement of contingencies. Those estimates could change, and as a result, actual results could differ materially from those estimates.

Due to the novel coronavirus (“COVID-19”) pandemic, and the impact on our customers due to the reduced demand for oil and gas, as well as the oversupply of oil, there has been uncertainty and disruption in the global economy and financial markets. The Company is not aware of any specific event or circumstance that would require an update to its estimates or judgments or a revision of the carrying value of its assets or liabilities as of March 12, 2021, the date of issuance of this Annual Report on Form 10-K. These estimates may change, as new events occur and additional information is obtained. Actual results could differ materially from these estimates under different assumptions or conditions. The Company undertakes no obligation to update publicly these estimates for any reason after the date of this Annual Report on Form 10-K, except as required by law.

Significant Accounting Policies

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original or remaining contractual maturity on date of purchase of less than or equal to three months to be classified and presented as cash equivalents on the Company’s Consolidated Balance Sheet. Cash equivalents are stated at cost, which approximates fair value. The Company’s cash and cash equivalents are maintained primarily in demand deposit accounts with large financial institutions, institutional money market funds, U.S. treasury securities, and corporate notes and bonds. The Company monitors the creditworthiness of the financial institutions, institutional money market funds, and corporations in which the Company invests its surplus funds. The Company has experienced no credit losses from its cash investments.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Allowance for Doubtful Accounts

The Company records a provision for doubtful accounts based on historical experience and an estimate of the expected credit losses. In estimating the allowance for doubtful accounts, the Company considers, among other factors, the aging of the accounts receivable, its historical write-offs, the credit worthiness of each customer, and general economic conditions. Account balances are charged off against the allowance when the Company believes that it is probable that the receivable will not be recovered. Actual write-offs may be in excess of the Company's estimated allowance.

Short-term and Long-term Investments

The Company's 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 income (loss) within stockholders' equity on the Consolidated Balance Sheets. Realized gains and losses on the sale of available-for-sale securities are determined by specific identification of the cost basis of each security.

The Company categorizes and classifies short-term and long-term available-for-sale investments on the Company's Consolidated Balance Sheets as follows:

- *Short-term investments:* Investments purchased with an original or remaining maturity at time of purchase greater than three months and that are expected to mature within 12 months from the balance sheet date are classified as short-term investments and are presented in current assets.
- *Long-term investments:* Investments purchased with an original or remaining maturity at time of purchase greater than three months and that are expected to mature more than 12 months from the balance sheet date are classified as long-term investments and are presented in non-current assets.

Inventories

Inventories are stated at the lower of cost (using the first-in, first-out "FIFO" method) or net realizable value. The Company calculates 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 years to ten years. Certain equipment used in the development and manufacturing of ceramic components is depreciated over estimated useful lives of up to ten 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 years to five years. Maintenance and repairs are charged directly to expense as incurred.

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. The Company evaluates the recoverability of long-lived assets by comparing the carrying amount of an asset to estimated future net undiscounted cash flows generated by the asset (asset group). 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.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Leases

The Company determines if an arrangement is a lease, or contains a lease, at the inception of the arrangement and evaluates whether the lease is an operating or a finance lease at the commencement date. The Company recognizes right-of-use ("ROU") assets and lease liabilities for operating leases with terms greater than 12 months. ROU assets represent the Company's right to use an asset for the lease term, while lease liabilities represent the Company's obligation to make lease payments. Operating and finance lease ROU assets and liabilities are recognized based on the present value of lease payments over the lease term at the lease commencement date. The Company uses the implicit interest rate or, if not readily determinable, its incremental borrowing rate as of the lease commencement date to determine the present value of lease payments. The incremental borrowing rate is based on the Company's unsecured borrowing rate, adjusted for the effects of collateral. Operating and finance lease ROU assets are recognized net of any lease prepayments and incentives. In addition, the Company has elected the practical expedient, based on materiality, to account for both the non-lease components and related lease components as a single lease component. Lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Operating lease expense is recognized on a straight-line basis over the lease term. Finance lease expense is recognized based on the effective-interest method over the lease term.

The Company applies lease modifications that change the contractual terms and conditions of a lease, that was not part of the original lease, and grants additional right of use with a price consistent with the market, as a new lease. These modifications will be assessed in compliance with the above parameters. For other types of lease modification, the modified lease is reassessed and all new assumptions are applied in the calculation of the updated lease liability and the ROU asset.

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.

Goodwill is not amortized but is evaluated annually (July 1) for impairment at the reporting unit level or when indicators of a potential impairment are present. The Company estimates the fair value of the reporting unit using the discounted cash flow and market approaches. The forecast of future cash flows, which are based on the Company's best estimate of future net sales and operating expenses, are based primarily on expected category expansion, pricing, market segment, and general economic conditions. In addition, the Company incorporates other significant inputs to its fair value calculations, including discount rate and market multiples, to reflect current market conditions, and also considered the impact of the COVID-19 pandemic and the termination of the VorTeq License Agreement in its calculations.

Acquired intangible assets with determinable useful lives are amortized on a straight-line or accelerated basis over the estimated periods benefited, ranging from one year to 20 years. Acquired intangible assets with contractual terms are amortized over their respective legal or contractual lives. Other non-contractual intangible assets with determinable lives are amortized over periods ranging from five years to 20 years.

The Company evaluates the recoverability of long-lived 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.

Fair Value of Financial Instruments

The Company's financial instruments include cash and cash equivalents, restricted cash, investments in marketable securities, accounts receivable and accounts payable. The carrying amounts for these financial instruments reported in the Consolidated Balance Sheets approximate their fair values. See Note 5, "Investments and Fair Value Measurements," for further discussion of fair value.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Revenue Recognition

Revenues are recognized when control of the promised goods or services is transferred to the Company's customers, in an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods or services. At the inception of each contract, performance obligations are identified and the total transaction price is allocated to the performance obligations.

The Company's payment terms vary based on the credit risk of its customer. For certain customer types, the Company requires payment before the products or services are delivered to the customer. The Company performs an evaluation of customer credit worthiness on an individual contract basis to assess whether collectability is reasonably assured at the inception of the contract. As part of this evaluation, the Company considers many factors about the individual customer, including the underlying financial strength of the customer and/or partnership consortium and the Company's prior history or industry-specific knowledge about the customer and its supplier relationships. For smaller projects, the Company requires the customer to remit payment generally within 30 days to 60 days after product delivery. In some cases, if credit worthiness cannot be determined, prepayment or other security is required.

Sales commissions are expensed as incurred when product revenue is earned. These costs are recorded within sales and marketing expenses.

Arrangements with Multiple Performance Obligations and Termination for Convenience

The Company's contracts with customers may include multiple performance obligations. For such arrangements, the Company allocates revenue to each performance obligation based on its relative stand-alone selling price. The Company generally determines stand-alone selling prices based on the prices charged to customers.

With respect to termination, the Company does not have the ability to cancel the contract for convenience. In general, customers can cancel for convenience upon the payment of a termination fee that covers costs and profit. It is rare for customers to cancel contracts.

Practical Expedients and Exemptions

In the Water segment, the time period between when the Company transfers control of products to the customer and the payment for the products is, in general, less than one year and, therefore, the practical expedient with respect to a financing component has been adopted by the Company.

With respect to taxes, the Company has made the policy election to exclude taxes from the measurement of the transaction price.

The Company does not disclose the value of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less; and (ii) contracts for which the Company recognizes revenue at the amount to which the Company has the right to invoice for services performed.

Contract Costs

The Company recognizes the incremental cost of obtaining contracts as an expense when incurred if the amortization period of the assets that the Company otherwise would have recognized is one year or less. The costs of obtaining contracts are included in sales and marketing expenses.

Product and Service Revenue Recognition - Water Segment

In the Company's Water segment, a contract is established by a written agreement (executed sales order, executed purchase order or stand-alone contract) with the customer with fixed pricing, and a credit risk assessment is completed prior to the signing of the agreement to ensure that collectability is reasonably assured.

The Company adheres to consistent pricing in the stand-alone sale of products and services. The Company does not bundle performance obligations in the Water segment. Performance obligations consist of delivery of products, such as the Company's PXs, Turbochargers, pumps and spare parts, and services. Service obligation, such as commissioning, which are not material, are deferred as contract liabilities until the services are performed.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

The transfer of control for the Company's products follows transfer of title which typically occurs upon shipment of the equipment in accordance with International Commercial Terms (commonly referred to as "incoterms"). The specified product performance criteria for the Company's products pertain to the ability of the Company's product to meet its published performance specifications and warranty provisions, which the Company's products have demonstrated on a consistent basis. This factor, combined with historical performance metrics, provides the Company's management with a reasonable basis to conclude that the products will perform satisfactorily upon commissioning of the plant. Installation is relatively simple, requires no customization, and is performed by the customer under the supervision of the Company's personnel. Based on these factors, the Company concluded that performance has been completed upon shipment when title transfers based on the shipping terms, and that product revenue is recognized at a point in time.

The Company does not provide its customers with a right of product return; however, the Company 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 warranty is provided consistent with the industry and is considered to be an assurance warranty, not a separate performance obligation. Product returns and warranty charges have not been significant.

For large projects, stand-alone contracts are utilized. For these contracts, consistent with industry practice, the Company's customers typically require their suppliers, including the Company, 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. These retention payments are generally 10% or less of the total contract amount and are due and payable based upon the contractual milestone billing, generally up to 24 months to 36 months from the date of product delivery. These retention payments with performance conditions are recorded as contract assets and align with the product warranty period. Given that they are not material in the context of the contract, they are not considered to be a financing component.

Shipping and handling charges billed to customers are pass-through from the freight forwarder to the customer and are included in product revenue. The cost of shipping to customers is included in product cost of revenue.

Cost-to-Total Cost ("CTC") Revenue Recognition - Oil & Gas Segment

The IsoBoost system is a highly engineered and customized solution that is designed and manufactured over an extended period of time, and is built specifically to meet a customer's specifications. Given the facts and circumstances of these projects, the Company concluded that the CTC method of accounting is appropriate for the IsoBoost system. In the event that a purchase order for an IsoBoost system does not meet these facts and circumstances, then the CTC method of accounting does not apply. The Company had one CTC contract for IsoBoost turbochargers in fiscal years 2017 through 2018, which was completed in 2018, and last units were shipped in the first quarter of 2019. A standard assurance type warranty was provided.

Revenue from fixed price contracts is recognized with progress measured 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 were expensed in the period in which they were 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, using the cumulative catch-up method. 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.

Unbilled project costs, and cost and estimated earnings in excess of billings, are included in contract assets and contract liabilities, respectively, on the Company's Consolidated Balance Sheets.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

License and Development Revenue Recognition - Oil & Gas Segment

License and development revenue is comprised of revenue recognition over time of the upfront non-refundable \$ 75.0 million exclusivity fee received in connection with a license agreement ("VorTeq License Agreement") with Schlumberger Technology Corporation ("Schlumberger"). The VorTeq License Agreement comprised of a 15-year exclusive license for the Company's VorTeq technology ("VorTeq"). In performing the obligations under the license, the Company provided research and development services to commercialize the technology in accordance with the Key Performance Indicators ("KPIs"), defined in the VorTeq License Agreement.

Revenue is recognized when control of the promised goods or services is transferred to customers. For example, stand-alone selling price was established at the inception of the VorTeq License Agreement by taking the transaction to market on a non-exclusive basis, and pricing in an exclusivity premium. Since the VorTeq License Agreement included an up-front non-refundable payment at the inception of the VorTeq License Agreement and future products and services are provided after initial commercialization, the Company completed an analysis and concluded that there was no material right included in the pricing of the VorTeq License Agreement.

Performance obligations, such as the exclusive license to the Company's missile technology and upgrades prior to and subsequent to the date of full commercial launch, have been identified. Value has been allocated to the performance obligations and revenue is recognized over time based on the input measure of progress of the cost of salaries, wages and travel costs related to the project prior to full commercialization, and ratably for the unspecified upgrades for the period subsequent to full commercialization until the expiration of the VorTeq License Agreement.

Contracts are sometimes modified for a change in scope or other requirements. The Company considers contract modifications to exist when the modification either creates new or changes the existing enforceable rights and obligations. Any subsequent contract modifications are analyzed to determine the treatment of the contract modification as a separate contract, prospectively or through a cumulative catch-up adjustment.

Warranty Costs

The Company sells products with a limited warranty for a period ranging from 18 months to five years. The Company accrues for warranty costs based on estimated product failure rates, historical activity, and expectations of future costs. Periodically, the Company evaluates and adjusts the warranty costs to the extent that actual warranty costs vary from the original estimates.

Stock-based Compensation

The Company measures and recognizes stock-based compensation expense based on the fair value measurement for all stock-based awards made to its employees, non-employee consultants and directors, including restricted stock units ("RSUs"), and incentive stock options over the requisite service period (typically the vesting period of the awards). The fair value of RSUs is based on the Company's common 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 the expected life to exercise a vested award, expected volatility based upon the Company's historical stock prices, risk-free interest rate based upon the U.S. Treasury rates, and the Company's dividend yield. The estimation of awards that will ultimately vest requires judgment, and to the extent that actual results or updated estimates differ from the Company's current estimates, such amounts are recorded as a cumulative adjustment in the period in which the estimates are revised. See Note 1, "Description of Business and Significant Accounting Policies - Recently Adopted Accounting Pronouncements (ASU 2018-07)," for further discussion on non-employee equity awards and Note 11, "Stock-based Compensation," for further discussion of stock-based compensation.

Foreign Currency

The Company's reporting currency is the U.S. dollar. The functional currency of the Company's Irish subsidiary is the U.S. dollar, while the functional currency of the Company's other foreign subsidiaries is their respective local currencies. The asset and liability accounts of the Company's 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 the Company's subsidiary balance sheets are recorded as a component of accumulated other comprehensive income (loss). Gains and losses from foreign currency transactions are recorded in other income (expense) in the Consolidated Statements of Operations.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

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 the Company is subject to tax. In the ordinary course of business, there is inherent uncertainty in quantifying income tax positions. The Company assesses income tax positions and records tax benefits for all years subject to examination based upon the Company's 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, the Company records 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 the Company's deferred tax assets. In making such a determination, the Company considers 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. See Note 9, "Income Taxes," for further discussion of tax valuation allowances.

The Company's operations are subject to income and transaction taxes in the U.S. and in foreign jurisdictions. Significant estimates and judgments are required in determining the Company's 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.

Recently Adopted Accounting Pronouncements

In June 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-13, *Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"), which amends Accounting Standards Codification ("ASC") No. 326, *Financial Instruments-Credit Losses* ("ASC 326"). Subsequent to the issuance of ASU 2016-13, ASC 326 was amended by various updates that amend and clarify the impact and implementation of the aforementioned update. The new guidance introduces the current expected credit loss ("CECL") model, which requires an entity to record an allowance for credit losses for certain financial instruments and financial assets, including trade receivables, based on expected losses rather than incurred losses. Under this update, on initial recognition and at each reporting period, an entity is required to recognize an allowance that reflects the entity's current estimate of credit losses expected to be incurred over the life of the financial instrument. In February 2020, the FASB issued ASU No. 2020-02, *Financial Instruments-Credit Losses (Topic 326) and Leases (Topic 842) - Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 119 and Update to SEC Section on Effective Date Related to Accounting Standards Update No. 2016-02, Leases (Topic 842)* ("ASU 2020-02"), which amended the language in Subtopic 326-20 and addressed questions primarily regarding documentation and company policies. ASU 2016-13 and its amendments are effective for the Company for interim and annual periods in fiscal years beginning after December 15, 2019, on a modified retrospective basis. The adoption of ASU 2016-13 and its amendments on January 1, 2020 did not have a material impact on the Consolidated Financial Statements and related disclosures. The Company will continue to actively monitor the impact of the COVID-19 pandemic, and the impact on the Company's customers due to the reduced demand for oil & gas, as well as the oversupply of oil, on expected credit losses.

In January 2017, the FASB issued ASU No. 2017-04 ("ASU 2017-04"), *Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*, to eliminate Step 2 from the goodwill impairment test. Entities should perform their goodwill impairment tests by comparing the fair value of a reporting unit with its carrying amount and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. The Company adopted ASU 2017-04 on January 1, 2020 on a prospective basis and the adoption of this standard did not have a material impact on the Consolidated Financial Statements and related disclosures.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

In March 2020, the FASB issued ASU No. 2020-03, *Codification Improvements to Financial Instruments* ("ASU 2020-03"). This ASU improves and clarifies various financial instruments topics, including the CECL standard issued in 2016. ASU 2020-03 included seven different issues that describe the areas of improvement and the related amendments to U.S. GAAP, intended to make the standards easier to understand and apply by eliminating inconsistencies and providing clarifications. The Company adopted ASU 2020-03 on January 1, 2020, and the adoption of this standard did not have a material impact on the Consolidated Financial Statements and related disclosures.

Recently Issued Accounting Pronouncements Not Yet Adopted

In March 2020, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848)* ("ASU 2020-04"), which provided optional expedients and exceptions for applying U.S. GAAP to contracts, hedging relationships, and other transactions affected by the discontinuation of the London Interbank Offered Rate ("LIBOR") or by another reference rate expected to be discontinued. Entities may apply the provisions of the new standard as of the beginning of the reporting period when the election is made (i.e., as early as the first quarter of 2020). Unlike other topics, the provisions of this update are only available until December 31, 2022, when the reference rate replacement activity is expected to have been completed. An entity may elect to apply amendments prospectively through December 31, 2022. The optional expedients were available to be used upon issuance of this guidance but the Company has not yet applied the guidance because the Company has not yet modified its existing contract for reference rate reform. The Company does not expect the provisions of ASU 2020-04 to have a material impact on its financial condition, results of operation, and cash flows.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* ("ASU 2019-12"), which simplifies the accounting for income taxes by removing certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. The new standard is effective for interim and annual periods beginning after December 15, 2020. The Company will adopt ASU 2019-12 beginning on January 1, 2021 for fiscal year 2021. The Company does not expect the adoption of ASU 2019-12 to have a material impact on its consolidated financial condition, results of operations, and cash flows.

Note 2 — Revenue

On June 24, 2020, the Company entered into an agreement with Schlumberger to terminate the existing VorTeq License Agreement. Pursuant to the terms of the agreement, each party's rights, duties and obligations under the VorTeq License Agreement have been terminated effective June 1, 2020. Accordingly, the Company (i) is entitled to retain all of the non-refundable upfront exclusivity payment; (ii) is not entitled to any further payments from Schlumberger; and (iii) has no future performance obligations under the VorTeq License Agreement. The Company accounted for the termination as a contract modification, which resulted in the Company recognizing the remaining amounts of the original \$75.0 million non-refundable upfront exclusivity payment of \$24.4 million during the second quarter of fiscal year 2020 as license and development revenue in the Consolidated Statements of Operations for such quarter. See Note 14, "VorTeq Partnership and License Agreement," for additional discussion regarding the termination of the VorTeq License Agreement.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Disaggregation of Revenue

The following tables present the Company's disaggregated revenues by product and service line, revenues by geography based on the "shipped to" addresses of the Company's customers and product revenue by channel. Sales and usage-based taxes are excluded from revenues.

The Company classifies its channel customers as follows:

- *Megaproject ("MPD")*. MPD customers are major firms that develop, design, build, own and/or operate large-scale desalination plants.
- *Original Equipment Manufacturer ("OEM")*. OEM customers are companies that supply equipment, packaged systems, and various operating and maintenance solutions for small to medium-sized desalination plants, utilized by commercial and industrial entities, as well as national, state and local municipalities worldwide.
- *Aftermarket ("AM")*. AM customers are desalination plant owners and/or operators who can utilize our technology to upgrade or keep their plant running.

	Year Ended December 31, 2020			Year Ended December 31, 2019			Year Ended December 31, 2018		
	Water	Oil & Gas	Total	Water	Oil & Gas	Total	Water	Oil & Gas	Total
<i>(In thousands)</i>									
Revenue by product and service line									
PX Pressure Exchangers, pumps and turbo devices, and other	\$ 92,061	\$ 30	\$ 92,091	\$ 72,730	\$ 104	\$ 72,834	\$ 60,511	\$ 514	\$ 61,025
License and development	—	26,895	26,895	—	14,108	14,108	—	13,490	13,490
Total revenue	<u>\$ 92,061</u>	<u>\$ 26,925</u>	<u>\$ 118,986</u>	<u>\$ 72,730</u>	<u>\$ 14,212</u>	<u>\$ 86,942</u>	<u>\$ 60,511</u>	<u>\$ 14,004</u>	<u>\$ 74,515</u>
Revenue by primary geographical markets									
Middle East and Africa	\$ 73,963	\$ —	\$ 73,963	\$ 46,574	\$ 104	\$ 46,678	\$ 35,593	\$ 514	\$ 36,107
Americas	7,274	26,925	34,199	9,018	14,108	23,126	6,388	13,490	19,878
Asia	7,363	—	7,363	11,952	—	11,952	11,955	—	11,955
Europe	3,461	—	3,461	5,186	—	5,186	6,575	—	6,575
Total revenue	<u>\$ 92,061</u>	<u>\$ 26,925</u>	<u>\$ 118,986</u>	<u>\$ 72,730</u>	<u>\$ 14,212</u>	<u>\$ 86,942</u>	<u>\$ 60,511</u>	<u>\$ 14,004</u>	<u>\$ 74,515</u>
Product revenue by channel									
Megaproject	\$ 66,763	\$ —	\$ 66,763	\$ 38,164	\$ —	\$ 38,164	\$ 27,172	\$ —	\$ 27,172
Original equipment manufacturer	15,834	—	15,834	23,014	—	23,014	21,956	—	21,956
Aftermarket	9,464	30	9,494	11,552	104	11,656	11,383	514	11,897
Total product revenue	<u>\$ 92,061</u>	<u>\$ 30</u>	<u>\$ 92,091</u>	<u>\$ 72,730</u>	<u>\$ 104</u>	<u>\$ 72,834</u>	<u>\$ 60,511</u>	<u>\$ 514</u>	<u>\$ 61,025</u>

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Contract Balances

The following table presents contract balances by category.

	December 31,	
	2020	2019
	<i>(In thousands)</i>	
Accounts receivable, net	\$ 11,792	\$ 12,979
Contract assets:		
Contract assets, current (included in prepaid expenses and other current assets)	\$ 1,309	\$ 501
Contract assets, non-current (included in other assets, non-current)	583	191
Total contract assets	<u>\$ 1,892</u>	<u>\$ 692</u>
Current contract liabilities:		
Customer deposits	\$ 1,157	\$ 1,506
Deferred revenue:		
License and development	—	13,846
Product	79	78
Service	316	316
Total deferred revenue	<u>395</u>	<u>14,240</u>
Total current contract liabilities	<u>1,552</u>	<u>15,746</u>
Non-current contract liabilities		
License and development	—	13,048
Service	88	72
Total non-current contract liabilities	<u>88</u>	<u>13,120</u>
Total contract liabilities	<u>\$ 1,640</u>	<u>\$ 28,866</u>

The Company records contract liabilities when cash payments are received in advance of the Company's performance. The following table presents significant changes in contract liabilities during the period.

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Contract liabilities balance, beginning of year	\$ 28,866	\$ 42,809	\$ 56,426
Revenue recognized	(28,414)	(15,247)	(13,493)
Cash received, excluding amounts recognized as revenue during the period	1,188	1,304	(124)
Contract liabilities balance, end of year	<u>\$ 1,640</u>	<u>\$ 28,866</u>	<u>\$ 42,809</u>

Transaction Price Allocated to the Remaining Performance Obligation

The following table presents the estimated revenue expected to be recognized in the future related to performance obligations that are unsatisfied or partially unsatisfied.

	December 31,
	2020
	<i>(In thousands)</i>
Year:	
2021	\$ 26,510
2022	2,996
Total performance obligation	<u>\$ 29,506</u>

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Note 3 — Earnings Per Share

Net income for the reported period is divided by the weighted average number of common shares outstanding during the reported period to calculate basic earnings per common share. Basic earnings per share exclude any dilutive effect of stock options and RSUs.

Diluted earnings per common share reflects the potential dilution that would occur if outstanding stock options to purchase common stock were exercised for shares of common stock, using the treasury stock method, and the shares of common stock underlying each outstanding RSU were issued (outstanding stock options to purchase common stock and RSUs collectively referred to as, "stock awards"). Certain shares of common stock issuable under stock awards have been omitted from the diluted earnings per share calculations because their inclusion is considered anti-dilutive.

The following table presents the computation of basic and diluted earnings per share.

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands, except per share amounts)</i>		
Numerator:			
Net income	\$ 26,387	\$ 10,913	\$ 22,093
Denominator (weighted average shares):			
Basic common shares outstanding	55,709	54,740	53,764
Dilutive stock awards	928	1,327	1,574
Diluted common shares outstanding	56,637	56,067	55,338
Earnings per share:			
Basic	\$ 0.47	\$ 0.20	\$ 0.41
Diluted	\$ 0.47	\$ 0.19	\$ 0.40

The following table presents the potential common shares issuable under stock awards that were excluded from the computation of diluted earnings per share, as their effect would have been anti-dilutive.

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Anti-dilutive stock awards	2,185	1,898	2,176

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Note 4 — Other Financial Information**Cash, Cash Equivalents and Restricted Cash**

The Consolidated Statements of Cash Flows explain the changes in the total of cash, cash equivalents and restricted cash. The following table presents a reconciliation of cash, cash equivalents and restricted cash reported within the Consolidated Balance Sheets that sum to the total of such amounts presented.

	December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Cash and cash equivalents	\$ 94,255	\$ 26,387	\$ 21,955
Restricted cash, current (included in cash, cash equivalents and restricted cash)	—	—	97
Restricted cash, non-current (included in other assets, non-current)	103	101	86
Total cash, cash equivalents and restricted cash	<u>\$ 94,358</u>	<u>\$ 26,488</u>	<u>\$ 22,138</u>

The Company pledged cash in connection with the Company's credit cards. The Company deposited corresponding amounts into restricted accounts at several financial institutions.

Accounts Receivable, net

The following table presents the components of accounts receivable, net.

	December 31,	
	2020	2019
	<i>(In thousands)</i>	
Accounts receivable, gross	\$ 12,189	\$ 13,287
Allowance for doubtful accounts	(397)	(308)
Accounts receivable, net	<u>\$ 11,792</u>	<u>\$ 12,979</u>

Allowance for Doubtful Accounts

The following table presents the allowance for doubtful accounts activities.

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Balance, beginning of year	\$ 308	\$ 396	\$ 103
Changes to reserves ⁽¹⁾	95	17	336
Collection of specific reserves	(6)	(105)	(43)
Balance, end of year	<u>\$ 397</u>	<u>\$ 308</u>	<u>\$ 396</u>

⁽¹⁾ Includes general and specific reserves charged to expense.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Inventories

The following table presents inventory by category.

	December 31,	
	2020	2019
	<i>(In thousands)</i>	
Raw materials	\$ 4,260	\$ 3,742
Work in process	2,360	2,141
Finished goods	5,128	4,434
Inventories, net	<u>\$ 11,748</u>	<u>\$ 10,317</u>

Inventories are stated at the lower of cost or net realizable value, using the first-in, first-out method. Valuation adjustments for excess and obsolete inventory reflected as a reduction of inventory was \$0.5 million and \$0.4 million at December 31, 2020 and 2019, respectively. During the year ended December 31, 2020, due to the COVID-19 pandemic, the Company expensed \$1.5 million to product cost of revenue related to the reduced utilization of the Company's manufacturing facilities.

Property and Equipment

On June 24, 2020, the Company entered into an agreement with Schlumberger to terminate the existing VorTeq License Agreement effective June 1, 2020. As a result, the Company conducted an analysis on certain VorTeq long-lived assets that were directly related to obligations under the VorTeq License Agreement and determined that certain of those assets were impaired. The net carrying value of the impaired VorTeq-related machinery and equipment of \$2.3 million was recognized in the year ended December 31, 2020 as impairment of long-lived assets in the Consolidated Statements of Operations. See Note 14, "VorTeq Partnership and License Agreement," for additional discussion regarding the termination of the VorTeq License Agreement.

	December 31,	
	2020	2019
	<i>(In thousands)</i>	
Machinery and equipment	\$ 30,283	\$ 27,664
Leasehold improvements	14,520	10,485
Software	3,422	3,210
Office equipment, furniture, and fixtures	3,493	3,011
Automobiles	199	199
Construction in progress	670	3,910
Total property and equipment	<u>52,587</u>	<u>48,479</u>
Less: Accumulated depreciation and amortization	<u>(32,411)</u>	<u>(29,636)</u>
Property and equipment, net	<u>\$ 20,176</u>	<u>\$ 18,843</u>

Depreciation and Amortization Expense

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Depreciation and amortization expense	<u>\$ 3,875</u>	<u>\$ 3,820</u>	<u>\$ 3,228</u>

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Cloud Computing Arrangements

The following table presents the net carrying value of the implementation costs for hosted cloud computing arrangements included in prepaid and other current assets.

	December 31,	
	2020	2019
	<i>(In thousands)</i>	
Cloud computing arrangements	\$ 1,087	\$ 981

The following table presents the cloud computing arrangement amortization expense. The Company placed its cloud computing arrangements in service in fiscal year 2020, therefore, during the years ended December 31, 2019 and 2018, there were no cloud computing amortization expense.

	Year Ended December
	31, 2020
	<i>(In thousands)</i>
Amortization expense	\$ 190

Accrued Expenses and Other Current Liabilities

	December 31,	
	2020	2019
	<i>(In thousands)</i>	
Payroll, incentives and commissions payable	\$ 8,400	\$ 6,040
Warranty reserve	760	631
Other accrued expenses and current liabilities	2,656	3,198
Total accrued expenses and other current liabilities	\$ 11,816	\$ 9,869

Accumulated Other Comprehensive Income (Loss)

There were no reclassifications of amounts out of accumulated other comprehensive income (loss) for the years ended December 31, 2020, 2019, and 2018, as there have been no sales of securities or translation adjustments that impacted other comprehensive income during these periods. The tax impact of the changes in accumulated other comprehensive income (loss) for the years ended December 31, 2020, 2019 and 2018, was not material.

Advertising Expense

Advertising expense is charged to operations during the year in which it is incurred. Total advertising expense was not material for the years ended December 31, 2020, 2019 and 2018.

Note 5 — Investments and Fair Value Measurements

Available-for-Sale Investments

The Company's investments in U.S. treasury securities and corporate notes and bonds are classified as available-for-sale. As of December 31, 2020 and 2019, all available-for-sale investments were either classified as cash equivalents, or short-term and long-term investments.

The classification of available-for-sale investments on the Consolidated Balance Sheet and definition of each of these classifications are presented in Note 1, "Description of Business and Significant Accounting Policies - Significant Accounting Policies," subsections "Cash and Cash Equivalents" and "Short-term and Long-term Investments."

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Expected maturities can differ from contractual maturities because borrowers may have the right to prepay obligations without prepayment penalties. The Company generally holds available-for-sale investments until maturity; however, from time-to-time, the Company may elect to sell certain available-for-sale investments prior to contractual maturity.

Fair Value of Financial Instruments

The Company follows 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.

All of the Company's financial assets and liabilities are remeasured and reported at fair value at each reporting period; and are classified and disclosed in one of the following three pricing category levels:

- 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 assumptions that market participants would use in pricing.

The following table presents the Company's financial assets measured on a recurring basis by contractual maturity, including their pricing category, amortized cost, gross unrealized holding gains and losses, and fair value.

	Pricing Category	December 31, 2020				December 31, 2019			
		Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
<i>(In thousands)</i>									
Cash equivalents									
Money market securities	Level 1	\$ 59,132	\$ —	\$ —	\$ 59,132	\$ 86	\$ —	\$ —	\$ 86
U.S. treasury securities	Level 2	—	—	—	—	11,582	—	—	11,582
Total cash equivalents		59,132	—	—	59,132	11,668	—	—	11,668
Short-term investments									
U.S. treasury securities	Level 2	1,614	7	—	1,621	2,746	1	—	2,747
Corporate notes and bonds	Level 2	18,708	117	—	18,825	55,951	49	(11)	55,989
Total short-term investments		20,322	124	—	20,446	58,697	50	(11)	58,736
Long-term investments									
Corporate notes and bonds	Level 2	—	—	—	—	15,415	9	(5)	15,419
Total long-term investments		—	—	—	—	15,415	9	(5)	15,419
Total short and long-term investments		20,322	124	—	20,446	74,112	59	(16)	74,155
Total		\$ 79,454	\$ 124	\$ —	\$ 79,578	\$ 85,780	\$ 59	\$ (16)	\$ 85,823

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

As of December 31, 2020 and 2019, the Company had no financial liabilities and no Level 3 financial assets. During the years ended December 31, 2020 and 2019, the Company had no transfers of financial assets between any levels.

The Company monitors investments for impairment. It was determined that unrealized gains and losses at December 31, 2020 and 2019, were 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 contractual maturity, it is expected that the realized gains or losses, if any, will be immaterial.

The following table presents a summary of the fair value and gross unrealized holding losses on the available-for-sale securities that have been in a continuous unrealized loss position, aggregated by type of investment instrument. As of December 31, 2020, there were no available-for-sale securities that were in a continuous unrealized loss position. The available-for-sale securities that were in an unrealized gain position have been excluded from the table.

	December 31, 2019	
	Fair Value	Gross Unrealized Losses
	<i>(In thousands)</i>	
Corporate notes and bonds	\$ 18,754	\$ (16)

Sales of Available-for-Sale Investments

The following table presents the sales of available-for-sale investments.

	Years Ended December 31,	
	2020	2019
	<i>(In thousands)</i>	
U.S. treasury securities	\$ —	\$ 2,043
Corporate notes and bonds	10,573	5,565
Total sales of securities	\$ 10,573	\$ 7,608

During the year ended December 31, 2018, there were no sales of available-for-sale investments. Realized gain and loss on sales of securities was immaterial during the years ended December 31, 2020, 2019 and 2018.

Note 6 — Goodwill and Other Intangible Assets

	December 31,	
	2020	2019
	<i>(In thousands)</i>	
Goodwill	\$ 12,790	\$ 12,790
Other intangible assets		
Gross other intangible assets	286	6,386
Accumulated amortization	(237)	(6,321)
Net other intangible assets	49	65
Total goodwill and other intangible assets	\$ 12,839	\$ 12,855

The reduction in the gross other intangible assets and related accumulated amortization balances was due to the retirement of fully amortized patent assets during the year ended December 31, 2020.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Goodwill

Goodwill is tested for impairment annually in the third quarter (July 1) of the Company's fiscal year or more frequently if indicators of potential impairment exist. The recoverability of goodwill is measured at the reporting unit level, which represents the operating segment.

On July 1, 2020, the Company estimated the fair value of its reporting units using both the discounted cash flow and market approaches. The forecast of future cash flows, which are based on the Company's best estimate of future net sales and operating expenses, are based primarily on expected category expansion, pricing, market segment, and general economic conditions. The Company incorporates other significant inputs to its fair value calculations, including discount rate and market multiples, to reflect current market conditions, and also considered the impact of the COVID-19 pandemic and the termination of the VorTeq License Agreement in its calculations. The analysis performed indicated that the fair value of each reporting unit that is allocated goodwill significantly exceed their carrying value. As a result, no impairment charge was recorded during the year ended December 31, 2020. The Company continues to actively monitor the industries in which it operates and its businesses' performance for indicators of potential impairment.

Other Intangible Assets

The following table presents the components of active identifiable intangible assets, all of which are finite-lived, at the beginning of each respective year and their related accumulated amortization and carrying value at the end of each respective year. All intangible assets are amortized on a straight-line basis over their useful life.

	Weighted Average Useful Life	December 31, 2020			December 31, 2019		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
<i>(In thousands, except for weighted average useful life)</i>							
Developed technology	10 years	\$ —	\$ —	\$ —	\$ 6,100	\$ (6,100)	\$ —
Patents	18 years	286	(237)	49	286	(221)	65
Total		\$ 286	\$ (237)	\$ 49	\$ 6,386	\$ (6,321)	\$ 65

There was no impairment of intangible assets recorded during the years ended December 31, 2020, 2019 and 2018.

The following table presents the intangible asset amortization expense recognized.

	Years Ended December 31,		
	2020	2019	2018
<i>(In thousands)</i>			
Amortization of intangible assets	\$ 16	\$ 575	\$ 630

The following table presents the future estimated amortization expense on intangible assets as of December 31, 2020.

Year:	Estimated Future Amortization
	<i>(In thousands)</i>
2021	\$ 12
2022	11
2023	11
2024	11
2025	4
Total	\$ 49

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Note 7 — Lines of Credit**Loan and Pledge Agreement**

The Company entered into a loan and pledge agreement with a financial institution during January 2017, which has been amended multiple times to accommodate the growth of the Company (the original loan and pledge agreement and its subsequent amendments are hereinafter referred to as the “Loan and Pledge Agreement”). The Loan and Pledge Agreement, which will expire on June 30, 2022, currently provides for a committed revolving credit line of \$16.0 million and an uncommitted revolving credit line of \$4.0 million. The covenants of the Loan and Pledge Agreement allow the Company to incur indebtedness owed to a foreign subsidiary in an aggregate amount not to exceed \$66.0 million, which amount is subordinated to any amounts outstanding under the Loan and Pledge Agreement.

Revolving Loans

Revolving loans under the Loan and Pledge Agreement incur interest per annum at a base rate equal to the London Inter-bank Offered Rate (“LIBOR”) plus 1.5%. Any default bears the aforementioned interest rate plus an additional 2%. The unused portion of the credit line is subject to a fee equal to the product of 0.2% 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. As of December 31, 2020 and 2019, there were no debt outstanding under the Loan and Pledge Agreement.

Letters of Credit

Under the Loan and Pledge Agreement, the Company is allowed to borrow and request letters of credit, which are limited to a term of three years, against the eligible assets held from time to time in the pledged account maintained with the financial institution. As of December 31, 2020 and 2019, there were no letters of credit outstanding under the Loan and Pledge Agreement.

Stand-By Letters of Credit

Under the Loan and Pledge Agreement, the Company is allowed to issue stand-by letters of credit (“SBLCs”) up to one year past the expiration date of the Loan and Pledge Agreement and to hold SBLCs with other financial institutions up to \$5.1 million. SBLCs have a term limit of three years, are secured by pledged U.S. investments, and do not have any cash collateral balance requirements. SBLCs are deducted from the total revolving credit line under the Loan and Pledge Agreement and are subject to a non-refundable quarterly fee that is in an amount equal to 0.7% per annum of the face amount of the outstanding SBLCs.

As of December 31, 2020 and 2019, there were outstanding SBLCs of \$ 13.3 million and \$11.8 million, respectively.

Note 8 — Commitments and Contingencies**Operating Lease Obligations**

The following table presents a summary of operating lease, right of use assets and lease liabilities.

	December 31,	
	2020	2019
	<i>(In thousands)</i>	
Operating lease, right of use asset	\$ 16,090	\$ 11,195
Lease liabilities	\$ 1,243	\$ 1,023
Lease liabilities, non-current	16,443	11,533
Total lease liability	\$ 17,686	\$ 12,556

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

The Company leases office facilities and equipment under operating leases that expire on various dates through fiscal year 2030.

On January 10, 2019, the Company entered into an industrial lease agreement, which commenced on January 1, 2020. This lease for the Company's Katy, Texas facility for manufacturing, testing and training (the "Katy Lease"), included an office, manufacturing and warehouse space of approximately 25,200 square feet ("sq.Ft.") and land of approximately 4.5 acres. The Company's annual base rent obligation, paid monthly, is approximately \$0.3 million with an increase of approximately 3% annually thereafter, totaling approximately \$3.6 million, over the term of the lease. The initial term of the Katy Lease is 120 months after the commencement date, and the Company has two options to extend the lease by an additional five-year term per option, which must be exercised by written notice by the Company at least six months prior to the end of the relevant term.

On February 10, 2020, the Company entered into a lease agreement, that commenced on March 1, 2020, for an additional manufacturing and warehousing space of approximately 54,429 sq.Ft., located in Tracy, California (the "Tracy Lease"). This lease supplements the existing manufacturing, warehousing and distribution of the Company's energy recovery devices ("ERDs") and other products. The Company's annual base rent obligation, paid monthly, is approximately \$0.4 million, with an increase of approximately 3% annually thereafter, totaling approximately \$5.0 million, over the term of the lease. The initial term of the Tracy Lease is 122 months after the commencement date, and the Company has one option to extend the lease by an additional five-year term, which must be exercised by written notice by the Company at least nine months prior to the end of the original lease term.

The following table presents operating lease activities related to all leased properties.

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Operating lease expense	\$ 2,589	\$ 1,894	\$ 1,888
Cash payments	2,398	1,824	964
Non-cash lease liabilities arising from obtaining right-of-use assets	6,384	—	10,411

The following table presents other information related to outstanding operating leases as of December 31, 2020.

Weighted average remaining lease term	8.4 years
Weighted average discount rate	7.0 %

The following table presents the minimum lease payments under noncancelable operating leases, exclusive of executory costs as of December 31, 2020.

Year:	Lease Amounts
	<i>(In thousands)</i>
2021	\$ 2,431
2022	2,650
2023	2,580
2024	2,812
2025	2,736
2026 and thereafter	10,462
Total	23,671
Less imputed lease interest	(5,985)
Total lease liabilities	\$ 17,686

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Warranty

The following table presents the changes in the Company's accrued product warranty reserve.

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Warranty reserve balance, beginning of year	\$ 631	\$ 478	\$ 366
Warranty costs charged to cost of revenue	403	402	340
Utilization charges against reserve	(36)	(56)	(48)
Release of accrual related to expired warranties	(238)	(193)	(180)
Warranty reserve balance, end of year	<u>\$ 760</u>	<u>\$ 631</u>	<u>\$ 478</u>

Purchase Obligations

The Company has purchase order arrangements with its vendors for which the Company has not received the related goods or services as of December 31, 2020. These arrangements are subject to change based on the Company's sales demand forecasts. The Company has the right to cancel the arrangements prior to the date of delivery. The purchase order arrangements are related to various raw materials and component parts, as well as capital equipment. As of December 31, 2020, the Company had approximately \$6.3 million of such open cancellable purchase order arrangements.

Guarantees

The Company enters into indemnification provisions under its agreements with other companies in the ordinary course of business, typically with its customers. Under these provisions, the Company generally indemnifies and holds harmless the indemnified party for losses suffered or incurred by the indemnified party as a result of the Company's activities, generally limited to personal injury and property damage caused by the Company's employees at a customer's plant, and in proportion to the employee's percentage of fault for the accident. Damages incurred for these indemnifications would be covered by the Company's general liability insurance to the extent provided by the policy limitations. The Company has not incurred material costs to defend lawsuits or settle claims related to these indemnification agreements. As a result, the estimated valuation of the potential liability arising from these agreements is not material. Accordingly, the Company recorded no liabilities for these agreements as of December 31, 2020 and 2019.

In certain cases, the Company issues warranty and product performance guarantees to its customers for amounts generally equal to 10% or less of the total sales agreement to endorse the execution of product delivery and to the warranty of design work, fabrication and operating performance of our devices. These guarantees are generally SBLCs that typically remain in place for a period of 24 months to 36 months. See Note 7, "Lines of Credit – Stand-By Letters of Credit," for information related to SBLCs.

Litigation

The Company is named in and subject to various proceedings and claims in connection with its business. The outcome of matters the Company has been, and currently is, 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 effect on the Company's results of operations in any future period, and a significant judgment could have a material impact on the Company's financial condition, results of operations and cash flows. The Company may in the future become involved in additional litigation in the ordinary course of business, including litigation that could be material to its business.

The Company considers all claims on a quarterly basis and, based on known facts, assesses whether potential losses are considered reasonably possible, probable and estimable. Based upon this assessment, the Company then evaluates disclosure requirements and whether to accrue for such claims in its consolidated financial statements. The Company records a provision for a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. These provisions are reviewed at least quarterly and are adjusted to reflect the impacts of negotiations, settlements, rulings, advice of legal counsel and other information and events pertaining to a particular case. As of December 31, 2020, there were no material losses which were probable or reasonably possible.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

On July 21, 2020, a purported securities class action lawsuit was filed in the United States District Court for the Southern District of New York (Visser, et al. v. Energy Recovery, Inc., et al., Case No. 1:20-cv-05647-VM (S.D.N.Y.)), naming as defendants the Company and certain of the Company's present and former executive officers. The Complaint alleged that the defendants violated Section 10(b) and Section 20(a) of the Securities Exchange Act of 1934, as amended, and Rule 10b-5 promulgated thereunder, by making materially false and misleading statements, and failed to disclose material adverse facts concerning, the commercialization of VorTeq and expectations of future license revenue. The Complaint further alleged unspecified damages based on a decline in the market price of the Company's shares following the announcement of the termination of the VorTeq License Agreement. The Company believed the complaint was without merit. On January 20, 2021, upon a motion brought by the Plaintiff, the court dismissed the case, without prejudice. The Plaintiff determined to seek dismissal of the action after completing further investigation into the matter. The matter is now closed.

Note 9 — Income Taxes

The following table presents the Company's U.S. and foreign components of consolidated income before income taxes and the provision for (benefit from) income taxes.

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Income before income taxes:			
U.S.	\$ 32,046	\$ 12,180	\$ 12,139
Foreign	87	76	(699)
Total income before income taxes	<u>\$ 32,133</u>	<u>\$ 12,256</u>	<u>\$ 11,440</u>
Current tax benefit:			
Federal	\$ (148)	\$ (120)	\$ (297)
State	5	3	(2)
Foreign	40	66	25
Current tax benefit	<u>(103)</u>	<u>(51)</u>	<u>(274)</u>
Deferred tax provision (benefit):			
Federal	5,547	949	(9,773)
State	302	445	(606)
Total deferred tax provision (benefit)	<u>5,849</u>	<u>1,394</u>	<u>(10,379)</u>
Total provision for (benefit from) income taxes	<u>\$ 5,746</u>	<u>\$ 1,343</u>	<u>\$ (10,653)</u>

For the year ended December 31, 2020, the Company recognized an income tax expense of \$ 5.7 million. The tax expense of \$5.7 million included a tax benefit of \$0.7 million related to tax deductions from stock-based compensation.

For the year ended December 31, 2019, the Company recognized an income tax expense of \$ 1.3 million. The tax expense of \$1.3 million included a deferred tax benefit of \$1.0 million related to an increase in prior year U.S. federal research and development credits and a tax benefit of \$ 0.5 million related to tax deductions from stock-based compensation, partially offset by deferred tax expense of \$0.3 million due primarily to a remeasurement of the Company's state deferred tax assets due to an adjustment to the Company's estimated blended state effective tax rate.

For the year ended December 31, 2018, the Company recognized an income tax benefit of \$ 10.7 million. The tax benefit of \$10.7 million included a tax benefit of \$12.3 million related to the income tax effects of a tax election related to a change to the Company's international tax structure in Ireland that was effective in the second quarter of 2018. This resulted in a deferred tax asset related to tax expense recorded on earnings and profits under the U.S. Tax Cut and Jobs Act ("Tax Act") on deferred revenue not yet recognized under U.S. GAAP. In addition, the tax benefit also included a \$0.8 million discrete tax benefit related to tax deductions from stock-based compensation.

The Company has evaluated the impact of the global intangible low taxed income ("GILTI") and has concluded that the impact to the Company is immaterial.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

The following table presents a reconciliation of income taxes computed at the statutory federal income tax rate to the effective tax rate implied by the accompanying Consolidated Statements of Operations.

	Years Ended December 31,		
	2020	2019	2018
U.S. federal taxes at statutory rate	21 %	21 %	21 %
State income tax, net of federal benefit	1	4	(6)
Deferred tax re-measurement - Change in tax rates	—	—	1
Foreign rate differential	—	—	(1)
Change in tax status of foreign operations	—	—	(102)
Stock-based compensation	(2)	(1)	(3)
Non-deductible expenses	1	2	1
Federal research credits	(3)	(16)	(6)
Valuation allowance	—	—	3
Other	—	1	(1)
Effective tax rate	18 %	11 %	(93 %)

The following table presents the components of the Company's net deferred tax asset, which is presented in other assets, non-current on the Consolidated Balance Sheets.

	December 31,	
	2020	2019
	<i>(In thousands)</i>	
Deferred tax assets:		
Net operating loss carry forwards	\$ 6,285	\$ 6,488
Accruals and reserves	3,852	8,922
Operating lease liabilities	3,848	2,750
Research and development, and foreign tax credit carry forwards	8,851	7,533
Acquired intangibles	641	804
Charitable contributions	45	26
Total deferred tax assets	23,522	26,523
Valuation allowance	(4,403)	(3,933)
Net deferred tax assets	19,119	22,590
Deferred tax liabilities:		
Depreciation on property and equipment	(2,985)	(1,854)
Right of use asset	(3,489)	(2,443)
Unrecognized gain on translation of foreign currency	(54)	(33)
Goodwill	(1,561)	(1,363)
Total deferred tax liabilities	(8,089)	(5,693)
Net deferred tax asset	\$ 11,030	\$ 16,897

The Company had gross deferred tax assets of \$ 23.5 million and \$26.5 million at December 31, 2020 and 2019, respectively. In asserting the recoverability of deferred tax assets, management considers 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.

The Company assesses 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, the Company considers 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 objective positive evidence evaluated was the cumulative profit incurred in the U.S. and the cumulative losses incurred in Ireland over the three-year period ended December 31, 2020.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

On the basis of this evaluation, as of December 31, 2020, the Company recognized all of its U.S. federal and state deferred tax assets with the exception that the Company continues to maintain a valuation allowance on its California research and development ("R&D") credit carryovers of \$3.1 million. The Company will maintain a valuation allowance on its California R&D credit carryovers because it is more likely than not that the Company will continue to annually generate more California R&D tax credits than it utilizes, resulting in no net reduction of credits. The Company's policy with respect to California R&D credits is that they are utilized on a last-in, first-out basis.

In addition, as of December 31, 2020, the Company is reporting a full valuation allowance on its Irish entity's deferred tax assets totaling \$ 1.3 million. The valuation allowance represents a provision for uncertainty as to the realization of tax benefits from these deferred income tax assets. The Company will continue to evaluate the tax benefit uncertainty and will adjust, if warranted, the valuation allowance in future periods to the extent that the Company's deferred income tax assets become more likely than not to be realizable.

The Company continues to assert that the accumulated foreign earnings of its subsidiaries in Spain and Canada are permanently reinvested. Due to the Tax Act, any future repatriation of the earnings of its subsidiaries in Spain and Canada would not be subject to U.S. federal income tax. The Company has estimated that the foreign withholding taxes and U.S. state income taxes related to a potential future repatriation of these earnings would be immaterial.

The following table presents the Company's net operating loss carryforwards by taxing authority.

	December 31,	
	2020	2019
	<i>(In thousands)</i>	
Federal	\$ 19,913	\$ 21,153
California	11,043	11,840
Ireland	10,376	9,363
Total net operating loss carryforwards	<u>\$ 41,332</u>	<u>\$ 42,356</u>

The net operating loss carryforwards, if not utilized, will begin to expire in years 2034 and 2031 for Federal and California, respectively. Utilization of the net operating loss carryforward may be subject to a substantial annual limitation due to the ownership change limitations provided by the U.S. Internal Revenue Code ("IRC") and similar California provisions. The annual limitation will result in the expiration of the net operating loss carryforwards before utilization. The Company has estimated the amount which may ultimately be realized and recorded deferred tax assets accordingly. The Ireland net operating loss carryforwards do not have an expiration date.

The following table presents the Company's R&D credit by taxing authority, minimum tax credit and foreign tax credit carryforwards.

	December 31,	
	2020	2019
	<i>(In thousands)</i>	
Federal	\$ 5,733	\$ 4,761
California	3,947	3,509
Total credit carryforwards	<u>\$ 9,680</u>	<u>\$ 8,270</u>

The federal R&D credit carryforwards, if not utilized, will begin to expire in year 2030. The California credit carryforwards do not expire. Utilization of the credit carryforwards may be subject to a substantial annual limitation due to the ownership change limitations provided by the IRC and similar California provisions.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Accounting for 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. The following table presents the aggregate changes in the balance of the gross unrecognized tax benefits.

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Gross unrecognized tax benefits, beginning of year	\$ 963	\$ 1,162	\$ 911
Additions:			
Prior year tax position	9	27	—
Current year tax position	167	163	251
Reductions:			
Prior year tax position	(5)	(389)	—
Gross unrecognized tax benefits, end of year	<u>\$ 1,134</u>	<u>\$ 963</u>	<u>\$ 1,162</u>

As of December 31, 2020, the Company had unrecognized tax benefits of \$ 1.1 million, of which \$0.7 million, if recognized, would affect the Company's effective tax rate.

The Company adopted the accounting policy that interest and penalties are classified as part of its income taxes. As of December 31, 2020, there were no accrued interest or penalties associated with any unrecognized tax benefits.

There are currently no examinations by Federal, California, and foreign tax authorities. The Company believes that, as of December 31, 2020, the gross unrecognized tax benefits will not materially change in the next twelve months. The Company believes that it has adequately provided for any reasonably foreseeable outcomes related to any tax audits and that any settlement will not have a material adverse effect on the consolidated financial position or results of operations. However, there can be no assurances as to the possible outcomes.

Note 10 — Stockholder's Equity

Preferred Stock

The Company has the authority to issue 10,000,000 shares of preferred stock with a par value of \$ 0.001 per share. The Board of Directors has the authority, without action by the Company's 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 the Company's stockholders. To date, the Board of Directors has not designated any rights, preferences, or powers of any preferred stock, and as of December 31, 2020 and 2019, no shares of preferred stock were issued or outstanding.

Common Stock

The Company has the authority to issue 200,000,000 shares of common stock with a par value of \$ 0.001 per share. Subject to the preferred rights of 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 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.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

The follow table presents the Company's common shares issued and outstanding.

	December 31,	
	2020	2019
Issued	61,798,004	60,717,702
Outstanding	56,342,069	55,261,767

Stock Repurchase Program

On March 9, 2021, the Board of Directors authorized a stock repurchase program under which the Company, at the discretion of management, may repurchase up to \$50.0 million in aggregate cost of the Company's outstanding common stock (the "March 2021 Authorization"). Under the March 2021 Authorization, purchases of shares of common stock may be made from time to time in the open market, or in privately negotiated transactions, in compliance with applicable state and federal securities laws. The March 2021 Authorization does not have an expiration date. The timing and amounts of any purchases will be based on market conditions and other factors including price, regulatory requirements, and capital availability. The March 2021 Authorization does not obligate the Company to acquire any specific number of shares in any period, and may be expanded, extended, modified or discontinued at any time without prior notice. The Company accounts for stock repurchases using the cost method. The aggregate cost includes fees charged in connection with acquiring the outstanding common stock.

Note 11 — Stock-based Compensation

Stock Option Plans

In July 2020, the stockholders approved the 2020 Incentive Plan (the "2020 Plan"), that permits the grant of stock options, stock appreciation rights, restricted stock, restricted stock awards ("RSA"), RSUs, performance units, performance shares, and other stock-based awards to employees, officers, directors, and consultants. Prior to the approval of the 2020 Plan, the Company maintained the 2016 Incentive Plan, the Amended and Restated 2008 Equity Incentive Plan, and the 2008 Equity Incentive Plan (hereinafter referred to as the "Predecessor Plans"). Subject to adjustments, as provided in the 2020 Plan, the number of shares of common stock initially authorized for issuance under the 2020 Plan was 5,894,727 shares (which consist of 4,500,000 new share awards plus 1,394,727 share awards that were authorized and unissued under the Predecessor Plans) plus up to 4,850,630 shares that were set aside for awards granted under the Predecessor Plans that are subsequently forfeited. The 2020 Plan supersedes all previously issued stock incentive plans (including the Predecessor Plans) and is currently the only available plan from which awards may be granted. The Company's 2020 Plan and Predecessor Plans are hereinafter referred to as "Equity Incentive Plans."

Shares available for grant under the 2020 Plan at December 31, 2020 was 5,885,313 shares. There were no shares available for grant under the Predecessor Plans after July 15, 2020.

Stock Options

Stock options outstanding at December 31, 2020 and to be granted subsequently after December 31, 2020, generally vest over four years and expire no more than 10 years after the date of grant.

Restricted Stock Awards

There were no RSAs outstanding as of December 31, 2020.

Restricted Stock Units

RSUs outstanding at, and to be awarded subsequently after, December 31, 2020, generally vest 25% annually over the four years from date of grant and are dependent upon continued employment. As RSUs 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.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Fair Value Assumptions**Stock Options**

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, the Company is required to develop several assumptions, which are highly subjective. The Company determines these assumptions as follows:

- *Expected Term:* The Company uses its 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 determines the expected term based on the simplified method.
- *Expected Volatility:* The Company determines expected volatility based on its 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 stock options granted.
- *Dividend Yield:* The Company has never declared or paid any cash dividends and does not plan to pay cash dividends in the foreseeable future; therefore, the Company uses an expected dividend yield of zero in the valuation model.

The following table presents assumptions used in the Black-Scholes option pricing model to determine the estimated grant date fair values of stock options granted to employees.

	Years Ended December 31,		
	2020	2019	2018
Weighted average expected life (years)	5.1	4.6	4.2
Weighted average expected volatility	71.7%	75.9%	67.4%
Risk-free interest rate	0.29% – 1.32%	1.55% – 2.57%	2.48% – 3.01%
Weighted average dividend yield	—%	—%	—%

Restricted Stock Units

The fair value of RSUs granted to employees is based on the Company's common stock price on the date of grant.

Stock-based Compensation Expense

The following table presents the stock-based compensation expense related to the fair value measurement of awards granted to employees by expense category and by type of award. All stock-based payment awards are amortized on a straight-line basis over the requisite service periods of the awards, generally the vesting periods.

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Stock-based compensation expense charged to:			
Product cost of revenue	\$ 135	\$ 130	\$ 87
General and administrative	2,615	3,090	3,266
Sales and marketing	893	836	694
Research and development	1,151	1,625	1,193
Total stock-based compensation expense	<u>\$ 4,794</u>	<u>\$ 5,681</u>	<u>\$ 5,240</u>
Stock-based compensation expense by type of award:			
Options	\$ 3,004	\$ 3,940	\$ 3,873
RSUs	1,790	1,741	1,367
Total stock-based compensation expense	<u>\$ 4,794</u>	<u>\$ 5,681</u>	<u>\$ 5,240</u>

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Modifications of Equity Awards

During the year ended December 31, 2019, the Company recorded additional stock-based compensation expense of \$ 0.6 million related to the modification of certain equity awards resulting from the Company's former Chairman of the Board's retirement from service, on June 13, 2019, in consideration for his entering into a Settlement Agreement and Release, and the Company's former President and Chief Executive Officer's resignation, on November 1, 2019, in consideration for his entering into a Settlement Agreement and Release.

During the year ended December 31, 2018, the Company recorded additional stock-based compensation expense of \$ 0.9 million primarily related to the modification of certain equity awards resulting from the Company's former President and Chief Executive Officer's resignation, on February 24, 2018, in consideration for his entering into a Settlement Agreement and Release.

Forfeitures

The Company estimates forfeitures at the time of grant and revises those estimates periodically in subsequent periods if actual forfeitures differ from those estimates. The Company uses historical data to estimate pre-vesting option forfeitures and records stock-based compensation expense only for those awards that are expected to vest. If the Company's actual forfeiture rate is materially different from its estimate, the stock-based compensation expense could be significantly different from what the Company has recorded in the current period.

The following table presents the estimated forfeiture rates used in determining the expense in the stock-based compensation expense table above.

	Years Ended December 31,		
	2020	2019	2018
Stock options and RSUs vested over 4-years	11.2%	11.6%	14.9%

Unamortized Stock-Based Compensation Costs

Stock-based compensation costs related to unvested stock options and RSUs will generally be amortized on a straight-line basis over the remaining average service period of each award. The following table presents the unamortized compensation costs and weighted average service period of all unvested outstanding awards as of December 31, 2020.

	Unamortized Compensation Costs	Weighted Average Service Period
	<i>(In thousands)</i>	<i>(In years)</i>
Stock options	\$ 5,189	2.5
RSUs	4,938	2.7
Total unamortized compensation costs, net of adjusted forfeitures	<u>\$ 10,127</u>	

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Stock Option Activities

The following table presents stock option activities under the Equity Incentive Plans.

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value ⁽¹⁾
	<i>(In thousands)</i>	<i>(Per share)</i>	<i>(In years)</i>	<i>(In thousands)</i>
Balance, December 31, 2017	5,092	\$ 5.43		
Granted	1,232	7.96		
Exercised	(1,160)	3.73		\$ 4,735
Forfeited	(182)	3.98		
Balance, December 31, 2018	4,982	6.36		
Granted	568	8.31		
Exercised	(1,133)	5.36		4,781
Forfeited	(490)	8.49		
Balance, December 31, 2019	3,927	6.66		
Granted	806	8.78		
Exercised	(926)	4.79		4,637
Forfeited	(187)	9.15		
Balance, December 31, 2020	3,620	\$ 7.48	6.6	\$ 22,293
Vested and exercisable as of December 31, 2020	2,427	\$ 6.99	5.6	\$ 16,153
Vested and exercisable as of December 31, 2020 and expected to vest thereafter	3,484	\$ 7.44	6.5	\$ 21,602

⁽¹⁾ The aggregate intrinsic value of an exercised option is calculated as the difference between the exercise price of the underlying option and the fair value of the Company's common stock at the time of exercise. The aggregate intrinsic value at December 31, 2020 is calculated as the difference between the exercise price of the underlying outstanding options and the fair value of the Company's common stock as of December 31, 2020 or the last trading day prior to December 31, 2020.

Restricted Stock Unit Activities

The following table presents RSU activities under the Equity Incentive Plans.

	Number of Shares	Weighted Average Grant Date Fair Value
	<i>(In thousands)</i>	<i>(Per share)</i>
Balance, December 31, 2017	274	\$ 9.54
Awarded	279	7.74
Vested	(90)	9.33
Balance, December 31, 2018	463	8.49
Awarded	415	7.80
Vested	(201)	8.62
Forfeited	(133)	8.37
Balance, December 31, 2019	544	7.95
Awarded	368	10.33
Vested	(161)	8.12
Forfeited	(64)	8.86
Balance, December 31, 2020	687	9.10

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Vested Stock Options and RSUs

The following table presents the total grant date fair value of stock options and RSUs vested during the period.

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Stock options	\$ 2,915	\$ 4,025	\$ 3,607
RSUs	1,310	1,733	841
Total grant date fair value of stock options and RSUs vested during the period	<u>\$ 4,225</u>	<u>\$ 5,758</u>	<u>\$ 4,448</u>

Note 12 — Segment Reporting

The Company's chief operating decision-maker ("CODM") is its chief executive officer. The Company's reportable 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 products sold and the related products and services. The Water segment consists of revenue associated with products sold for use in reverse osmosis desalination as well as the related identifiable expenses. The Oil & Gas segment for fiscal years 2018, 2019 and 2020 consists solely of revenue associated with products sold for use in gas processing, chemical processing and hydraulic fracturing as well as license and development revenue associated therewith.

The Company continues to monitor and review its segment reporting structure in accordance with authoritative guidance to determine whether any changes have occurred that would impact its reportable segments. As a result of the evolution of the Company's operations and its R&D efforts in new product development, starting in 2021, the Company's reportable segments will be the Water segment and the Emerging Technologies segment. The Company's Water segment will include both seawater desalination sales and service, industrial wastewater R&D and marketing efforts, and other water-related R&D activities, and the Company's Emerging Technologies segment will include the Company's R&D efforts in continued development of the VorTeq, its sale and support of the IsoBoost in natural gas processing, and its R&D efforts for new product development for other non-water fluid processing applications, which are currently reported as R&D under the Company's corporate expenses. In addition, certain amounts in the Company's general and administrative ("G&A") and sales and marketing ("S&M") expenses will be reallocated to the Water and Emerging Technologies segments.

For each of the years presented in the following tables, operating income (loss) for each segment excludes other income and expenses and certain corporate expenses managed outside the operating segment such as 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.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Segment Financial Information

The following table presents a summary of the Company's financial information by segment and corporate operating expenses.

	Year Ended December 31, 2020			Year Ended December 31, 2019			Year Ended December 31, 2018		
	Water	Oil & Gas	Total	Water	Oil & Gas	Total	Water	Oil & Gas	Total
	<i>(In thousands)</i>								
Product revenue	\$ 92,061	\$ 30	\$ 92,091	\$ 72,730	\$ 104	\$ 72,834	\$ 60,512	\$ 513	\$ 61,025
Product cost of revenue	28,239	10	28,249	20,148	187	20,335	17,211	662	17,873
Product gross profit (loss)	63,822	20	63,842	52,582	(83)	52,499	43,301	(149)	43,152
License and development revenue	—	26,895	26,895	—	14,108	14,108	—	13,490	13,490
Operating expenses									
General and administrative	2,196	2,058	4,254	1,501	1,576	3,077	2,078	1,771	3,849
Sales and marketing	5,958	112	6,070	7,072	741	7,813	5,783	1,264	7,047
Research and development	2,973	15,859	18,832	3,825	19,085	22,910	1,711	15,276	16,987
Amortization of intangible assets	16	—	16	575	—	575	629	—	629
Impairment of long-lived assets	—	2,332	2,332	—	—	—	—	—	—
Total operating expenses	11,143	20,361	31,504	12,973	21,402	34,375	10,201	18,311	28,512
Operating income (loss)	\$ 52,679	\$ 6,554	59,233	\$ 39,609	\$ (7,377)	32,232	\$ 33,100	\$ (4,970)	28,130
Less: Corporate operating expenses			27,939			21,868			18,152
Income from operations			31,294			10,364			9,978
Other income, net			839			1,892			1,462
Income before income taxes			\$ 32,133			\$ 12,256			\$ 11,440

Segment Depreciation and Amortization Expense

The following table presents a summary of the Company's depreciation and amortization by segment and corporate operating expenses.

	Years Ended December 31,		
	2020	2019	2018
	<i>(In thousands)</i>		
Water	\$ 1,354	\$ 1,824	\$ 2,060
Oil & Gas	2,125	2,251	1,377
Corporate	412	320	432
Total depreciation and amortization	\$ 3,891	\$ 4,395	\$ 3,869

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Note 13 — Concentrations**Product Revenue by Geographic Location**

The following table presents the Company's product revenue by geographic locations. The geographic information includes product revenue from our domestic and international customers based on the customers' requested delivery locations, except for certain cases in which the customer directed the Company 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.

	Years Ended December 31,		
	2020	2019	2018
Product revenue by geographic location:			
United States	2%	2%	3%
International	98%	98%	97%
Total product revenue	100%	100%	100%
Product revenue by country: ⁽¹⁾			
Saudi Arabia	34%	29%	31%
United Arab Emirates	18%	10%	**
Egypt	10%	**	17%
Others ⁽²⁾	38%	61%	52%
Total	100%	100%	100%

⁽¹⁾ Countries representing more than 10% of product revenues for the periods presented.

⁽²⁾ Countries in the aggregate, individually representing less than 10% of product revenues for the periods presented.

** Zero or less than 10%.

Product Revenue

The following table presents customers accounting for 10% or more of the Company's product revenue by segment. Although certain customers might account for greater than 10% of the Company's product revenue at any one point in time, the concentration of product revenue between a limited number of MPD customers shifts regularly, depending on contract negotiations. The percentages by customer reflect specific relationships or contracts that would concentrate the Company's product revenue for the periods presented and does not indicate a trend specific to any one customer.

	Segment	Years Ended December 31,		
		2020	2019	2018
Customer A	Water	27%	**	**
Customer B	Water	23%	19%	**
Customer C	Water	**	**	15%
Customer D	Water	**	**	11%

** Zero or less than 10%.

License and Development Revenue

One international Oil & Gas segment customer accounted for 100% of the Company's license and development revenue for the years ended December 31, 2020, 2019 and 2018.

Long-lived Assets

All of the Company's long-lived assets were located in the United States at December 31, 2020 and 2019.

ENERGY RECOVERY, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Cont.)

Major Supply Vendors

The following table presents the major supply vendors accounting for 10% or more of the Company's consolidated supply and manufacturing costs purchases during the years ended December 31, 2020 and 2019.

	Years Ended December 31,	
	2020	2019
Vendor A	19%	22%
Vendor B	16%	13%

Note 14 — VorTeq Partnership and License Agreement

On October 14, 2015, the Company and Schlumberger entered into the VorTeq License Agreement, which provided Schlumberger with exclusive worldwide rights to the Company's VorTeq technology for use in hydraulic fracturing onshore applications. In performing the obligations under the agreement, the Company provided research and development services to commercialize the technology in accordance with the KPIs, as defined in the VorTeq License Agreement. The VorTeq License Agreement included up to \$125.0 million in upfront consideration paid in the following stages: (i) a \$ 75.0 million non-refundable upfront exclusivity payment; and (ii) two non-refundable milestone payments of \$ 25.0 million each made upon achievement of successful tests in accordance with the KPIs specified in the VorTeq License Agreement ("M1" and "M2").

On June 24, 2020, prior to activating the M1 test, the Company and Schlumberger entered into an agreement to terminate the VorTeq License Agreement effective June 1, 2020. Prior to the termination of the VorTeq License Agreement, the Company had been recognizing license and development revenue related to the non-refundable exclusivity payment under the cost to total cost method of accounting. Pursuant to the terms of the agreement, each party's rights, duties and obligations under the VorTeq License Agreement have been terminated. Accordingly, the Company (i) is entitled to retain all of the non-refundable upfront exclusivity payment; (ii) is not entitled to any further payments from Schlumberger, and (iii) has no future performance obligations under the VorTeq License Agreement. The Company accounted for the termination as a contract modification, which resulted in the Company recognizing the remaining amounts of the original \$75.0 million non-refundable upfront exclusivity payment of \$24.4 million during the second quarter of fiscal year 2020 as license and development revenue in the Consolidated Statements of Operations.

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 and Attestation Report of the Registered Public Accounting Firm

Management’s Report on Internal Control Over Financial Reporting

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, 2020. 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, 2020, our internal control over financial reporting was effective.

Attestation Report of the Registered Public Accounting Firm

The Company’s independent registered public accountants, Deloitte & Touche, 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 in Part II, Item 8, “Financial Statements and Supplementary Data,” in this Annual Report on Form 10-K.

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, 2021. The Proxy Statement is for our Annual Meeting of Stockholders which will be held on June 10, 2021.

Item 11 — Executive Compensation

The information required by this Item is included in and incorporated by reference from the Proxy Statement under the captions “Election of Directors,” “Director Compensation,” “Compensation Discussion and Analysis” and “Report of the Compensation Committee of the Board of Directors on Executive Compensation.”

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, 2020.

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⁾	4,307,102	\$7.48	5,885,313
Equity compensation plans not approved by security holders	None	Not applicable	Not applicable

⁽¹⁾ Represents shares of our common stock issuable upon exercise of options outstanding under the following equity compensation plans: the 2020 Incentive Plan, the 2016 Incentive Plan, the Amended and Restated 2008 Equity Incentive Plan, and the 2008 Equity Incentive Plan.

The information under the caption “Security Ownership of Certain Beneficial Owners and Management” in the Proxy Statement is incorporated herein by reference.

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 under the caption “Related Person Policies and Transactions.”

Item 14 — Principal Accounting Fees and Services

The information required by this item is included in and incorporated by reference from the Proxy Statement under the caption “Principal Accountant Fees and Services.”

With the exception of the information specifically incorporated by reference in Part III to this Annual Report on Form 10-K from the Proxy Statement, the Proxy Statement shall not be deemed to be filed as part of this report.

PART IV

Item 15 — Exhibits and Financial Statement Schedules

Financial Statements

- (a) The following documents are included as part of this Annual Report on Form 10-K:
- (1) *Financial Statements*. The financial statements included in Part II, Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K.
- (2) *Financial Statement Schedule*. See Note 4, “Other Financial Information-Allowance for Doubtful Accounts,” of the Notes to Consolidated Financial Statements in Part II, Item 8, “Financial Statements and Supplementary Data,” of this Annual Report on Form 10-K. Schedules not listed have been omitted because information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.
- (b) *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).
- (c) Exhibits required by Item 601 of Regulation S-K.

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	3/27/2009	
3.2	Amended and Restated Bylaws, effective as of July 8, 2008.	10-K	001-34112	3.2	3/27/2009	
4.1	Description of Securities.					X
10.1*	Form of Indemnification Agreement between the Company and its directors and officers.	S-1/A	333-150007	10.1	5/12/2008	
10.2*	2008 Equity Incentive Plan of the Company and form of Stock Option Agreement thereunder.	S-1/A	333-150007	10.6	5/12/2008	
10.3*	Energy Recovery Inc. Amended and Restated 2008 Equity Incentive Plan.	DEF14A	001-34112	Appendix A	4/27/2012	
10.4	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	8/8/2011	
10.5*	Energy Recovery, Inc. Change in Control Severance Plan dated March 5, 2012.	8-K	001-34112	10.1	3/9/2012	
10.6*	Offer Letter dated September 17, 2015 to Ms. Emily Smith.	10-K	001-34112	10.30	3/4/2016	
10.7*	Energy Recovery, Inc. Annual Incentive Plan effective as of January 1, 2016.	8-K	001-34112	10.1	3/2/2016	
10.8*	Energy Recovery, Inc. 2016 Incentive Plan.	DEF14A	001-34112	Appendix A	4/27/2016	
10.9*	Offer Letter dated May 27, 2016 to Mr. William Yeung.	8-K	001-34112	99.1	6/22/2016	
10.10	Loan and Pledge Agreement between Energy Recovery, Inc. as Borrower, and Citibank, N.A. as Lender.	10-K	001-34112	10.34	3/10/2017	
10.11	First Amendment to Loan and Pledge Agreement by and between Energy Recovery, Inc. and Citibank, N.A.	10-Q	001-34112	10.1	5/4/2017	
10.12	1717 Doolittle Lease Agreement.	8-K	001-34112	10.1	4/18/2018	
10.13	Second Amendment to Loan and Pledge Agreement by and between Energy Recovery, Inc. and Citibank, N.A.	10-Q	001-34112	10.1	5/3/2018	
10.14	Offer Letter to Mr. Joshua Ballard.	8-K	001-34112	2.2	8/15/2018	
10.15	Employment Agreement with Mr. Rodney Clemente.	8-K	001-34112	10.3	8/27/2018	
10.16	Third Amendment to Loan and Pledge Agreement by and between Energy Recovery, Inc. and Citibank N.A.	10-Q	001-34112	10.5	11/1/2018	
10.17	Lease Agreement, dated as of January 10, 2019, by and between Energy Recovery, Inc. and FS Clay, LLC.	8-K	001-34112	10.1	1/16/2019	
10.18	Fourth Amendment to Loan and Pledge Agreement by and between Energy Recovery, Inc. and Citibank N.A.	10-Q	001-34112	10.1	5/2/2019	

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Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.19	Fifth Amendment to Loan and Pledge Agreement by and between Energy Recovery, Inc. and Citibank N.A.	10-Q	001-34112	10.2	5/2/2019	
10.20	Sixth Amendment to Loan and Pledge Agreement by and between Energy Recovery, Inc. and Citibank N.A.	10-Q	001-34112	10.1	8/2/2019	
10.21	Settlement Agreement and Release, dated as of March 24, 2020, by and between Energy Recovery, Inc., and Eric Siebert.	8-K	001-34112	10.1	3/25/2020	
10.22	Lease Agreement, dated as of February 10, 2020, by and between Energy Recovery, Inc. and Prologis, L.P.	10-Q	001-34112	10.1	5/1/2020	
10.23	Offer of Employment with Energy Recovery, Inc., as President and Chief Executive Officer.	8-K/A	001-34112	10.1	5/22/2020	
10.24*	Energy Recovery, Inc. 2020 Incentive Plan.	DEF14A	001-34112	Appendix A	5/29/2020	
10.25	Termination Agreement and Release, dated as of June 24, 2020, by and between ERI Energy Recovery Ireland Ltd. and Schlumberger Technology Corporation.	8-K/A	001-34112	10.1	6/29/2020	
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	3/27/2009	
21.1	List of subsidiaries of the Company.					X
23.1	Consent of Deloitte & Touche 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
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	Inline XBRL Document Set for the consolidated financial statements and accompanying notes in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K.					X
104	Inline XBRL for the cover page of this Annual Report on Form 10-K, included in the Exhibit 101 Inline XBRL Document Set.					X

* Indicates management compensatory plan, contract or arrangement.

** The certifications furnished in Exhibits 32.1 are deemed to accompany this Form 10-K and are not deemed "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, nor shall they be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act.

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 12th day of March, 2021.

ENERGY RECOVERY, INC.

/s/ ROBERT YU LANG MAO

Robert Yu Lang Mao
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
<u>/s/ ROBERT YU LANG MAO</u> Robert Yu Lang Mao	Chairman of the Board, Director, and President and Chief Executive Officer (Principal Executive Officer)	March 12, 2021
<u>/s/ JOSHUA BALLARD</u> Joshua Ballard	Chief Financial Officer (Principal Financial and Accounting Officer)	March 12, 2021
<u>/s/ ALEXANDER J. BUEHLER</u> Alexander J. Buehler	Director	March 12, 2021
<u>/s/ OLAV FJELL</u> Olav Fjell	Director	March 12, 2021
<u>/s/ SHERIF FODA</u> Sherif Foda	Director	March 12, 2021
<u>/s/ ARVE HANSTVEIT</u> Arve Hanstveit	Director	March 12, 2021
<u>/s/ OLE PETER LORENTZEN</u> Ole Peter Lorentzen	Director	March 12, 2021
<u>/s/ PAMELA TONDREAU</u> Pamela Tondreau	Director	March 12, 2021

**DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES
EXCHANGE ACT OF 1934**

Energy Recovery, Inc. (the "Company", "Energy Recovery", "we", "our" and "us") has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "*Exchange Act*"): our common stock.

General

Energy Recovery is authorized to issue up to 200,000,000 shares of common stock, \$0.001 par value per share, or common stock, and 10,000,000 shares of preferred stock, \$0.001 par value per share, or preferred stock. Only shares of our common stock and no shares of our preferred stock are outstanding.

The following summary description is based on the provisions of our certificate of incorporation, our amended and restated bylaws and the applicable provisions of the Delaware General Corporation Law. This information may not be complete in all respects and is qualified entirely by reference to the provisions of our certificate of incorporation, our amended and restated bylaws and the Delaware General Corporation Law. Our certificate of incorporation and our amended and restated bylaws are filed as exhibits to this Annual Report on Form 10-K to which this Description of Capital Stock is an exhibit.

Common Stock

General. The following is a description of our common stock, which is the only security of the Company registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended, or the Exchange Act.

Dividend rights. Subject to preferences that may apply to shares of preferred stock outstanding at the time, the holders of outstanding shares of our common stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to declare dividends and then only at the times and in the amounts that our board of directors may determine.

Voting rights. Each holder of common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of stockholders. Our certificate of incorporation does not provide for the right of stockholders to cumulate votes for the election of directors. Our certificate of incorporation establishes a classified board of directors, which is divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. These provisions in our amended and restated certificate of incorporation could discourage potential takeover attempts. See "Anti-Takeover Effects of Delaware Law and Our Charter Documents" below.

No preemptive or similar rights. Our common stock is not entitled to preemptive rights and is not subject to conversion or redemption provisions. The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of any series of our preferred stock that we may designate and issue in the future.

Right to receive liquidation distributions. Upon our dissolution, liquidation or winding-up, the assets legally available for distribution to our stockholders are distributable ratably among the holders of our common stock, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights and payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

The rights of the holders of our common stock are subject to, and may be adversely affected by, the rights of holders of shares of any preferred stock that we may designate and issue in the future.

Anti-Takeover Effects of Delaware Law and Our Charter Documents

Certificate of Incorporation and Bylaws. Our certificate of incorporation and bylaws include provisions that:

- authorize the 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 the board of directors, the chairman of the board of directors, 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 the board of directors;
-

- provide that directors may be removed only for cause;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum;
- establish that our board of directors is divided into three classes, Class I, Class II and Class III with each class serving staggered terms;
- 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.

Delaware Anti-Takeover Statute. Some of the provisions of Delaware law may have the effect of delaying, deferring, discouraging or preventing another person from acquiring control of the Company.

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon closing of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned by (1) persons who are directors and also officers and (2) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines business combination to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loss, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an "interested stockholder" as an entity or person who, together with the person's affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

A Delaware corporation may "opt out" of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from a stockholders' amendment approved by at least a majority of the outstanding voting shares. We have not elected to "opt out" of these provisions. The statute could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us. Certain provisions in our certificate of incorporation and our amended and restated bylaws could have an effect of delaying, deferring or preventing a change in control.

Transfer Agent and Registrar

American Stock Transfer & Trust Company, LLC is the transfer agent and registrar for our common stock. American Stock Transfer & Trust Company, LLC's address is 6201 15th Ave, Brooklyn, New York, USA 11219.

Listing

Our common stock is listed on The Nasdaq Stock Market LLC under the symbol "ERII".

Energy Recovery, Inc.

List of Subsidiaries

Company Name	Country/State of Incorporation/Formation
ERI Energy Recovery Ireland Limited	Ireland
Energy Recovery Iberia, S.L.	Spain
Energy Recovery Canada, Corp.	Canada

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-233730 on Form S-3 and Registration Statement No. 333-152142, 333-165559, 333-180076, and 333-212707 on Form S-8 of our reports dated March 12, 2021, relating to the consolidated financial statements of Energy Recovery, Inc. and the effectiveness of Energy Recovery, Inc.'s internal control over financial reporting appearing in this Annual Report on Form 10-K of Energy Recovery, Inc. for the year ended December 31, 2020.

/s/ DELOITTE & TOUCHE LLP

San Francisco, California

March 12, 2021

**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, Robert Yu Lang Mao, certify that:

1. I have reviewed this Annual Report on Form 10-K of Energy Recovery, Inc. for the period ended December 31, 2020;
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. I am 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. I have disclosed, based on my 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 12, 2021

/s/ ROBERT YU LANG MAO

Name: Robert Yu Lang Mao
Title: President and Chief Executive Officer
(Principal Executive Officer)

**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, Joshua Ballard, certify that:

1. I have reviewed this Annual Report on Form 10-K of Energy Recovery, Inc. for the period ended December 31, 2020;
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. I am 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. I have disclosed, based on my 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 12, 2021

/s/ JOSHUA BALLARD

Name: Joshua Ballard

Title: Chief Financial Officer

(Principal Financial and Accounting Officer)

**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, Robert Yu Lang Mao, President and Chief Executive Officer of Energy Recovery, Inc., and Joshua Ballard, Chief Financial Officer of Energy Recovery, Inc., each hereby certify that, to the best of his knowledge:

1. The Company's Annual Report on Form 10-K for the period ended December 31, 2020, 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 has set his hand hereto:

Date: March 12, 2021

/s/ ROBERT YU LANG MAO
Robert Yu Lang Mao
President and Chief Executive Officer

Date: March 12, 2021

/s/ JOSHUA BALLARD
Joshua Ballard
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.