

ANNUAL REPORT

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

Form 10-K	

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

For the fiscal year ended December 31, 2023

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□ 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:

Title of each class

Common Stock, \$0.001 par value

Trading Symbol ERII

Name of each exchange on which registered

Nasdaq Stock Market

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 \square No \square						
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 (\S 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 \square No \square						
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. \square

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

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

The aggregate market value of the voting stock held by non-affiliates amounted to approximately \$1.54 billion on June 30, 2023.

The number of shares of the registrant's common stock outstanding as of February 15, 2024 was 57,078,540 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 2024 Annual Meeting of Stockholders, which is expected to be filed not later than 120 days after the registrant's fiscal year ended December 31, 2023.

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Forward-Looking Information

This Annual Report on Form 10-K for the year ended December 31, 2023, including Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" (the "MD&A"), contains 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," "frojects," "intends," "plans," "believes," "estimates," "seeks," "continue," "could," "may," "potential," "should," "will," "would," 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 statement. Readers are directed to risks and uncertainties identified under Part I, 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 statement 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 desalination ("SWRO") industry;
- our belief that the scalability and versatility of our PX® Pressure Exchanger® ("PX") can help us achieve success in emerging wastewater markets:
- our belief that the Ultra PX[™] addresses key challenges associated with treating wastewater in a range of reverse osmosis ("RO") applications;
- our belief that the Ultra PX addresses key challenges, such as energy intensity and environmental impacts associated with treating wastewater;
- our belief that the Ultra PX can help make RO the preferred treatment option to achieve zero and minimum liquid discharge ("ZLD" and "MLD", respectively) requirements by enhancing RO's affordability and efficiency compared to thermal treatment options;
- our belief that our PX has helped make SWRO an economically viable and more sustainable option in the production of potable water:
- our expectation of greater demand of our PX in the wastewater market due to expanding environmental regulations;
- our belief that our hydraulic turbochargers deliver substantial savings, operational benefits and ease of integration into desalination systems;
- our anticipation that markets not traditionally associated with desalination, such as the United States of America (the "U.S.") and China will inevitably develop and provide further revenue growth opportunities;
- our belief that countries around the world will continue to mandate ZLD or MLD requirements for specific industries;
- our belief that, as the existing thermal technology is replaced with RO technology, demand for our products will be created;
- our belief that our PX offers market-leading value with the highest technological and economic benefit;
- our belief that ongoing operating costs and life cycle costs rather than the initial capital expenditures are the key factor in the selection of an energy recovery device solution for megaproject ("MPD") customers;
- our belief that initial capital expenditure rather than future ongoing operating costs is more of a factor in the selection of an energy recovery device solution for original equipment manufacturer ("OEM") projects;
- our belief that our PX has a distinct competitive advantage in the market for desalination plants and numerous wastewater
 market verticals, because our PX 1) has minimal unplanned and planned downtime, resulting in lower lifecycle maintenance
 cost, 2) is a cost-effective energy recovery solution, 3) is made with highly durable and corrosion-resistant aluminum oxide
 ("alumina") ceramic parts and outperforms our competition with respect to quality, flexibility and durability, and 4) is warrantied
 for high efficiencies;
- our belief that leveraging our pressure exchanger technology will unlock new commercial opportunities in the future;

- our belief that our PX G1300[™] can contribute to help make CO₂-based refrigeration economically viable in a broader range of climates:
- our belief that the PX G1300 could eventually alter the standard refrigeration system architecture by reducing costs for retail end users such as grocery stores;
- our belief that there is a significant potential market for the PX G1300 in a variety of channels, such as supermarket chains and cold storage facilities.
- our expectation that we will initially sell our PX G1300 to a variety of customers, such as to the OEMs themselves, potentially
 directly to end user supermarket chains or industrial sites, or to contractors who may retrofit our technology onto existing
 systems, and once the PX G1300 is established, our belief that our sales process will evolve to primarily selling through OEMs;
- our belief that as CO₂-based refrigeration systems become more prevalent, competitive technologies to the PX G1300 could arise;
- our belief that the simplicity of installation and the ease of operations of the PX G1300 could encourage adoption of the PX G1300;
- our belief that our current facilities will be adequate for the foreseeable future;
- our belief that by investing in research and development, we will be well positioned to continue to execute on our product strategy;
- our belief that our technology helps our customer achieve environmentally sustainable operations;
- our expectation that sales outside of the U.S. will remain a significant portion of our revenue;
- our belief that the integration of sustainability 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 fluidflow environments:
- our belief that our sustainability goals are highly influential to our business success;
- our belief that we contribute to our customers' operational profitability while advancing environmental sustainability;
- 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/or 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 belief that our cash deposit risk at uninsured or under insured financial institutions will not materially affect our current liquidity;
- our expectation that the lender under our current credit agreement, as amended, will continue to honor its commitments to us;
- 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 of increased sales and marketing expenditures for 2024 and 2025;
- our belief that we will be in compliance with the terms of the existing credit agreement, as amended, in the future;
- our expectation that we will continue to receive a tax benefit related to U.S. federal foreign-derived intangible income and California research and development tax credit;
- 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;
- · 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; and
- other factors disclosed under Part I, Item 1, "Business," Item 1A, "Risk Factors," and Item 2, "Properties," and Part II, Item 7, MD&A, and Item 7A, "Quantitative and Qualitative Disclosures about Market Risk," and elsewhere in this Form 10-K.

You should not place undue reliance on these forward-looking statements. These forward-looking statements 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 Part I, Item 1A, "Risk Factors," and are based on information available to us as of February 21, 2024. We assume no obligation to update any such forward-looking statements. Certain risks and uncertainties could cause actual results to differ materially from those projected in the forward-looking statements. These forward-looking statements are disclosed from time to time in our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K filed with, or furnished to, the Securities and Exchange Commission (the "SEC"), as well as 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," in our Quarterly Reports on Form 10-Q, and in our Annual Reports on Form 10-K, and from time-to-time, in our results disclosed in our Current Reports on Form 8-K.

We provide our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Proxy Statements on Schedule 14A, 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 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") is a trusted global leader in energy efficiency technology. We design and manufacture reliable, high-performance solutions that provide cost savings through improved energy efficiency in commercial and industrial processes, with applications across several industries. With a strong foundation in the desalination industry, we have delivered transformative solutions that help our customers optimize their operations and reduce their energy consumption for more than 30 years. We believe that our customers do not have to sacrifice quality and cost savings for sustainability; and we are committed to developing solutions that drive long-term value from a technical, financial, and environmental perspective.

We have been incorporated in the state of Delaware since 2001. Our corporate headquarters, principal research and development ("R&D"), and manufacturing facility is located in San Leandro, California. In addition, we have manufacturing and warehouse space in Tracy, California and offices, warehouse space and a yard in Katy, Texas. We have a global direct sales team and on-site technical support staff to service customers in the United States of America (the "U.S."), Europe, Latin America, the Middle East, and Asia.

Sustainability

Our technology harnesses the powerful combination of performance and energy efficiency to deliver operational profitability and help our customers achieve environmentally sustainable operations. As such, we are committed to measuring and managing our own operational impact, as well as producing high-quality energy recovery devices for our customers. While sustainability has always been central to our business, four years ago we embarked on our formal sustainability journey to turn the lens on ourselves and provide our stakeholders with further transparency around our company. Our integrated sustainability strategy includes a dedicated sustainability team, internal sustainability programs focused on key goals with measurable targets, and sustainability solutions for our customers.

Our sustainability goals, which we believe are highly influential to our business, were first announced in our 2020 Sustainability Report. These goals focus on four sustainability topics – Employees, Environmental & Climate Change Risks, Innovation & Opportunity, and Products. These topics were identified by our management team and our stakeholders as material to our company's ability to create value. We believe our goals provide us with a strategic roadmap to become a more sustainable and resilient business, and hold us accountable as we strive to be a responsible corporate citizen. In accordance with our strategic roadmap, we announced our first corporate emissions reduction target in 2023 and have committed to reducing our greenhouse gas emissions as outlined in our 2022 Sustainability Report.

Employees. Our employees are integral to success and innovation. It is our firm commitment and responsibility to provide a safe and supportive working environment for our staff where initiative is rewarded, suggestions are valued, and ideas to enhance our company or our products are implemented. Likewise, it is our responsibility to offer ample opportunities for employees to develop their skills. For more information on our employees and programs, please see *Human Capital Resources* below.

Environmental & Climate Change Risks. We are engaged in a comprehensive assessment to identify our short-, medium-, and long-term climate-related risks and opportunities. As our business grows, we are vigilant in managing our climate-related risks to remain successful and competitive in an ever-changing environment.

Innovation & Opportunity. Innovation and a trusted relationship with our customers and industry partners is pivotal to this goal, as this allows us to understand our customers' needs and pain points. By partnering with our customers and consistently striving to improve, we are confident in our continued ability to contribute to our customers' operational profitability while advancing environmental sustainability.

Products. We uphold the trust of the industries we serve by meticulously manufacturing products that not only deliver exceptional performance and generate significant value, but also demonstrate reliability and safety. At our core, we aim to design and manufacture high-quality innovative products that deliver significant value to customers and help foster environmentally sustainable operations.

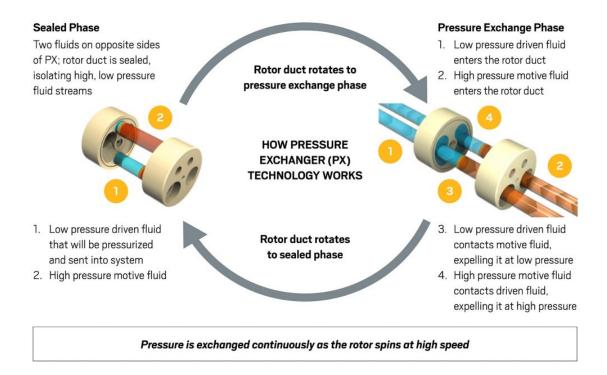
In 2023, we surveyed and interviewed investors, employees, and customers to ensure our sustainability strategy remains aligned with the evolution of our business. The results of this assessment process and any associated adjustments to our sustainability priorities, goals, and roadmap will be disclosed in our forthcoming 2023 Sustainability Report.

Detailed disclosures on our sustainability performance can be found in our recent 2022 Sustainability Report, which is available for download on our website at: https://energyrecovery.com/sustainability/. We have included this website address only as an inactive textual reference and do not intend it to be an active link to our website.

Pressure Exchanger Technology

Our pressure exchanger technology platform is at the heart of many of our solutions. It is designed to efficiently capture and transfer pressure energy, making commercial and industrial processes more efficient and environmentally sustainable, thereby lowering costs, saving energy, and minimizing emissions. This versatile technology is applicable to a wide range of industries that utilize pressurized fluids, including liquids and gas, and is ideal for a wide range of pressure ratings.

Our pressure exchanger technology acts like a fluid piston, efficiently transferring energy between high- and low-pressure liquid and/ or gas through continuously rotating ducts. Key to the operation of a pressure exchanger is the micron-level clearances between the rotor and the pressure exchanger's stationary components, including the sleeve and the end covers. Fluid circulating within this clearance acts as a lubricated bearing, minimizing frictional losses and wear for an extremely efficient exchange of pressure energy.



The original product application of our pressure exchanger technology, the PX® Pressure Exchanger® ("PX") energy recovery device was a major contributor to the advancement of seawater reverse osmosis desalination ("SWRO") globally, addressing "energy intensity", which is a key pain point for the industry. The PX, which we believe is today's industry standard in energy recovery in desalination, reduces energy use by up to 60% in SWRO facilities. It is this significant savings that allowed SWRO to supplant thermal desalination as today's desalination technology of choice. Today we continue to push the boundaries of our core technology to handle different operating environments and industrial applications and deliver reliable, high-performance solutions that generate cost savings and increase energy efficiency for our customers.

Water Treatment

Markets

The need for clean water and energy optimization around the world is intensifying, driven by population growth, industrialization, rapid urbanization, and climate change. Apart from seasonal variations, the attainable supply of fresh water generally remains fixed and is already decreasing in some geographic areas, as we believe that the reliability of rainfall grows more erratic in many geographies, water levels drop in rivers and aquifers, and rising oceans encroach on historically fresh water sources near the coasts. These trends make the markets we serve, such as desalination and wastewater treatment, increasingly critical to meet growing global water demand. Our goal is to lower the costs and emissions associated with water production and treatment in the desalination and wastewater markets, respectively. In addition, we help the end user in their sustainability compliance goals.

Reverse osmosis ("RO") is the preferred technology in the vast majority of desalination facilities and growing in importance in wastewater applications. As an industry leader in energy recovery devices, we deliver efficient, scalable solutions for recovering otherwise wasted energy in the RO process, thereby helping our customers lower their operating costs and reduce carbon emissions.

Desalination

Worldwide seawater desalination plants using our products produce over 30 million cubic meters of water per day ("m³/day"), enough to provide for more than 25% of U.S. population's daily water needs at home. As water scarcity grows in communities across the globe, we are proud of our impact in enabling more affordable, sustainable access to this vital resource.

Incoming seawater routed to pump and PX MEMBRANES Low pressure potable water potable water energy from high pressure brine to seawater To ocean PX DEVICE/ARRAY

Typical Process Flow Diagram

* Main pump size reduced by up to 60% compared to a SWRO process not using any energy recovery device.

Seawater Reverse Osmosis Desalination. Energy intensive pumps are used to pressurize feed waters with varying concentrations of salts, minerals and contaminants, which is then pumped through a semi-permeable membrane to achieve the desired water quantity and quality. This process results in fresh water, suitable for potable, agricultural and industrial use and a highly concentrated and pressurized concentrate or brine stream. Rather than dissipating or "wasting" the pressure energy from the discharge brine, our PX, the most commonly adopted energy recovery solution, can transfer the pressure energy from the high-pressure discharge stream directly to a portion of the low-pressure filtered feed water stream, thereby reducing the amount of flow required by the main high-pressure process pumps, which are the largest consumers of power within the SWRO process. Our highly efficient technology can recycle this pressure energy at peak efficiencies up to 98%. This results in a more efficient process as the size of the high-pressure pumps are greatly reduced, no longer needed to be sized for full membrane feed flow, and are now re-sized for the permeate flow, thus reducing the energy usage by up to 60%, compared to a system without energy recovery devices. As a result, our PXs have helped make seawater desalination an economically viable and more sustainable option in the production of potable water.

Brackish Water Reverse Osmosis Desalination. The brackish RO process is similar to that of 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. Due to the lower cost and available pressure energy involved, our low pressure PX and hydraulic turbochargers generally have characteristics more applicable to the brackish process. The salt content 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 energy recovery device to be employed, if any.

Seawater desalination has been our primary market for revenue generation, and brackish water applications are an emerging area of potential growth. These markets range from small, decentralized desalination plants, such as those used in cruise ships and resorts, to large-scale project ("megaproject") desalination plants, defined as those which produce over 50 thousand 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, such as the U.S. and China, will inevitably develop and provide further revenue growth opportunities.

Both seawater and brackish market opportunities are represented by newly constructed ("greenfield") and existing ("brownfield") water treatment projects. These opportunities include retrofits, upgrades, and plant expansions, that either operate without an energy recovery device or utilize alternative energy recovery device technologies. The large-scale greenfield market has been the key market for our water business and represents projects that are typically public in nature and involve a formal tendering process; while smaller projects, may be private in nature, may or may not involve a formal tendering process. Typical brownfield facilities face higher energy consumption and reduced plant availability due to legacy technologies and aging equipment and include improvements to existing operations, equipment upgrades and potential expansions of existing capacity.

We work directly with the project bidders, generally large project developers, engineering, procurement, and construction firms ("EPC" firm), 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 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). Retrofit opportunities may or may not have a formal tendering process. We typically approach the plant owners, operators, and/or end-users of these facilities to present our leading lifecycle cost value-proposition.

Wastewater

The wastewater market has more variety and covers a wide range of industries and geographies. As governments across the globe increase their focus on water conservation, reuse, recycling, and limiting the amount of pollution, they are establishing more stringent requirements for wastewater treatment to maximize water recovery, and to comply with growing freshwater withdrawal and discharge regulations. Zero or minimum liquid discharge ("ZLD" and "MLD", respectively) applications are being observed in countries throughout the world. We expect this trend to continue to expand as we observe the implementation of regulations on the discharge of wastewater effluents as the world responds to the growing gap between water availability and demand while focusing on minimizing and/or eliminating pollution from these industries.

Pressure up Pressure up to 28 Bar (400 psi) to 83 Bar (1,200 psi) Traditional ZLD Treatment LPRO **HPRO** Wastewater **Thermal** Pressure up Pressure up Pressure up to 83 Bar (1,200 psi) to 120 Bar (1.740 psi) to 28 Bar (400 psi) **HPRO** UHPRO **LPRO Thermal** Wastewater **ZLD Treatment with UHPRO**

Energy Recovery Devices Utilized During Each Stage in the Treatment Train

Many municipal and industrial industries are willing to adopt more sustainable water reuse practices and to reduce their reliance on existing water resources. Sectors such as automotive, including electric vehicles, chemicals, pulp and paper, textiles, semiconductors, and other heavy industries are often large water consumers. Their water usage can compete with municipal and agricultural water resources, further straining potable water supply in areas already struggling with water scarcity.

A variety of RO technologies may be utilized in the wastewater applications where our energy recovery solutions are applicable. Such processes are typically multi-staged, with each stage increasing in pressure as the wastewater is filtered to recover clean water from a wastewater stream and concentrate pollutants to a level where they can be economically utilized or safely disposed, rather than discharged into the environment. Our energy recovery solutions, such as our hydraulic turbochargers, low-pressure PX, and our Ultra PX, can be applied to each of these stages.

Technology Conversion

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

Over the past two decades RO desalination technology has become the predominant technology, supplanting thermal desalination technology as today's desalination technology of choice. 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 desalination technology. These conversions are driving new demand for RO desalination equipment, which in turn creates demand for our products.

We also see a similar technology conversion in the wastewater market. Thermal technologies have been the technology of choice for RO systems seeking to maximize the removal of waste from the water used in the manufacturing process, such as in "ZLD" processes, where all water is recovered and contaminants are reduced to solid waste, and MLD processes, where near-ZLD processes produce small volumes of liquid waste. Similar to seawater desalination, thermal technologies are an energy- and cost-intensive method for cleaning water in these discharge processes, with up to 50 percent of costs typically stemming from thermal treatments. Adopting ultra high-pressure reverse osmosis ("UHPRO") treatment methods to achieve ZLD and MLD objectives moves the cost of these thermal technologies further downstream. Our PX U Series pressure exchangers further reduce wasted energy of the UHPRO process by returning pressure energy to the system, ultimately reducing overall energy costs and potentially lowering capital expenditures.

Water Treatment Solutions

Pressure Exchangers

Our line of pressure exchangers are high efficiency isobaric energy recovery devices made of a ceramic cartridge supported by a highly efficient hydrodynamic and hydrostatic bearing system. Models in this product family are designed for use in a variety of reverse osmosis systems within the water treatment industry, including seawater and brackish desalination, and wastewater treatment.

High Pressure PX Pressure Exchanger. Our highly efficient PX Pressure Exchanger family of energy recovery device products delivers unmatched energy savings for water treatment systems. We offer a variety of sizes defined by the flow and pressure requirements of the system ranging as low as 20 and up to 400 gallons per minute ("gpm") (as low as 4.5 and up to 90.8 cubic meters of water per hour ("m³/h")) per device at pressures between 400-1200 pounds per square inch ("psi") (28-84 kilograms per square centimeter ("bar")); however, our customers can design their energy recovery systems to achieve unlimited capacities by installing an array of PXs in parallel.



energy recovery.

Small and large desalination projects around the world rely on our range of PXs to achieve optimal operations and maximum energy savings, and we believe the scalability and versatility of our PX can achieve similar success in the emerging wastewater markets we are targeting.



Ultra PX. Our Ultra PX energy recovery device which, we believe, addresses key challenges, such as energy intensity and environmental impacts associated with treating wastewater in a variety of water treatment applications. Designed with the pressure exchanger technology that powers our flagship high pressure PX, the Ultra PX, functions similarly to our PX but can withstand higher pressures. We offer a variety of sizes defined by the flow and pressure requirements of the system ranging as low as 10 and up to 250 gpm (or as low as 2.3 and up to 56.8 m³/h) per device at pressures between 1200-1800 psi (84-126 bar); however, by installing an array of PXs in parallel, our customers can design their energy recovery system to achieve unlimited capacities.

While reverse osmosis adoption in wastewater treatment is growing, we believe our Ultra PX can help accelerate further adoption of reverse osmosis in the growing zero and minimum liquid discharge markets by enhancing RO's affordability and efficiency compared to thermal treatment options, similar to the impact of our PX in the seawater desalination market.

Low Pressure PX. Products in this family are ideal for municipal and industrial potable water reuse applications that deploy low-pressure RO stages such as municipal wastewater reuse applications. We offer a variety of sizes defined by the flow and pressure requirements of the system ranging as low as 30 and up to 260 gpm (or as low as 6.8 and up to 59.0 m³/h) per device at pressures between 80-400 psi (6-28 bar); however, by installing an array of PXs in parallel, our customers can design their energy recovery system to achieve unlimited capacities.

Pumps and Turbochargers

We offer high-pressure centrifugal pumps designed to complement our energy recovery devices for a wide range of RO plant capacities and applications.



Hydraulic turbochargers. Our AT and LPT hydraulic turbochargers are high efficiency centrifugal energy recovery devices used in low-pressure brackish and high-pressure seawater desalination systems and wastewater treatment markets. Our turbocharger product lines are highly efficient with state-of-the-art engineering in a compact configuration. 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 RO applications, inter-stage boost applications typically found in brackish water desalination and some wastewater treatment systems.

We believe our hydraulic turbochargers deliver substantial savings, operational benefits, and ease of integration into systems.

Pumps. RO requires specialized high-pressure membrane feed and, in pressure exchanger applications, high-pressure circulation pumps. We manufacture and/or supply specialized high-pressure feed and circulation pumps for only a portion of the markets served by our energy recovery 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 desalinated 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 in many desalination and wastewater applications.



Sales and Marketing

Our strategically located direct sales force offers our products through capital sale to our customers around the world. We maintain a sales and service footprint in strategic territories, such as in the U.S., China, India, Latin America, Spain, Saudi Arabia and the United Arab Emirates, allowing rapid response to our customers' needs. Our team is comprised of individuals with many years of desalination and wastewater treatment industry expertise. Aligned 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 9, "Segment Reporting," and Note 10, "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 (the "Notes").

Competition

As the water industry has evolved, we faced, and continue to face, increasing worldwide competition based on product offerings and service. While our technology has been embraced for many years as the industry standard in RO desalination plants, the competition has increased over time whereby more companies are offering energy recovery devices similar to our devices. Furthermore, we expect our competition to begin offering new products that incorporate newer technology and materials that may work with existing and new RO desalination and wastewater operations. We believe our flagship PX has a competitive advantage over products offered by our competitors, because our devices (1) are made with highly durable and corrosion-resistant aluminum oxide ("alumina") ceramic parts that are designed for a life of more than 25 years; (2) are, in certain circumstances, warrantied for high efficiencies; and (3) cause minimal unplanned and planned downtime, resulting in lower lifecycle cost and cost-effective energy recovery solutions. In addition, our PX offers optimum scalability in both the desalination and growing wastewater market with a quick startup and no scheduled maintenance, as well as having been proven in the market and trusted by our customers.

Project Channels

We separate our Water segment sales into three distinct channels that are related to financial, 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 with capacities greater than 13.2 million gallons/day (50 thousand m³/day). A majority of our water treatment revenue comes from this channel. Our MPD customers have the required desalination expertise to engineer, undertake procurement for, construct, and sometimes own and operate, large-scale desalination plants. Due to the project structures and capacities of these plants, ongoing operating costs and life cycle costs, rather than the initial capital expenditures are the key factor in the customers' selection of an energy recovery device 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 our MPD customers to specify and optimize our PX solutions for their plant designs. The typical desalination and wastewater MPD project timeline between project tender and shipment generally ranges from 16 to 36 months; however, from time-to-time, may exceed 36 months. Each project in this channel generally represents revenue opportunities over \$1 million.

Original Equipment Manufacturer. OEM customers are companies that supply equipment, packaged systems, and various operating and maintenance solutions for small- to medium-sized desalination and wastewater plants utilized by commercial and industrial entities, and national, state, and local municipalities worldwide. We sell to our OEM customers a broad set of our products, including our PX, hydraulic turbochargers, high-pressure pumps, circulation booster pumps, and associated services. As it relates to desalination and wastewater OEM projects, these projects comprise of plants processing up to 13.2 million gallons/day (50 thousand m³/day), such as those located in hotels and resorts, power plants, cruise ships, agricultural sectors, local and other municipal sites, and industrial facilities. In addition, these OEM customers purchase our solutions for mobile, decentralized "quick water" or emergency water solutions. Unlike MPD projects, desalination and wastewater OEM projects are smaller in scope and the initial capital expenditure, rather than future ongoing operating costs, is often more of a factor in selection of an energy recovery device solution in desalination. Accordingly, we sell not only our PX, but also our hydraulic turbochargers, which offer a lower cost alternative to our PX. The typical desalination and wastewater OEM project timeline from project tender to shipment generally ranges from one to 16 months; however, from time-to-time, may exceed 16 months. Each project in this channel typically represents revenue opportunities up to \$1 million. Early stage revenue from these projects are dependent on the size of system or retrofit of our customers' projects.

Aftermarket. Aftermarket customers are desalination or wastewater plant owners and/or operators who can utilize our technology to upgrade or keep their plant running optimally, and usually have our solutions installed and in operation. We provide spare parts, repair services, field services and various commissioning activities. We leverage our industry expertise in supporting our existing installed base to ensure that our energy recovery solutions are being operated effectively and efficiently in order to maximize plant availability and overall profitability of the facility operations, as required by our industry partners and customers.

Seasonality

There is no specific seasonality to desalination or wastewater revenue. Desalination or wastewater revenue occurs throughout a calendar year. We often experience substantial fluctuations in desalination or wastewater revenue from quarter-to-quarter and from year-to-year primarily due to the timing and execution of our MPD shipments, which vary from year to year.

Emerging Technologies

Today, we are leveraging our pressure exchanger technology platform to develop new product applications and diversify into new industries. We continue to push the limits of what our pressure exchanger technology can do, which we believe will unlock new commercial opportunities in the future.

CO_2

The global refrigeration and heating industries are major contributors to greenhouse gas emissions, of which the leakage of hydrofluorocarbon ("HFC") refrigerants within these closed systems are the leading cause. HFCs have been recognized as a significant contributor to global warming, up to thousands of times more potent than carbon dioxide ("CO₂") used as a refrigerant. In 2016, much of the world adopted the Kigali Amendment to the Montreal Protocol with the intent of reducing HFCs by 85% in developed nations by 2036, and globally by 2047. The European Union's consumption of HFCs was 55% below targets by end of 2022, and they plan to reduce by 80% by 2030. The U.S. first supported the reduction of HFCs in the American Innovation and Manufacturing Act in 2020, later ratified the Kigali Amendment itself in October 2022, and the U.S. Environmental Protection Agency finalized the rules in July 2023 to reduce HFC production and imports by 70% by end of 2029, and 85% by 2036.

 CO_2 used as a refrigerant is a climate-friendly alternative to greenhouse gas-emitting HFCs and has been the natural refrigerant of choice for decades in Europe and Japan, where tens of thousands of CO_2 implementations have occurred to date. CO_2 -based refrigeration systems for commercial and industrial applications are safe, sustainable, and commercially available; however, a CO_2 -based refrigeration system can also consume significant amounts of electricity, especially in warm environments, making them expensive to operate. We believe our PX G1300 $^{\text{TM}}$, which uses proven pressure exchanger technology to improve CO_2 -based refrigeration system performance, can contribute to solving this challenge and help make CO_2 -based refrigeration economically viable in a broader range of climates. When integrated into new or existing systems, the PX G1300 can reduce compressor workload to increase cooling capacity, system stability, and energy efficiency.

PX~G1300. Our refrigeration-focused product leverages our existing ceramics, material science, and manufacturing expertise. The PX G1300 can reduce the energy consumption and operating costs of CO_2 -based refrigeration systems in a broad range of operating conditions. We see this as potentially a significant accelerator for adoption of CO_2 -based refrigeration system globally as our PX G1300 could eventually alter the standard refrigeration system architecture by reducing costs for end users, such as grocery stores.

We designed the PX G1300 to be integrated into new or existing CO₂-based refrigeration systems. The PX G1300 can integrate with any existing rack controller and is easy to operate and maintain. We believe the simplicity of installation and the ease of operations could encourage adoption of this new technology.



Sales and Marketing

We believe there is a significant potential market for the PX G1300 in a variety of channels, such as supermarket chains and cold storage facilities. The build of these commercial and industrial refrigeration systems is large enough and demands enough flow of CO₂ refrigerant to warrant the use of our device, which today implies any system 80 kilowatt in size or greater.

In understanding the market for the PX G1300, we have identified three major value propositions:

- Energy Savings and Emissions Reduction. The PX G1300 recycles the high-pressure energy of a CO₂ system by compressing a
 portion of the gas flow for "free." This "free" compression provided by the PX G1300 allows the main electrical refrigeration
 compressor to work less to keep the refrigeration system at the same temperature. In this way, our PX G1300 contributes to
 lower energy consumption and lower costs by reducing the amount of cycles the main compressor operates, and thereby lower
 emissions in a CO₂ refrigeration system.
- 2. *Increased Cooling Capacity*. The PX G1300 can add compression capacity to a transcritical CO₂-based refrigeration system to safeguard against high discharge pressure failures, which occur during heatwaves when refrigeration systems are under stress.
- 3. *Initial Capital Investment*. When designed into a new CO₂-based refrigeration system, the PX G1300 may offset some initial capital investment due to the extra compression capacity it provides, allowing for the reduction or removal of other components.

The magnitude of each of these value propositions, or lack thereof, will greatly depend on the geographic location of a refrigeration system and temperature ranges that location experiences, the cost of energy at that location, the specific architecture of the refrigeration system itself and possibly other parameters.

Channels and Customers

CO₂ sales are reported under our OEM sales channel. This includes direct sales to commercial or industrial customers, such as supermarket chains, cold storage facilities, and other industrial users. Also, included are sales to intermediaries, such as refrigeration system installers or refrigeration OEMs, to whom we sell the PX G1300 and associated services for inclusion in these customers' entire new packaged or retrofit of existing systems.

The commercial refrigeration market ecosystem has multiple players who integrate the components to build a system. These players include supermarkets, which are the end users of the systems; contractors and installers that assist with the installation and maintenance of the systems; refrigeration OEMs; and design consultants that assist in designing and specifying the systems for end users and in providing the component specifications to the refrigeration OEMs.

We initially sold the PX G1300 to a variety of customers, such as directly to an end user supermarket chain and OEMs. We believe that once the PX G1300 is more established, our sales process will evolve primarily to sell through OEMs, who in turn build and install refrigeration systems at sites maintained by end users.

Competition

The concept of energy recovery is a new one in the refrigeration industry. Therefore, unlike in our water markets, there is no direct analogous competitor to our pressure exchanger technology. However, there are a variety of cost saving methods, as well as alternative devices, that refrigeration manufacturers may try to introduce into their configurations to reduce energy consumption within their CO₂-based refrigeration systems. These cost saving methods include utilizing novel system architectures, new and improved equipment or materials, ejectors or other energy recovery devices, and/or other technologies that could improve energy efficiency. These cost savings methods may or may not be compatible with the PX G1300. As CO₂-based refrigeration systems become more prevalent, we believe competitive technologies and devices could arise.

Seasonality

There is no specific CO₂ revenue seasonality to highlight in the early stages of this product lifecycle.

Manufacturing

Our products, including our PX, hydraulic turbochargers, high-pressure pumps, and circulation booster pumps, are designed, manufactured, assembled, and tested in two facilities located in California. Our facilities include advanced ceramics manufacturing and testing equipment.

We obtain raw, processed, and certain pre-machined materials from various suppliers to support our manufacturing operations. A limited number of these suppliers are single source to maintain material consistency and support new product development. However, although we may purchase from certain single source suppliers, we have qualified redundant source(s) to ensure consistent supply for many of our critical raw materials and manufactured components. Alumina ceramic components for our PX products are manufactured in-house from high-purity alumina to the final product. We are able to leverage our ceramics manufacturing across all of our PX product lines. Through our vertically integrated ceramics precision manufacturing process, we ensure that all components meet our high standards for quality, durability, and reliability. The components for our other products undergo final precision machining to protect the proprietary nature of our manufacturing methods and product designs, and to maintain premium quality standards.

We are committed to reducing the environmental impact of our operations. We recognize that as we pursue our strategy of diversified and disciplined growth, our operations and our impact on the environment may increase. Some of the ways we currently seek to minimize our environmental impact are by reducing consumption of resources through waste management strategies, optimizing the use of renewable energy, and monitoring key environmental indicators. For example, as part of our waste management strategies, during the machining phase, when the solid components are shaped, excess high-purity alumina powder is collected, processed, and then reused. Further, we have incorporated in our testing process multiple test loops, which allows us to test products we manufacture to their operating conditions. These test loops, which are a major driver of our water usage, have been modified to allow us to recycle most of the water used in these testing cycles. Our efforts to measure and manage our impact will continue to evolve as our business grows.

Research, Development and Technology

Research and development ("R&D") has been, and remains, an essential part of our history, culture and corporate strategy. Since our formation, we have developed leading technology and engineering expertise through the evolution of our pressure exchanger technology, which can enhance environmental sustainability and improve productivity by reducing energy consumption in pressurized fluid-flow systems. This versatile technology works as a platform to build product applications and is at the heart of many of our products. In addition, we have engineered and developed ancillary devices, such as our hydraulic turbochargers and circulation booster pumps that complement our energy recovery devices.

Today, we are applying our pressure exchanger technology in new and important ways, building new products to accelerate environmental sustainability across more industries. Our investments into R&D are focused on (1) advancing our solutions to better service historical markets, such as desalination; (2) applying our pressure exchanger technology to new markets, such as our recent entries into the wastewater and CO₂ markets; and (3) fundamental research into new applications of our pressure exchanger technology in existing and new verticals.

We recognize the importance of carefully stewarding resources to support our ongoing R&D program. We maintain advanced analytical and testing capabilities to evaluate our solutions at all company sites. We have developed complex analytical tools which allow us to be less reliant on full-scale testing that is costly and often uses considerable amounts of water and consumable energy. Our advanced numerical modeling and analytical tools allow for 3-dimensional, multi-phase, multi-physics, and multi-scale, computational fluid dynamics, fluid structure interactions, thermodynamics, and system analysis. Leading-edge modeling and analytical techniques coupled with extensive state of the art experimental capabilities allow us to further refine our existing water and refrigeration technologies, as well as developing new derivatives of our pressure exchanger technology for complex systems and applications.

Our highly skilled engineering team, many of whom carry accreditation from world-recognized engineering organizations, specialize in a range of technical fields critical to support our current product lines and advance 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.

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," "Pressure Exchanger," "PX PowerTrain," "PX G1300," and the Energy Recovery logo. We have also applied for and received registrations in international trademark offices.

Human Capital Resources

Our employees are key to our Company's success. We believe we have a talented, motivated and dedicated team, and we work to create an inclusive, exciting, safe, and supportive environment, for all of our employees. Our company is built around innovation and driven by diversity of thought and background. Our employees challenge the status quo, actively partner to resolve challenges, and seek to continuously improve themselves as well as our operations.

As of December 31, 2023, we had 269 full-time employees, which is approximately 100% of our staffing, and include both permanent and leased employees. Our leased employees include sales and service agents worldwide, and IT support. Our employees are not unionized, and we consider our relations with our employees to be good.

We are proud to have built a global workforce to match our global customer base. Our employees represent a broad array of backgrounds, professionally and personally, and we believe that this diversity of experience and perspectives is a competitive advantage that allows us to better serve the needs of our customers.

Our Code of Business Conduct (our "Code") serves as a critical tool to help all of us recognize and report unethical conduct, while preserving and nurturing our culture. Our Code is reflected in our employee manual, which we provide to all of our employees, and training programs. Both our employee manual and training programs include our policies against harassment and bullying, and the elimination of bias in the workplace.

Recruiting, Training and Retention

Our focus is to create an engaged employee experience, throughout the process of attracting, onboarding, developing, and retaining employees. We are committed to supporting employee development as well as providing competitive benefits and a safe workplace. We support and develop our employees through global training and development programs that build and strengthen employees' leadership and professional skills while striving to enhance our employee's financial, mental and physical wellness. To assess and improve employee retention and engagement, we survey our employees with the assistance of a third-party employee engagement survey, and take action to address areas of employees' concerns.

Our employee engagement efforts include newsletters and all-employee town hall meetings, as well as informational meetings, which includes our executive staff meeting with small groups of employees in an informal setting, through which we aim to keep all of our employees well-informed, increase transparency and promote a culture of open communication. Our values and ethics serve as the guiding force through which we proactively maintain the highest standards of business conduct.

Compensation and Benefits

We believe that compensation should be competitive and equitable, and should enable our employees to share in our company's success. In addition, we recognize our employees are most likely to thrive when they have the resources to meet their needs and the time and support to succeed in their professional and personal lives. In support of this, we offer a wide variety of benefits for our employees and we invest in tools and resources that are designed to support our employees' individual growth and development.

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 the Company's and individual's performance. All full-time and full-time equivalent employees, where allowed, are included in our share-based equity incentive program, and are offered health and welfare benefits, mental wellness programs, development programs and training courses. In addition, all employees are afforded the opportunity to give back to our communities through donations of time and money through our company sponsored programs.

Workplace Health and Safety

We are committed to providing a safe and healthy workplace. We continuously strive to meet or exceed compliance with all laws, regulations and accepted practices pertaining to workplace safety. All employees are required to comply with established safety policies, standards and procedures, and to attend and complete annual safety training based on their job function. To accomplish our safety goals, we developed and maintain company-wide policies to ensure the safety of each employee, as well as compliance with domestic and international safety standards. In addition, we foster work/life balance for our employees that provides significant flexibility surrounding work location and work schedules.

Additional Information

Our website is https://energyrecovery.com. We also 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 our 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. The address of the SEC website is http://www.sec.gov. We have included this website address only as an inactive textual reference and do not intend it to be an active link to the SEC website.

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 revenues largely depend on the construction of new large-scale desalination plants and the retrofit of existing desalination plants, and as a result, our operating results have historically experienced, and may continue to experience, significant variability due to volatility in capital spending, availability of project financing, project timing, execution and other factors affecting the broader water desalination industry.

We currently derive the majority of our Water segment revenues from sales of energy recovery products and services used in newly constructed, large-scale desalination plants and the retrofit of existing desalination plants, particularly in dry or drought-ridden regions of the world. The demand for our products used in the Water segment may decrease if the construction of these large-scale desalination plants or the retrofit of existing plants declines for any reason, including, any global or regional economic downturns, worsening global or regional political conflicts, worsening regional conditions, changing government priorities, or the impact of any global or regional conflicts.

Other factors that could affect the number and capacity of large-scale desalination plants built or the timing of their completion, include the availability of required engineering and design resources; availability of credit and other forms of financing; the health of the global economy; inflation rates; changes in government regulation, permitting requirements, or priorities; and reduced capital spending for water desalination solutions. Each of these factors could result in reduced or uneven demand for our products. Pronounced variability or delays in the construction of such plants or reductions in spending for desalination in general could negatively impact our Water segment sales, 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.

Our Water segment faces competition from a number of companies that offer competing energy recovery solutions. If any of these companies produce superior products or offers their products at substantially lower prices, our competitive position in the market could be harmed and our revenues may decline.

The market for energy recovery devices for desalination and other water treatment plants is becoming increasingly competitive and we expect this competition to intensify as the desalination and wastewater markets continue to grow. Competitors have introduced products that are similar to, and directly compete with, our key energy recovery products. In addition, we expect new competitors to enter the market, and existing competitors to introduce improvements to their existing products and introduce new products that are directly competitive to our solutions. Our competitors' existing, new, and improved products may be superior to our products and/or could be offered at prices that are considerably less than the cost of our products. The performance and pricing pressure of such new products could cause us to adjust the prices of certain products to remain competitive, or we may not be able to continue to win large contracts, which could adversely affect our market share, competitive position and margins. 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, product margins, 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.

A sustained downturn in the economy or global unrest could impact the future of new, and the retrofit of existing, desalination plants, and the treatment of various wastewater verticals, 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, the retrofit of existing plants, and the construction of wastewater treatment facilities, particularly in the countries that are part of the Gulf Cooperation Council, China, and India. Weak economic conditions, inflation and global uncertainty including the continuing conflicts in Ukraine and many parts of the Middle East may have a negative economic impact on these and other countries, which may impact the levels of spending on, timing of, delays to, and availability of, project financing for new desalination and retrofit plant projects. The inability of our customers to secure credit or financing for these projects, may result in the postponement or cancellation of these projects. In addition, the change in government priorities and/or their reduction in spending for water treatment projects could result in decreased demand for our products and services, which could have an adverse effect on our business, financial condition or results of operations.

We may not be successful in developing suitable market adoption for our products in the wastewater market.

We have introduced a number of products designed specifically for the wastewater market, including the Ultra PX family of products and the low pressure PX. The wastewater market is evolving and covers a wide range of industries and geographies, and utilizes a variety of RO technologies. While our products can be a potential solution to these different applications, there is no guarantee that we will be successful in developing market adoption of our wastewater products. While countries like China and India are beginning to mandate zero or minimum liquid discharge ("ZLD" and "MLD", respectively) requirements for specific industries, in many parts of the world there are no regulations or minimal regulations for treating wastewater. Accordingly, end users in such areas may not be willing to implement wastewater treatment at all or, if they do plan to implement a wastewater treatment program, they may select a competitive or alternative wastewater treatment technology. Similar to the desalination market, there are many competitors and competitive products that can service wastewater industries that do not include RO technologies or utilize our products. These competitors may have existing relationships with end users, greater name recognition, and/or significantly greater financial, technical, marketing and other resources that may make it challenging for us to compete in this industry. As a result of the foregoing, we may not be able to successfully develop our wastewater business, develop any market share, or win any large contracts, which would affect our business, operating results and financial condition.

Risks Related to our Emerging Technologies Segment

We may not be able to successfully compete in the CO₂-based refrigeration system market.

For the past decade, the global commercial and industrial refrigeration industry has been shifting away from HFC-based refrigerants to natural refrigerants, such as CO₂-based refrigerants in response to the global HFC-based refrigerant phase-down and subsequent environmental regulations. We introduced the PX G1300 energy recovery device for use in CO₂-based refrigeration systems in 2021 and continue to work on developing market adoption of this new technology. While interest in the PX G1300 has been positive, there is no guarantee that we will be successful in generating sustained interest and, more importantly, adoption of our technology on a timeline necessary to meet our goals, or at all. The global commercial and industrial refrigeration industry can be slow to adopt new technologies and alternative technologies or new refrigerants may emerge, slowing the adoption of the PX G1300. In addition, we may encounter new technological challenges that we will need to solve in order to achieve adoption of the technology. The global commercial and industrial refrigeration industry is also saturated with very large, established companies who have greater experience and resources and may provide cost saving methods that utilize novel system architectures, new and improved equipment or materials, ejectors and/or other energy recovery devices, all or some of which could improve energy efficiency that compete against the PX G1300. If we are unable to solve any technological challenges, generate and sustain sufficient interest for our CO₂-based refrigeration technology, we may not be able to successfully compete in the CO₂-based refrigeration market, which could have an adverse effect on our CO₂ business, and our Emerging Technologies segment financial condition or results of operation.

We may not be able to develop future new technologies successfully.

We have made a substantial investment in R&D and sales and marketing to execute on our diversification strategy into fluid flow markets, including our recent commercial refrigeration products. 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. Our competitive position and future growth depend upon a number of factors, including our ability to successfully: (i) innovate, develop and maintain competitive products, and services to address emerging trends and meet customers' needs, (ii) defend our market share against an ever-expanding number of competitors, (iii) enhance our product and service offerings by adding innovative features or disruptive technologies that differentiate them from those of our competitors and prevent commoditization, (iv) develop, manufacture and bring compelling new products and services to market quickly and cost-effectively, (v) attract, develop and retain individuals with the requisite innovation and technical expertise and understanding of customers' needs to develop new technologies, products and services, and (vi) continue to invest in manufacturing, R&D, engineering, sales and marketing, and customer support. Any inability to execute this model for growth could damage our reputation, limit our growth, and negatively affect our operation results. 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. The failure of our technologies, products or services to maintain and gain market acceptance due to more attractive offerings, or customers' slower-than-expected adoption of, and investment in, our new and innovative technologies could significantly reduce our revenues or market share and adversely affect our competitive position.

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 quarterly and yearly 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 that year's 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 the impact of these fluctuations on our future results, in the event our revenue or operating results fall below the expectations of investors or securities analysts, our stock price may be negatively affected.

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 Water segment sales cycle for our international MPD customers, which are involved with larger desalination plants, typically ranges from 16 to 36 months, and may exceed 36 months from time-to-time, and the average sales cycle for our OEM customers, which are involved with smaller desalination plants, ranges from one to 16 months, and may exceed 16 months from time-to-time. These long sales cycles make revenue predictions difficult and results in our expending significant resources well in advance of orders for our products, which may cause our operating results to fluctuate and may adversely affect our financial condition.

Our Water contracts often contain holdback provisions of up to 10% of the contract price. If we are unable to collect unbilled receivables, which are caused in part by these holdback provisions, our operating results could be adversely affected.

Our Water 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 generally accounted for as contract assets. Such holdbacks may result in relatively high unbilled receivables. If we are unable to collect these performance holdbacks, our operating results and financial condition could 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, and alumina powder for our portfolio of energy recovery devices and stainless steel castings and components for our hydraulic 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 caused by rising inflation, and lack of guaranteed production capacity or product supply. 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.

We do not have long-term supply agreements with our suppliers but secure our 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 are subject to manufacturing risks, particularly related to new products, which could lead to excessive scrap, quality defects, 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 manufacture most of our products in our facilities. In connection with new products, we may sometimes need to develop new manufacturing processes and techniques that may lead to an increase in excess scrap compared to our more mature processes, as well as an increase in quality defects. We provide warranties for most of these products and while we test our products in our manufacturing facilities through a variety of means, there can be no assurance that our testing will reveal all quality defects in our products, which may not become apparent until after the products have been sold into the market. Accordingly, there is a risk that we may incur increased expenses due to excess scrap and significant warranty claims that will result in 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.

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 process; changes in the wastewater and refrigeration markets that result in product redesign; long delays in shipment of our products or order cancellations, and/or changes related to improvements in existing product design; our need to order raw materials that have long-lead times; our inability to estimate exact amounts and types of items needed, especially with regard to the configuration of our high-efficiency pumps; 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. While we believe one of our greatest strengths lies in our innovation and our product development efforts, successfully commercializing such efforts and generating a return can be difficult. 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, from time to time, 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, we 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 7, "Commitments and Contingencies – Litigation," of the Notes 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. The high and low ranges 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, and long-lived 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, if any. 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 North America, Middle East and Africa, Asia, Europe, Latin America, and South 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.

Our failure to maintain appropriate sustainability practices and disclosures could result in reputational harm, a loss of customer and investor confidence, and adverse business and financial results.

Governments, investors, customers, and employees are enhancing their focus on sustainability practices and disclosures, and expectations in this area are rapidly evolving and increasing. While we monitor the various and evolving standards and associated reporting requirements, failure to adequately maintain appropriate sustainability practices that meet diverse stakeholder expectations may result in the loss of business, reduced market valuation, an inability to attract customers, and an inability to attract and retain top talent.

Legal or regulatory measures to address climate change, may negatively affect us.

Concern over climate change can also result in new or additional legal or regulatory requirements designed to reduce greenhouse gas emissions and/or mitigate the effects of climate change on the environment, such as taxation of, or caps on the use of, carbon-based energy. Any such new or additional legal or regulatory requirements may increase the costs associated with, or disrupt sourcing, manufacturing and distribution of, our products which may adversely affect our business and financial statements.

We must comply with a variety of existing and future laws and regulations, such as sustainability initiatives, that could impose substantial costs on us and may adversely affect our business.

Increasingly regulators, customers, investors, employees and other stakeholders are focusing on sustainability matters. While we have certain sustainability initiatives, there can be no assurance that regulators, customers, investors, and employees will determine that these programs are sufficiently robust. In addition, there can be no assurance that we will be able to attain any announced goals related to our sustainability program, as statements regarding our sustainability goals reflect our current plans and aspirations and are not guarantees that we will be able to achieve them within the timelines we announce or at all. Actual or perceived shortcomings with respect to our sustainability initiatives and reporting can impact our ability to hire and retain employees, increase our customer base, or attract and retain certain types of investors. In addition, these parties are increasingly focused on specific disclosures and frameworks related to sustainability matters. Collecting, measuring, and reporting sustainability information and metrics can be costly, difficult and time consuming, is subject to evolving reporting standards, and can present numerous operational, reputational, financial, legal and other risks, any of which could have a material impact, including on our reputation and stock price. Inadequate processes to collect and review this information prior to disclosure could be subject to potential liability related to such information.

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.

Our success depends, in part, on key personnel whose continued service is not guaranteed.

Our success depends, in part, on the continued availability and service of key personnel, including executive officers and other highly qualified employees, particularly when we undergo a leadership transition. Competition for these key personnel is intense. We cannot assure that we will retain our key personnel or that we will be able to recruit and retain other highly qualified employees in the future. Losing any key personnel could, at least temporarily, have a material adverse effect on our business, financial position and results of operations.

Risks Related to Economic Conditions and Geopolitical Conflicts

Uncertainty in the global geopolitical landscape and macro-economic environment may impact our operations outside the U.S., including in the Middle East where many of our water megaprojects are planned.

We conduct our business on a global basis. Our products are sold in numerous countries worldwide, with a large percentage of our sales generated outside the U.S., specifically in the Middle East and Africa, and Asian markets which provide a significant portion of our total revenue. Therefore, we are exposed to, and impacted by, global macroeconomic factors, U.S. and foreign government policies, and foreign exchange fluctuations. There is uncertainty surrounding macroeconomic factors in the U.S. and globally characterized by the supply chain environment, inflationary pressure, rising interest rates, and labor shortages. These global macroeconomic factors, coupled with the U.S. political climate, political unrest internationally, and known conflicts in Europe and the Middle East, have created global economic and political uncertainty, and have impacted demand for certain of our products. While the impact and longevity of these factors remains uncertain, we are constantly evaluating the extent to which these factors will impact our business, financial condition, or results of operations. Over the long-term, demand for our energy recovery devices could correlate to global macroeconomic and geopolitical factors. Any disruption to the economic factors and regulations in these regions, which remain uncertain, may adversely affect our results of operations and financial condition.

In addition, there is uncertainty as to the position the U.S. will take with respect to world affairs. This uncertainty may include such issues as the 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 hostilities in the Middle East, may adversely impact (i) the ability or willingness of non-U.S. companies to transact business with U.S. companies, 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 Select Market Composite on which our common shares are traded); and (v) general global economic conditions. Furthermore, the conflicts in Europe and the Middle East have resulted in worldwide geopolitical and macroeconomic uncertainty, and we cannot predict how these conflicts will evolve or their timing. If these conflicts continue for a significant time or further expand to other countries or regions, they could have additional adverse effects on macroeconomic conditions that may have a direct adverse impact on our business and/or our supply chain, business partners or customers in the broader region. 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.

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. 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, such as LOG4J, 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 Privacy Rights Act ("CPRA"), which amends the California Consumer Privacy Act. The CPRA took effect on January 1, 2023, and enforcement began on July 1, 2023. We may 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 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

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") enacted in 2017, 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, foreign derived intangible income deductions, capitalization of R&D expenses beginning in the 2022 tax year, and possible limitations on the deductibility of net interest expense or corporate debt obligations. 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.

Changes in tax laws or regulations that are applied adversely to us or our customers may have a material adverse effect on our business, cash flow, financial condition or results of operations.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time, which could adversely affect our business operations and financial performance. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us. For example, the Tax Act, the Coronavirus Aid, Relief, and Economic Security Act, and the Inflation Reduction Act, enacted many significant changes to the U.S. tax laws. Future guidance from the U.S. Internal Revenue Service and other tax authorities with respect to such legislation may affect us, and certain aspects thereof could be repealed or modified in future legislation. The current administration and Congress periodically make and propose tax law changes, some of which could have an adverse effect on our operations, cash flows, and results of operations, and contribute to overall market volatility. In addition, it is uncertain if and to what extent various states will conform to federal tax legislation. Changes in corporate tax rates, the realization of net deferred tax assets relating to our operations, the taxation of foreign earnings, and the deductibility of expenses under the Tax Act or future reform legislation could have a material impact on the value of our deferred tax assets, could result in significant one-time charges, and could increase our future U.S. tax expense.

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 there 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.

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.

Risks Related to our Internal Controls

Changes in the U.S. generally accepted accounting principles 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. generally accepted accounting principles ("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. 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 controls 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;
- 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 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.

Item 1B — Unresolved Staff Comments

None.

Item 1C — Cybersecurity

Managing Material Risks & Integrated Overall Risk Management

We have strategically integrated cybersecurity risk management into our broader risk management framework to promote a company-wide culture of cybersecurity risk management. This integration ensures that cybersecurity considerations are an integral part of our decision-making processes at every level. Our Risk Management Team (see "Management's Role Managing Risk" below for details regarding the team members and scope) works closely with our Information Technology ("IT") team to continuously evaluate and address cybersecurity risks in alignment with our business objectives and operational needs.

Engage Third-parties on Risk Management

Recognizing the complexity and evolving nature of cybersecurity threats, we engage with a range of external experts, including cybersecurity consultants in evaluating and testing our risk management systems. These partnerships enable us to leverage specialized knowledge and insights, ensuring our cybersecurity strategies and processes remain at the forefront of industry best practices. Our collaboration with these third-parties includes regular audits, threat assessments, and consultation on security enhancements.

Oversee Third-party Risk

Because we are aware of the risks associated with third-party service providers, we have implemented stringent processes to oversee and manage these risks. We conduct thorough security assessments of all third-party providers before engagement and maintain ongoing monitoring to ensure compliance with our cybersecurity standards. The monitoring includes an initial assessment by our Director, Information Technology and IT team, and on an ongoing basis of a few key high-risk third-party systems by our security engineers. We also rely upon certain third-party system providers, including cloud and non-cloud programs provided by software developers such as Microsoft Corporation, Blackline Systems, Inc., Workiva, Inc., and others, to review and notify their customers of any data breach. This approach, both internal and reliance on external review notification, is designed to mitigate risks related to data breaches or other security incidents originating from third-parties.

Risks from Cybersecurity Threats

While we have a cybersecurity program designed to protect and preserve the integrity of our information systems, we also maintain cybersecurity insurance to manage potential liabilities resulting from specific cyber-attacks. However, it's important to note that although we maintain cybersecurity insurance, there can be no guarantee that our insurance coverage limits will protect against any future claims or that such insurance proceeds will be paid to us in a timely manner. As of December 31, 2023, no risks from cybersecurity threats, including as a result of any previous cybersecurity incidents, have materially affected, or are reasonably likely to materially affect, us, including our business strategy, results of operations, or financial condition.

Governance

The Board of Directors (the "Board") is acutely aware of the critical nature of managing risks associated with cybersecurity threats. The Board has established oversight mechanisms to ensure effective governance in managing risks associated with cybersecurity threats because we recognize the significance of these threats to our operational integrity and stakeholder confidence.

Board of Directors Oversight

The Audit Committee of the Board (the "Audit Committee") is central to the Board's oversight of cybersecurity risks and bears the primary responsibility for this domain. The Audit Committee is composed of independent board members with diverse expertise and experience which allows them to oversee cybersecurity risks effectively.

Management's Role Managing Risk

We have an internal management team comprising of our Chief Financial Officer ("CFO"), Chief Legal Officer ("CLO"), VP, Corporate Controller, Sr. Director, SEC Reporting, and Director, Information Technology (the "Risk Management Team"), that plays a pivotal role in informing the Audit Committee on cybersecurity risks. The Director, Information Technology and IT team monitor cybersecurity risks and perform continual risk exercises and assessments. The Risk Management Team meets quarterly to discuss current security breaches and threats, if any, and discuss new controls and results of the cybersecurity risk monitoring, exercises, and assessments. The Risk Management Team provides comprehensive briefings to the Audit Committee on a regular basis, with a minimum frequency of once per year. These briefings encompass a broad range of topics, including:

- Current cybersecurity landscape and emerging threats;
- Status of ongoing cybersecurity initiatives and strategies;
- Incident reports and learnings from any cybersecurity events; and
- Compliance with regulatory requirements and industry standards.

In addition to our scheduled meetings, the Audit Committee and the Risk Management Team maintain an ongoing dialogue regarding emerging or potential cybersecurity risks. Together, the Board receives updates on any significant developments in the cybersecurity domain, ensuring the Board's oversight is proactive and responsive. The Audit Committee actively participates in strategic decisions related to cybersecurity, offering guidance and approval for major initiatives. This involvement ensures that cybersecurity considerations are integrated into our broader strategic objectives.

Risk Management Personnel

Our Director, Information Technology (our "IT Director"), who has a career of 23 years in IT, has in-depth working knowledge on IT systems and data security, and his experience is instrumental in developing and executing our cybersecurity strategies. Our IT Director along with the IT team, oversees our governance programs, tests our compliance with standards, remediates known risks, and leads our employee cybersecurity risk training program. However, the primary responsibility for assessing, monitoring and managing our cybersecurity risks rests with the Risk Management Team. The diverse background and experience of our Risk Management Team members are instrumental in developing and executing our cybersecurity strategies and supplement the expertise of our IT Director with their understanding of the needs of our business.

Monitor Cybersecurity Incidents

Our IT Director and the IT team are continually informed about the latest developments in cybersecurity, including potential threats and innovative risk management techniques. This ongoing knowledge acquisition is crucial for the effective prevention, detection, mitigation, and remediation of cybersecurity incidents. Our IT Director and the IT team implement and oversee processes for the regular monitoring of our information systems. This includes the deployment of advanced security measures and regular system audits to identify potential vulnerabilities. In the event of a cybersecurity incident, our IT Director is equipped with a well-defined incident response plan. This plan includes immediate actions to mitigate the impact and long-term strategies for remediation and prevention of future incidents.

Reporting to Board of Directors

Our IT Director, in his capacity, regularly informs the other Risk Management Team members of all aspects related to cybersecurity risks and incidents. This ensures that various levels management are kept abreast of the cybersecurity posture and potential risks facing Energy Recovery, Inc. Furthermore, significant cybersecurity matters, and strategic risk management decisions are escalated to the Audit Committee, ensuring that the Audit Committee has comprehensive oversight and can provide guidance on critical cybersecurity issues.

Item 2 — Properties

The table below presents details for each of our principal properties. Each of these principal properties are located in the U.S.

	Approximate								
Facility	Location	Status	Square Footage	Lease Expiration					
Headquarters, R&D and manufacturing	San Leandro, California	Lease	171,000	Dec- 2028					
Manufacturing and warehouse	Tracy, California	Lease	54,429	Apr- 2030					
Office, R&D, warehouse, and yard	Katy, Texas	Lease	221,220	Jun- 2029					

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 7, "Commitments and Contingencies – Litigation" of the Notes which is incorporated by reference into this Item 3, for a description of the lawsuits pending, if any, 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 Nasdag Stock Market - The NASDAQ Global Select Market Composite under the symbol "ERII."

Stockholders

As of December 31, 2023, there were approximately 15 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.

Securities Authorized for Issuance Under Equity Compensation Plans

Information regarding our equity compensation plans and the securities authorized for issuance thereunder is set forth herein under Part III, Item 12, "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" included in this Annual Report on Form 10-K.

Sales of Unregistered Securities

None.

Stock Performance Graph

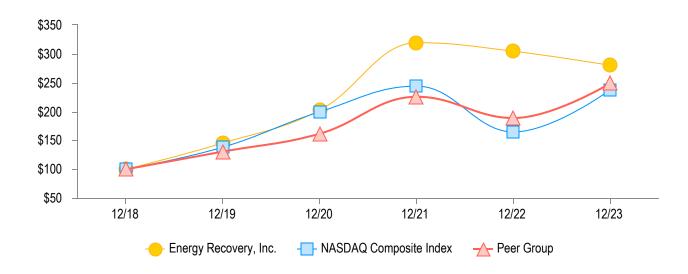
The following graph shows the cumulative total stockholder return of an investment of \$100 on December 31, 2018 in (i) our common stock, (ii) the NASDAQ Composite Index, (iii) and a peer group for the current fiscal year ("Peer Group"). Cumulative total return assumes the reinvestment of dividends, 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 annual period. For each reported year, the reported dates are the last trading dates of our annual year.

The NASDAQ Composite Index tracks the aggregate total return performance of equity securities traded on the Nasdaq Stock Market. The Peer Group tracks the weighted average total return performance of equity securities of nine companies that management believes Energy Recovery, Inc. is closely aligned during the years presented. As we evolve and grow into new industries, management expects to expand or rebalance the companies within this peer group. The companies within the Peer Group are: Badger Meter, Inc.; Evoqua Water Technologies Corp. (through May 2023); Flowserve Corp; Franklin Electronic Co., Inc.; The Gorman-Rupp Company; Itron, Inc.; Kurita Water Industries Ltd.; Pentair plc; and Primo Water Corp. 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 Peer Group



	 As of December 31,										
	 2018 2019		2020			2021		2022		2023	
Energy Recovery, Inc.	\$ 100.00	\$	145.47	\$	202.67	\$	319.32	\$	304.46	\$	279.94
NASDAQ Composite Index	100.00		138.27		199.64		243.92		164.56		238.01
Peer Group	100.00		130.56		161.69		225.56		188.67		249.19

Item 6 — [Reserved]

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 Emerging Technologies segments. These segments are based on the industries in which the technology solutions are sold, the type of energy recovery device or other technology sold and the related solution and service or, in the case of emerging technologies, where revenues from new and/or potential devices utilizing our pressure exchanger technology can be brought to market. Other factors for determining the reportable operating segments include the manner in which management evaluates the performance of the Company combined with the nature of the individual business activities. In addition, our corporate operating expenses include expenditures in support of the water and emerging technologies 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, Economic Conditions, Challenges, and Risks

We released our fourth annual Sustainability Report (formally referred to as our Environmental, Social, and Governance ("ESG") report), which details our efforts to accelerate the environmental sustainability of our customers' operations and enhance the management of sustainability issues in our own operations. Our Sustainability Report reports provide examples and data illustrating our products' positive environmental impacts across the industries where we operate. We understand the importance of being a responsible corporate citizen and believe our sustainability objectives provide us with a strategic roadmap to become a more resilient business, as well as a way to maintain our competitive advantage. Our 2022 Sustainability Report (issued in September 2023) outlines our progress on those objectives and aligns to leading sustainability frameworks and reporting standards, including the United Nations Sustainable Development Goals and the Sustainability Accounting Standards Board, as well as select disclosures from the Global Reporting Initiative and the Task Force on Climate-related Financial Disclosures.

As a result of our sustainability efforts and reporting, in 2023, MSCI ESG Research LLC ("MSCI") upgraded the company from an ESG rating of AA to its highest rating of AAA. MSCI's evaluation recognizes Energy Recovery as one of the highest performing companies within the Industrial Machinery industry in MSCI's All Company World Index, reflecting robust corporate governance and labor management practices and significant opportunities in clean technology.

Our complete 2022 Sustainability Report can be found on our website at: https://energyrecovery.com/sustainability/. The foregoing link to our 2022 Sustainability Report is an inactive textual reference, and our 2022 Sustainability Report is not incorporated by reference into, and is not a part of, this Annual Report.

During the year, we announced:

- Additions to our PX U Series product line, tailored for ultra high-pressure reverse osmosis ("UHPRO") applications. The expanded PX U Series product line includes the U20, U40, U80, and U250 models.
- The appointment of Fieuw Koeltechniek ("Fieuw"), a leading refrigeration cooling rack and service provider in Belgium, the
 Netherlands, and Luxembourg (these countries are commonly referred to as the "Benelux region"), as our exclusive distribution
 agent in the Benelux region for two years and requires set volume purchase commitments over the life of the contract. Under the
 agreement, Fieuw, is granted the exclusive right to sell our PX G1300 within the Benelux region.
- The successful installation and commissioning of our PX G1300 in a major supermarket chain in the Benelux region and the second installation and commissioning of our PX G1300 with Vallarta Supermarkets in the U.S.

- Received the prestigious "Refrigeration Innovation of the Year Award" for the PX G1300 at the ATMO Awards Ceremony of the Atmosphere America Summit 2023. The award for Refrigeration Innovation of the Year recognizes systems, products, or processes that utilize new technology to provide definitive innovations to refrigeration.
- Received the Refrigeration & Air Conditioning ("RAC") Magazine "Innovation of the Year" award together with our partner, the Epta Group. The RAC Magazine award was recognized for work on implementing a new approach to further scale up the efficiency of CO₂ refrigeration.

Global Economic and Political Environment Considerations

The markets for our products are dynamic and constantly evolving. Our products are sold in numerous countries worldwide, with a large percentage of our sales generated outside the U.S., specifically in the Middle East and Asia markets which provide a significant portion of our total revenue. Therefore, we are exposed to and impacted by global macroeconomic factors, U.S. and foreign government policies and foreign exchange fluctuations. There is uncertainty surrounding macroeconomic factors in the U.S. and globally characterized by the supply chain environment, inflationary pressure, rising interest rates, and labor shortages. These global macroeconomic factors, coupled with the U.S. political climate, political unrest internationally, and known conflicts in Europe and the Middle East, have created global economic and political uncertainty, and have impacted demand for certain of our products. While the impact and longevity of these factors remains uncertain, we are constantly evaluating the extent to which these factors will impact our business, financial condition or results of operations.

Over the long-term, demand for our energy recovery devices could correlate to global macroeconomic and geopolitical factors. Any disruption to the economic factors and regulations in these regions, which remain uncertain, may adversely affect our results of operations and financial condition.

Refer to Part I, Item 1, "Business," and Part I, Item 1A, "Risk Factors," of this Form 10-K for further discussion of these trends and other risks.

Results of Operations

A discussion regarding our financial condition and results of operations for the year ended December 31, 2022, compared to the year ended December 31, 2021, can be found under Item 7 in our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on February 23, 2023, 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).

Revenue

There is no specific seasonality in our revenues to highlight that occurs throughout a calendar year.

Revenue by Channel Customers

	 Years Ended December 31,						
	2023			2022			
		% of			% of		
	\$	Revenue		\$	Revenue	Change	
			(1	In thousands, except p	percentages)		
Megaproject	\$ 83,665	65%	\$	81,888	65%	\$ 1,777	2%
Original equipment manufacturer	25,995	20%		28,858	23%	(2,863)	(10%)
Aftermarket	 18,689	15%		14,845	12%	 3,844	26%
Total revenue	\$ 128,349	100%	\$	125,591	100%	\$ 2,758	2%

Revenue Attributable to Primary Geographical Markets by Segments.

		Years Ended December 31,										
			2023		2022							
	Water		Emerging Technologies			Total		Water		Emerging Technologies		Total
Middle East and Africa	\$	76,437	\$	177	\$	76,614	\$	86,227	\$	94	\$	86,321
Asia		30,500		_		30,500		24,777		_		24,777
Americas		15,048		153		15,201		8,544		34		8,578
Europe		5,740		294		6,034		5,880		35		5,915
Total revenue	\$	127,725	\$	624	\$	128,349	\$	125,428	\$	163	\$	125,591

The Megaproject ("MPD") channel has been the main driver of our long-term growth as revenue from this channel benefits from a growing number of projects as well as an increase in the capacity of these projects in some cases. The change in revenue for the year ended December 31, 2023, as compared to the prior year, was due primarily to customers' project timing, and execution of these projects, specifically in the Middle East and Africa ("MEA") markets.

The Original Equipment Manufacturer ("OEM") channel, where we sell into a wide variety of industries in the desalination, wastewater, and the refrigeration markets, contains projects smaller in size and of shorter duration compared to those projects in the MPD channel.

- Desalination: The decrease in revenue in the year ended December 31, 2023, as compared to the prior year, by \$6.3 million was
 due primarily to timing of project shipments. Revenue was lower in the MEA channel, partially offset by an increase in revenue in
 the Americas market.
- Wastewater: The increase in revenue in the year ended December 31, 2023, as compared to the prior year, by \$3.0 million, was due primarily to growth within the Asian, European, and the Americas markets.
- Emerging Technology: The increase in revenue in the year ended December 31, 2023, as compared to the prior year, by \$0.6 million was due primarily to CO₂ growth in the European and Americas markets.

The Aftermarket ("AM") channel revenue generally fluctuates from year-to-year depending on support and services rendered to our installed customer base. AM revenue is also dependent on our customers' timing of product upgrades, and replenishment of spare parts and supplies. Generally, the AM channel revenue trend has been increasing over time. The increase in revenue in the year ended December 31, 2023, as compared to the prior year, by \$3.8 million was due primarily to shipments to customers in the MEA, the Americas and the European markets.

Concentration of Revenue

Revenues attributable to domestic and international sales as a percentage of total revenue are presented in the following table. See Note 10, "Concentrations – Revenue by Geographic Location and Country," of the Notes for information about for further discussion regarding our concentration of revenue by geographic location.

	Years Ended D	ecember 31,
	2023	2022
United States	2%	1%
International	98%	99%
Total revenue	100%	100%

The following table presents all customers accounting for 10% or more of our revenues. Although certain customers might account for greater than 10% of our revenues at any one point in time, the concentration of revenues between a limited number of large customers shifts regularly, depending on timing of shipments. The percentages by customer reflect specific relationships or contracts that would concentrate our revenue for the periods presented and does not indicate a trend specific to any one customer. See Note 10, "Concentrations – Customer Revenue Concentration," of the Notes for further discussion on customer concentration.

	_	Years Ended	December 31,
	Segment	2023	2022
Customer B	Water	**	18%
Customer D	Water	**	15%
Customer E	Water	13%	**
Customer F	Water	**	11%

Zero or less than 10%.

Gross Profit and Gross Margin

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

		Years Ended						
	2023			2022				
		Gross			Gross			
	\$	Margin %		\$	Margin %	Change in Product Gross Profit		
				(In thousands, except	percentages)			_
Gross profit and gross margin	\$ 87,079	67.8%	\$	87,356	69.6%	\$	(277)	(0.3%)

The decrease in gross profit for the year ended December 31, 2023, as compared to the prior year, was due primarily to lower gross margin, partially offset by an increase in revenue. The decrease in gross margin during the year ended December 31, 2023, as compared to the prior year, was due primarily to higher manufacturing costs, partially offset by changes in product mix, and lower freight and tariffs.

Operating Expenses

The total material changes of general and administrative ("G&A"), sales and marketing ("S&M") and research and development ("R&D") operating expenses for the year ended December 31, 2023, as compared the prior year, are discussed within the following segment and corporate operating expense discussions below.

		Yea	r Ended De	cemb	per 31, 2023		Year Ended December 31, 2022							
	Water		merging hnologies	(Corporate	Total (In tho	ısand	Water s)		merging chnologies		Corporate		Total
General and administrative	\$ 7,751	\$	3,927	\$	17,186	\$ 28,864	\$	6,936	\$	4,104	\$	17,301	\$	28,341
Sales and marketing	13,691		6,053		2,420	22,164		11,065		3,047		2,165		16,277
Research and development	 4,251		12,750			17,001		4,151		13,758				17,909
Total operating expenses	\$ 25,693	\$	22,730	\$	19,606	\$ 68,029	\$	22,152	\$	20,909	\$	19,466	\$	62,527

Overall operating expenditures increased by \$5.5 million, or 8.8%, in the year ended December 31, 2023, as compared to the prior year. This increase was due primarily to higher employee costs and share-based compensation expense related to additional headcount, and increased wages and benefit costs in G&A, S&M and R&D. Other non-employee costs included:

- G&A: higher consultant costs, professional fees related to management projects, and CEO and board member search fees;
- S&M: higher marketing expenses to further develop the CO₂ market, an increase in outside commission costs and higher software licensing and support costs, partially offset by lower consultant costs, and a litigation settlement cost that occurred in 2022 with no comparable cost in the current year;
- *R&D*: an increase in CO₂ product development costs, offset by expenses incurred in 2022 with no comparable costs in the current year, such as VorTeq-related accelerated depreciation expense of certain assets and employee severance costs.

Water Segment. Water segment operating expenses increased by \$3.5 million, or 16.0%, in the year ended December 31, 2023, as compared to the prior year. This increase was due primarily to higher employee costs, including share-based compensation expense, in G&A, S&M and R&D to support our existing desalination operations and our growth in wastewater, and an increase in marketing costs, partially offset by lower product development costs. The increase in employee costs was due primarily to an increase in headcount, and higher wage and benefit costs. In addition, in 2022, we incurred a litigation settlement cost with no comparable cost in the current year.

Emerging Technologies Segment. Emerging Technologies operating expenses increased by \$1.8 million, or 8.7%, in the year ended December 31, 2023, as compared to the prior year. This increase was due primarily to higher employee costs, and share-based compensation expense, related to an increase in headcount in G&A, S&M and R&D, an increase in travel and marketing costs to further develop the CO_2 market, and an increase in R&D costs to further develop our CO_2 product. This increase was partially offset by VorTeq-related accelerated depreciation expense of certain assets and employee severance costs incurred in 2022 with no comparable amounts in the current year.

Corporate Operating Expenses. Corporate operating expenses increased by \$0.1 million, or 0.7%, in the year ended December 31, 2023, as compared to the prior year. This increase was due primarily to higher consultant costs, an increase in CEO and board member search fees, and higher share-based compensation expense, partially offset by lower employee compensation costs, and a decrease in software and licensing costs.

Other Income, Net

	Years	Years Ended December 31,				
	2023			2022		
		(In thousands)				
Interest income	\$,756	\$	908		
Other non-operating (expense) income, net		(101)		334		
Total other income, net	\$ 3	,655	\$	1,242		

The increase in Total other income, net in the year ended December 31, 2023, as compared to the prior year, was due primarily to an increase in interest yields on our investments as well as an increase in investment-grade marketable debt instruments.

Income Taxes

	Years Ended	l Decemb	ber 31,		
	2023		2022		Change
	(In t	housands	s, except perce	ntages)	
\$	1,201	\$	2,022	\$	(821)
	5%		8%		

The lower provision for income taxes in 2023, as compared to the prior year, was due primarily to a decrease in income from operations, an increase in tax benefit of \$0.6 million related to Foreign Derived Intangible Income ("FDII"), and an increase of \$0.3 million in R&D tax credits, partially offset by lower share-based compensation related windfalls of \$0.7 million.

The fiscal year 2023 effective tax rate included a benefit of \$2.4 million related to FDII, a benefit of \$1.3 million related to R&D tax credits, and a benefit of \$0.7 million related to tax deductions from stock-based compensation related windfalls.

The fiscal year 2022 effective tax rate included a benefit of \$1.8 million related to related to FDII, a benefit of \$1.3 million related to tax deductions from stock-based compensation related windfalls, and a benefit of \$1.0 million related to R&D tax credits.

See Note 8, "Income Taxes," of the Notes for further discussion regarding further information related to our tax rate reconciliation.

Liquidity and Capital Resources

Overview

From time-to-time, management and our Board of Directors review our liquidity and future cash needs and may make a decision to (1) return capital to our shareholders through a share repurchase program or dividend payout; or (2) seek additional debt or equity financing. As of December 31, 2023, our principal sources of liquidity consisted of (i) unrestricted cash and cash equivalents of \$68.1 million; (ii) investment-grade short-term and long-term marketable debt instruments of \$54.3 million that are primarily invested in U.S. treasury securities, corporate notes and bonds, and municipal and agency notes and bonds; and (iii) accounts receivable, net of allowances, of \$46.9 million. As of December 31, 2023, there was unrestricted cash of \$1.2 million held outside the U.S. We invest cash not needed for current operations predominantly in investment-grade, marketable debt instruments with the intent to make such funds available for future 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. We believe 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.

Short-term Contract Assets

As of December 31, 2023, we had \$0.6 million of short-term contract assets which represents unbilled trade receivables from certain Water segment contract sales which include 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.

Credit Agreement

We entered into a credit agreement with JPMorgan Chase Bank, N.A. ("JPMC") on December 22, 2021 ("Credit Agreement") to provide us with additional capital to fuel our growth and expansion into emerging markets utilizing our pressure exchanger technology. The Credit Agreement, which will expire on December 21, 2026, provides a committed revolving credit line of \$50.0 million and includes both a revolving loan and a letters of credit ("LCs") component. During September 2023, the Company and JPMC amended the Credit Agreement (the "Second Amendment") to only increase the maximum allowable LCs credit line component from \$25.0 million to \$30.0 million. No other components or features under the Credit Agreement (including the First Amendment dated July 15, 2022) were amended. As of December 31, 2023, we were in compliance with all covenants under the Credit Agreement.

Under the Credit Agreement, as of December 31, 2023, there were no revolving loans outstanding. In addition, as of December 31, 2023, under the LCs component, we utilized \$21.8 million of the maximum allowable credit line of \$30.0 million, which included newly issued LCs, and previously issued and unexpired stand-by letters of credits ("SBLCs") and certain non-expired commitments under the previous Loan and Pledge Agreement with Citibank, N.A., which are guaranteed under the Credit Agreement. As of December 31, 2023, there was \$19.9 million of outstanding LCs. These LCs had a weighted average remaining life of approximately 14 months.

See Note 6, "Lines of Credit," of the Notes for further discussion related to the Credit Agreement.

Cash Flows

	Years Ended December 31,				
	2023			2022	Change
				(In thousands)	-
Net cash provided by operating activities	\$	26,054	\$	12,631	\$ 13,423
Net cash used in investing activities		(19,114)		(6,946)	(12,168)
Net cash provided by (used in) financing activities		4,794		(23,668)	28,462
Effect of exchange rate differences on cash and cash equivalents		33		(20)	53
Net change in cash, cash equivalents and restricted cash	\$	11,767	\$	(18,003)	\$ 29,770

Cash Flows from Operating Activities

Net cash provided by operating activities is subject 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.

The lower net cash used for operating assets and liabilities for the year ended December 31, 2023, as compared to the prior year, was due primarily to the following factors:

- an increase in cash related to an increase in revenues and the timing of collections on accounts receivable balances in 2023;
- lower cash used for inventory builds. In 2022, cash used for inventory builds was higher due to the additional purchases of raw
 material to mitigate supply risk and building of finished goods inventory to satisfy future projects; and
- · an increase in accounts payables related to the timing of vendor payments.

Cash Flows from Investing Activities

Net cash used in investing activities primarily relates to sales, maturities and purchases of investment-grade marketable debt instruments, such as corporate notes and bonds, and capital expenditures supporting our growth. We believe our investments in marketable debt instruments are structured to preserve principal and liquidity while at the same time maximizing yields without significantly increasing risk. The higher \$12.2 million in net cash used in investing activities in the year ended December 31, 2023, as compared to the prior year, was driven by a \$12.8 million increase in net cash used for investments in marketable debt instruments, partially offset by lower cash used for capital expenditures.

Cash Flows from Financing Activities

Net cash provided by (used in) financing activities primarily relates to the share repurchases under our board authorized share repurchase program, which was completed in 2022, and by issuance of equity from our equity incentive plans. The cash provided by financing activities for the year ended December 31, 2023, as compared to the cash used in financing activities in the prior year, was due primarily to higher cash from issuance of equity from our equity incentive plans, offset by share repurchases of \$26.7 million in 2022 under the March 2021 Authorization, as discussed in Note 11, "Stockholders' Equity – Share Repurchase Program," of the Notes.

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, and the timing and extent of our expansion into new geographic territories. 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.

Facility and Equipment Leases. We lease facilities and equipment under fixed noncancelable operating leases that expire on various dates through fiscal year 2030. See Note 7, "Commitments and Contingencies – Operating Lease Obligations," of the Notes for additional information related to our fixed noncancelable operating leases.

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 7, "Commitments and Contingencies – Purchase Obligations," of the Notes for additional information related to 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. See Note 1, "Description of Business and Significant Accounting Policies," of the Notes for further detailed discussion regarding our accounting policies and estimates.

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 – Revenue Recognition (Product and Service Revenue Recognition)," of the Notes for more detail on product and service revenue recognition.

Stock-based Compensation

We account for share-based compensation according to U.S. GAAP relating to share-based payments, which requires the measurement and recognition of compensation expense for all share-based awards made to employees and directors based on estimated fair values on the grant date. The fair value of stock options is calculated on the date of grant using a Black-Scholes (also referred to as the "Black-Scholes-Merton") model, which requires a number of complex assumptions including the expected life to exercise a vested award based upon the Company's exercise history, 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. See Note 1, "Description of Business and Significant Accounting Policies – Stock-based Compensation" and Note 12, "Stock-based Compensation," of the Notes for further discussion of our accounting policy and stock-based compensation activities, respectively.

Goodwill

Our goodwill represents the excess of the purchase price of a business combination over the fair value of the net assets acquired. Goodwill impairment testing requires significant judgment and management estimates, including, but not limited to, the determination of (i) the number of reporting units, (ii) the goodwill and other assets and liabilities to be allocated to the reporting units and (iii) the fair values of the reporting units. The estimates and assumptions described above, along with other factors such as discount rates, will significantly affect the outcome of the impairment tests and the amounts of any resulting impairment losses. We perform a quantitative assessment of goodwill for impairment on an annual basis during the third quarter of each year, and between annual tests, a qualitative assessment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. If these interim qualitative factors were to indicate that it is more-likely-than-not that the fair value of the reporting unit is less than its carrying value, we would then perform a quantitative assessment, which would consist primarily of a discounted cash flow ("DCF") analysis to determine the fair value of the reporting unit's goodwill. To the extent the carrying amount of the reporting unit's allocated goodwill exceeds the unit's fair value, we recognize an impairment of goodwill for the excess up to the amount of goodwill of that reporting unit. See Note 1, "Description of Business and Significant Accounting Policies – Significant Accounting Policies – Goodwill" and Note 4, "Other Financial Information – Goodwill," of the Notes for further discussion of our accounting policy and goodwill activities, respectively.

Inventories

We determine at each balance sheet date how much, if any, of our inventory may ultimately prove to be either unsalable or unsalable at its carrying cost. Reserves are established to effectively adjust the carrying value of such inventory to lower of cost (first-in, first-out method) or net realizable value. See Note 1, "Description of Business and Significant Accounting Policies – Significant Accounting Policies – Inventories" and Note 4, "Other Financial Information – Inventories, net," of the Notes for further discussion of our accounting policy and estimates, and inventory activities, respectively.

Income Taxes

Our annual tax rate is determined based on our income and the jurisdictions where it is earned, statutory tax rates, and the tax impacts of items treated differently for tax purposes than for financial reporting purposes. Also inherent in determining our annual tax rate are judgments and assumptions regarding the recoverability of certain deferred tax balances, and our ability to uphold certain tax positions. We are subject to complex tax laws, in the U.S. and numerous foreign jurisdictions, and the manner in which they apply can be open to interpretation. Realization of deferred tax assets is dependent upon generating sufficient taxable income in the appropriate jurisdiction in future periods, which involves business plans, planning opportunities, and expectations about future outcomes. Our assessment relies on estimates and assumptions, and may involve a series of complex judgments about future events. We use an estimate of our annual effective tax rate at each interim period based on the facts and circumstances available at that time, while the actual effective tax rate is calculated at year-end. See Note 1, "Description of Business and Significant Accounting Policies – Significant Accounting Policies – Income Taxes" and Note 8, "Income Taxes," of the Notes for further discussion of our income tax policy and our tax valuation allowance, respectively.

Recent Accounting Pronouncements

Refer to Note 1, "Description of Business and Significant Accounting Policies – Recently Issued Accounting Pronouncement Not Yet Adopted," of the Notes.

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 the 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 the USD. At times, our international customers may have difficulty in obtaining the USD to pay our receivables, thus increasing collection risk and potential bad debt expense. To the extent we expand our international sales, a larger 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. In addition, we do not have any exposure to the Russian ruble.

Interest Rate and Credit Risks

The primary objective of our investment activities is to preserve principal and liquidity while at the same time maximizing yields without significantly increasing risk. We invest primarily in investment-grade short-term and long-term marketable debt instruments that 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, 2023, our investment portfolio of \$54.3 million, in investment-grade marketable debt instruments, such as U.S. treasury securities, corporate notes and bonds, and municipal and agency notes and bonds, are classified as either short-term and/or long-term investments on our Consolidated Balance Sheets. These investments are subject to interest rate fluctuations and decrease in market value to the extent interest rates increase, which occurred during the year ended December 31, 2023. To minimize the exposure due to adverse shifts in interest rates, we maintain investments with a weighted average maturity of approximately nine months. As of December 31, 2023, a hypothetical 1% increase in interest rates would have resulted in a less than \$0.3 million decrease in the fair value of our investments in marketable debt instruments as of such date.

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, 2023 and 2022, 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, 2023, 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, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, 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, 2023, 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 February 21, 2024, 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 separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue Recognition — Refer to Notes 1, 2 and 10 to the financial statements

Critical Audit Matter Description

Revenue is recognized upon transfer of control of products which typically follows transfer of title upon shipment or delivery in accordance with International Commercial Terms. The processing and recording of the Company's revenue transactions is a combination of automated and manual processes (i.e., the revenue transactions are recorded automatically upon invoice generation at the time of shipment, whereas the review process remains relatively manual to ensure control has properly transferred to recognize revenue) and therefore, the Company uses a precise set of procedures to ensure revenue is accurate for each transaction.

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We identified the Company's revenue recognition processes as a critical audit matter as the Company has a significant volume of product revenue transactions throughout the year and a manual process to generate accurate data to process and record revenue in line with when risk is transferred to the customers. This required an increased extent of effort to audit these revenue transactions.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to revenue recognition included the following, among others:

- We tested the effectiveness of controls over the recognition of revenue.
- We obtained an understanding of the nature of the revenue recognition process through inquiry with the Company personnel responsible for the invoices as well as review of the contract with the customers.
- For a sample of processed revenue transactions, we traced and agreed the calculation of the Company's recorded revenue and the timing of revenue recognition to source documents such as the agreed upon terms with the customer and shipping records, as well as the related invoices generated within the system and evaluated any differences.

/s/ Deloitte & Touche LLP

San Francisco, California February 21, 2024

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, 2023, 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, 2023, 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, 2023, of the Company and our report dated February 21, 2024, expressed an ungualified 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 February 21, 2024

ENERGY RECOVERY, INC. CONSOLIDATED BALANCE SHEETS

		Decem	nber 31,		
		2023		2022	
	(In t	housands, except		s and per share	
ASSETS		uu	ta)		
Current assets:					
Cash and cash equivalents	\$	68,098	\$	56,354	
Short-term investments		40,445		33,479	
Accounts receivable, net		46,937		34,062	
Inventories, net		26,149		28,366	
Prepaid expenses and other assets		3,843		5,606	
Total current assets		185,472		157,867	
Long-term investments		13,832		3,058	
Deferred tax assets, net		10,324		10,263	
Property and equipment, net		18,699		19,580	
Operating lease, right of use asset		11,469		13,115	
Goodwill		12,790		12,790	
Other assets, non-current		388		366	
Total assets	\$	252,974	\$	217,039	
LIABILITIES AND STOCKHOLDERS' EQUITY					
Current liabilities:					
Accounts payable	\$	3,000	\$	814	
Accrued expenses and other liabilities		15,583		14,693	
Lease liabilities		1,791		1,600	
Contract liabilities		1,097		1,195	
Total current liabilities		21,471		18,302	
Lease liabilities, non-current		11,488		13,278	
Other liabilities, non-current		207		121	
Total liabilities		33,166		31,701	
Commitments and contingencies (Note 7)					
Stockholders' equity:					
Preferred stock, \$0.001 par value; 10,000,000 shares authorized; no shares issued or outstanding at December 31, 2023 and 2022		_		_	
Common stock, \$0.001 par value; 200,000,000 shares authorized; 65,029,459 shares issued and 56,880,947 shares outstanding at December 31, 2023 and 64,225,391 shares issued and 56,076,879 shares outstanding at December 31, 2022		65		64	
Additional paid-in capital		217,617		204,957	
Accumulated other comprehensive loss		(44)		(349)	
Treasury stock, at cost, 8,148,512 shares repurchased at December 31, 2023 and 2022		(80,486)		(80,486)	
Retained earnings		82,656		61,152	
Total stockholders' equity		219,808		185,338	
Total liabilities and stockholders' equity	\$	252,974	\$	217,039	
Total liabilities and stockholders equity	Ψ	232,314	Ψ	217,009	

ENERGY RECOVERY, INC. CONSOLIDATED STATEMENTS OF OPERATIONS

		Years Ended December 31,					
		2023		2022		2021	
		(In the	ousand	ds, except per share	data)		
Revenue	\$	128,349	\$	125,591	\$	103,904	
Cost of revenue		41,270		38,235		32,670	
Gross profit		87,079		87,356		71,234	
Operating expenses:							
General and administrative		28,864		28,341		25,174	
Sales and marketing		22,164		16,277		12,160	
Research and development		17,001		17,909		20,069	
Total operating expenses		68,029		62,527		57,403	
Income from operations		19,050		24,829		13,831	
Other income (expense):							
Interest income		3,756		908		204	
Other non-operating income (expense), net		(101)		334		(31)	
Total other income, net		3,655		1,242		173	
Income before income taxes		22,705		26,071		14,004	
Provision for (benefit from) income taxes		1,201		2,022		(265)	
Net income	\$	21,504	\$	24,049	\$	14,269	
Not income nor charge							
Net income per share: Basic	¢	0.38	\$	0.43	\$	0.25	
	\$						
Diluted	\$	0.37	\$	0.42	\$	0.24	
Number of shares used in per share calculations:							
Basic		56,444		56,221		56,993	
Diluted		57,740		57,641		58,723	

ENERGY RECOVERY, INC. CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

		Υ	ear E	nded December 3	1,	
	2023			2022	2021	
				(In thousands)		
Net income	\$	21,504	\$	24,049	\$	14,269
Other comprehensive income (loss), net of tax						
Foreign currency translation adjustments		51		15		(68)
Unrealized gain (loss) on investments		254		(215)		(134)
Total other comprehensive income (loss), net of tax		305		(200)		(202)
Comprehensive income	\$	21,809	\$	23,849	\$	14,067

ENERGY RECOVERY, INC. CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	<u></u>	Years	Ended December 3	31,			
	2023		2022	2021			
		(In th	ousands, except shares	s)			
Common stock							
Beginning balance	·	4 \$	64	\$	62		
Issuance of common stock, net		<u> </u>			2		
Ending balance	6	5	64		64		
Additional paid-in capital							
Beginning balance	204,95		195,593		179,16		
Issuance of common stock, net	4,79		2,986		10,552		
Stock-based compensation	7,86	7	6,378		5,880		
Ending balance	217,61	7	204,957		195,593		
Accumulated other comprehensive loss							
Beginning balance	(34	9)	(149)		5		
Other comprehensive income (loss)							
Foreign currency translation adjustments	5	1	15		(68		
Unrealized gain (loss) on investments	25	4	(215)		(134		
Total other comprehensive income (loss), net	30		(200)		(20:		
Ending balance	(4	4)	(349)		(149		
Treasury stock							
Beginning balance	(80,48	6)	(53,832)		(30,486		
Common stock repurchased	(00,10	_	(26,654)		(23,346		
Ending balance	(80,48	6)	(80,486)		(53,832		
Retained earnings		_					
Beginning balance	61,15		37,103		22,83		
Net income	21,50	_	24,049		14,26		
Ending balance	82,65	<u>6</u> _	61,152		37,100		
Total stockholders' equity	\$ 219,80	8 \$	185,338	\$	178,779		
Common stock issued (shares)							
Beginning balance	64,225,39	1	63,544,419		61,798,004		
Issuance of common stock, net	804,06	8	680,972		1,746,415		
Ending balance	65,029,45		64,225,391		63,544,419		
Treasury stock (shares)							
Beginning balance	8,148,51	2	6,721,153		5,455,93		
Common stock repurchased	5,140,51	_	1,427,359		1,265,21		
Ending balance	<u> </u>	2	8,148,512		6,721,15		
Ending balance			0,140,312		0,721,100		
Total common stock outstanding (shares)	56,880,94	7	56,076,879		56,823,26		

ENERGY RECOVERY, INC. CONSOLIDATED STATEMENTS OF CASH FLOWS

			ars	Ended December	JI,	2024
		2023	_	(In thousands)		2021
Cash flows from operating activities:				(in thousands)		
Net income	\$	21,504	\$	24,049	\$	14,269
Adjustments to reconcile net income to cash provided by operating activities	·	,	,	,	,	,
Stock-based compensation		8,038		6,508		6,053
Depreciation and amortization		4,102		4,764		4,502
Right of use asset amortization		1,646		1,538		1,437
(Accretion) amortization of premiums and discounts on investments		(862)		680		570
Deferred income taxes		(61)		1,158		(39
Other non-cash adjustments		1,026		(201)		95
Changes in operating assets and liabilities:						
Accounts receivable, net		(12,873)		(13,480)		(8,823
Contract assets		1,128		(1,227)		1,399
Inventories, net		1,354		(8,282)		(8,766
Prepaid and other assets		(96)		138		314
Accounts payable		2,629		138		(15
Accrued expenses and other liabilities		(1,352)		(1,062)		390
Contract liabilities		(129)		(2,090)		1,76
Net cash provided by operating activities		26,054		12,631		13,52
Cash flows from investing activities:						
Sales of marketable securities		2,966		_		_
Maturities of marketable securities		64,955		39,756		35,01
Purchases of marketable securities		(84,555)		(43,572)		(48,90
Capital expenditures		(2,567)		(4,232)		(6,68
Proceeds from sales of fixed assets		87		1,102		
Net cash used in investing activities		(19,114)		(6,946)		(20,56
Cash flows from financing activities:						
Net proceeds from issuance of common stock		4,794		2,986		10,55
Repurchase of common stock				(26,654)		(23,34
Net cash provided by (used in) financing activities		4,794		(23,668)		(12,79
Effect of exchange rate differences on cash and cash equivalents		33		(20)		(6
Net change in cash, cash equivalents and restricted cash		11,767		(18,003)		(19,89
Cash, cash equivalents and restricted cash, beginning of year		56,458		74,461		94,35
Cash, cash equivalents and restricted cash, end of year	\$	68,225	\$	56,458	\$	74,46
Supplemental disclosure of cash flow information:						
Cash received for income tax refunds	\$	3	\$	2	\$	27
Cash paid for income taxes		505		549		7
Supplemental disclosure on non-cash investing and financing transactions:						
Purchases of property and equipment in trade accounts payable, and accrued expenses	¢	647	¢	740	¢	40
and other liabilities	\$	647	\$	740	\$	42

Note 1 — Description of Business and Significant Accounting Policies

Energy Recovery, Inc. and its wholly-owned subsidiaries (the "Company" or "Energy Recovery") designs and manufactures reliable, high-performance solutions that provide cost savings through improved energy efficiency in commercial and industrial processes, with applications across several industries. Leveraging the Company's pressure exchanger technology, which generates little to no emissions when operating, the Company's solutions lowers costs, saves energy, reduces waste, and minimizes emissions for companies across a variety of industrial processes. As the world coalesces around the urgent need to address climate change and its impacts, the Company is helping companies reduce their energy consumption in their industrial processes, which in turn, reduces their carbon footprint. The Company believes that its customers do not have to sacrifice quality and cost savings for sustainability and is committed to developing solutions that drive long-term value – both financial and environmental. The Company's solutions are marketed, sold in, or developed for, the fluid-flow and gas markets, such as seawater and wastewater desalination, natural gas, chemical processing and CO₂-based refrigeration systems, under the trademarks ERI®, PX®, Pressure Exchanger®, PX® Pressure Exchanger® ("PX"), Ultra PX™, PX G™, PX G1300™, PX PowerTrain™, AT™, and Aquabold™. The Company owns, manufactures and/or develops its solutions, in whole or in part, in the United States of America (the "U.S.").

Basis of Presentation

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

Reclassifications

Certain prior period amounts have been reclassified in 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 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; useful life and valuation of equipment; valuation and impairment of goodwill; 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.

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 February 21, 2024, 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 Consolidated Balance Sheets. Cash equivalents are stated at cost, which approximates fair value. The Company's cash and cash equivalents may include demand deposit accounts with large financial institutions, institutional money market funds, U.S. treasury securities, corporate notes and bonds, and municipal and agency 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.

Short-term and Long-term Investments

The Company's short-term and long-term investments consist primarily of investment-grade debt securities, such as U.S. treasury securities, corporate notes and bonds, and municipal and agency notes and bonds, all of which are classified as available-for-sale. Available-for-sale securities are carried at fair value. Amortization or accretion of premium or discount is included in other income (expense) on the Consolidated Statements of Operations. Changes in the fair value of available-for-sale securities are reported as a component of accumulated other comprehensive loss within stockholders' equity on the Consolidated Balance 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.

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.

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. The following table presents the estimated useful life, or range of useful lives, of the Company's property and equipment. Maintenance and repairs are charged directly to expense as incurred.

	Minimum	Maximum
Machinery and equipment (excluding equipment used for manufacturing of ceramic components)	3 years	7 years
Machinery and equipment used for manufacturing of ceramic components	3 years	10 years
Leasehold improvements (1)	1 year	5.5 years
Software (2)	3 years	5 years
Office equipment, furniture, and fixtures	3 years	5 years
Automobiles	1 year	7 years

⁽¹⁾ 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. See Note 7, Commitments and Contingencies-Operating Lease Obligations, for further discussion of lease terms.

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.

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 1 year. 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 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 lease ROU assets are recognized net of any lease prepayments and incentives. Based on materiality, the Company accounts 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.

The Company applies lease modifications that change the contractual terms and conditions of a lease, that were 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.

⁽²⁾ Software purchased for internal use consists primarily of amounts paid for perpetual licenses to third-party software providers and implementation costs.

Goodwill

Our goodwill represents the excess of the purchase price of a business combination over the fair value of the net assets acquired. 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. Goodwill impairment testing requires significant judgment and management estimates, including, but not limited to, the determination of (i) the number of reporting units, (ii) the goodwill and other assets and liabilities to be allocated to the reporting units and (iii) the fair values of the reporting units. The estimates and assumptions described above, along with other factors such as discount rates, will significantly affect the outcome of the impairment tests and the amounts of any resulting impairment losses. We perform a quantitative assessment of goodwill for impairment on an annual basis during the third quarter of each year, which would consist primarily of a discounted cash flow ("DCF") analysis to determine the fair value of the reporting unit's goodwill. The forecast of future cash flows, which is based on the Company's best estimate of future net sales and operating expenses, is 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. Between annual tests, a qualitative assessment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. If these interim qualitative factors were to indicate that it is more-likely-than-not that the fair value of the reporting unit is less than its carrying value, we would then perform a quantitative assessment. To the extent the carrying amount of the reporting unit's allocated goodwill exceeds the unit's fair value, we recognize an impairment of goodwill for the excess up to the amount of goodwill of that repo

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 related to fair value.

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. Performance obligations are identified and the total transaction price is allocated to the performance obligations at execution of the contract.

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 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 stand-alone observable sales 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.

Practical Expedients and Exemptions

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

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. Performance obligations consist of delivery of products, such as the Company's PXs, hydraulic turbochargers, pumps and spare parts. Service obligations, such as commissioning, which are not material, are deferred as contract liabilities until the services are performed.

The transfer of control for the Company's products follows transfer of title which typically occurs upon shipment or delivery 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 or delivery 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 material.

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 between 24 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.

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 a Black-Scholes (also referred to as the "Black-Scholes-Merton") model, which requires a number of complex assumptions including the expected life to exercise a vested award based upon the Company's exercise history, 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 12, "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 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.

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 8, "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 Issued Accounting Pronouncement Not Yet Adopted

In October 2023, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") 2023-06, Disclosure Agreements - Codification Amendments in Response to the SEC's Disclosure Update and Simplification Initiative ("ASU 2023-06"). The amendments in ASU 2023-06 will impact various disclosure areas, including the statement of cash flows, accounting changes and error corrections, earnings per share, debt, equity, derivatives, and transfers of financial assets. The amendments in ASU 2023-06 will be effective on the date the related disclosures are removed from Regulation S-X or Regulation S-K by the Securities and Exchange Commission (the "SEC"), and will no longer be effective if the SEC has not removed the applicable disclosure requirement by June 30, 2027. Early adoption is prohibited. The Company does not believe the amendments in ASU 2023-06 will materially impact any of the Company's current disclosures.

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures ("ASU 2023-07"). ASU 2023-07 expands public entities' segment disclosures by requiring disclosure of significant segment expenses that are regularly provided to the Chief Operating Decision-Maker ("CODM") and included within each reported measure of segment profit or loss, an amount and description of its composition for other segment items, and interim disclosures of a reportable segment's profit or loss and assets. ASU 2023-07 is effective for fiscal years beginning after December 15, 2023 (i.e., the Company's 2024 Annual Report) and interim periods within fiscal years beginning after December 15, 2024 (i.e., the Company's first quarter of fiscal 2025). Early adoption is permitted. The Company is currently evaluating the impact of the adoption of ASU 2023-07 on its consolidated financial statements and disclosures.

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvement to Income Tax Disclosures* ("ASU 2023-09"). ASU 2023-09 was issued to enhance the transparency and decision usefulness of income tax disclosures. ASU 2023-09 is effective for annual periods beginning after December 15, 2024 (i.e., the Company's 2025 Annual Report) on a prospective basis; however, retrospective application is permitted. In addition, early adoption is permitted. The Company is currently evaluating the impact of the adoption of ASU 2023-09 on its consolidated financial statements and disclosures.

Note 2 — Revenue

Disaggregation of Revenue

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 or projects. Revenues from projects generally exceed \$1.0 million and the MPD project timeline between project tender and shipment generally ranges from 16 to 36 months; however, from time-to-time, may exceed 36 months.
- Original Equipment Manufacturer ("OEM"). In addition to the type of customers listed below, revenues from projects generally
 are \$1.0 million or less and the OEM project timeline from project tender to shipment generally ranges from one to 16 months;
 however, from time-to-time, may exceed 16 months.
 - Water: 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.
 - Emerging Technologies: OEM customers include direct sales to commercial or industrial customers, such as supermarket chains, cold storage facilities, and other industrial users. Also, included are sales to intermediaries, such as refrigeration system installers or refrigeration original equipment manufacturers.
- Aftermarket ("AM"). AM customers are desalination plant owners and/or operators who can utilize our technology to upgrade or keep their plant running. AM revenue includes sales of spare parts, repair services, field services and various commissioning activities.

Disaggregation of Revenue

The following table presents the disaggregated revenues by segment, and within each segment, by geographical market based on the customer "shipped to" address, and by channel customers. Sales and usage-based taxes are excluded from revenues. See Note 9, "Segment Reporting," for further discussion related to the Company's segments.

								Years E	=nde	ed December	31,																																															
				2023						2022						2021																																										
		Water		merging chnologies		Total		Water	Те	Emerging chnologies	Total		Total		Total		Total		Total		Total		Total		Total		jies Total		-		<u>Total</u>		Total			Water		Water		Emerging Technologies										Total								
									(In ti	housands)																																																
Geographical ma	arket	:																																																								
Middle East and Africa	\$	76,437	\$	177	\$	76,614	\$	86,227	\$	94	\$	86,321	\$	78,348	\$	53	\$	78,401																																								
Asia		30,500		_		30,500		24,777		_		24,777		18,639		_		18,639																																								
Americas		15,048		153		15,201		8,544		34		8,578		3,264		_		3,264																																								
Europe		5,740		294		6,034		5,880		35		5,915		3,600		_		3,600																																								
Total revenue	\$	127,725	\$	624	\$	128,349	\$	125,428	\$	163	\$	125,591	\$	103,851	\$	53	\$	103,904																																								
Channel																																																										
Megaproject	\$	83,665	\$	_	\$	83,665	\$	81,755	\$	133	\$	81,888	\$	75,338	\$	53	\$	75,391																																								
Original equipment manufacturer		25,548		447		25,995		28,858		_		28,858		17,604		_		17,604																																								
Aftermarket		18,512		177		18,689		14,815		30		14,845		10,909		_		10,909																																								
Total revenue	\$	127,725	\$	624	\$	128,349	\$	125,428	\$	163	\$	125,591	\$	103,851	\$	53	\$	103,904																																								
ICVCIIUC	Ψ	121,120	Ψ	024	Ψ	120,048	Ψ	120,420	Ψ	103	Ψ	120,001	Ψ	100,001	Ψ		Ψ	100,304																																								

Contract Balances

The following table presents contract balances by category.

		December 31,					
	2023			2022			
		(In tho	usands)				
Accounts receivable, net	\$	46,937	\$	34,062			
Contract assets, current (included in prepaid expenses and other assets)		592		1,720			
Contract liabilities:							
Contract liabilities, current	\$	1,097	\$	1,195			
Contract liabilities, non-current (included in other liabilities, non-current)		90		121			
Total contract liabilities	\$	1,187	\$	1,316			

Contract Liabilities

The Company records contract liabilities, which consist of customer deposits and deferred revenue, 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,							
	2023			2022		2021		
				(In thousands)				
Contract liabilities, beginning of year	\$	1,316	\$	3,406	\$	1,640		
Revenue recognized		(1,254)		(3,123)		(1,415)		
Cash received, excluding amounts recognized as revenue during the period		1,125		1,033		3,181		
Contract liabilities, end of year	\$	1,187	\$	1,316	\$	3,406		

Future Performance Obligations

As of December 31, 2023, the following table presents the future estimated revenue by year expected to be recognized related to performance obligations that are unsatisfied or partially unsatisfied.

Year	Future Performance Obligations
	(In thousands)
2025	6,861

Note 3 — Net Income 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 net income per common share.

- Basic net income per common share excludes any dilutive effect of stock options and RSUs.
- Diluted net income 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 if the shares of common stock underlying each unvested RSU were issued.

Outstanding stock options to purchase common stock and unvested RSUs are collectively referred to as "stock awards."

The following table presents the computation of basic and diluted net income per common share.

	Years Ended December 31,							
		2023	2022			2021		
		(In thou	ısands, e	except per share a	nounts)			
Numerator								
Net income	\$	21,504	\$	24,049	\$	14,269		
Denominator (weighted average shares)								
Basic common shares outstanding		56,444		56,221		56,993		
Dilutive stock awards		1,296		1,420		1,730		
Diluted common shares outstanding		57,740		57,641		58,723		
Net income per share								
Basic	\$	0.38	\$	0.43	\$	0.25		
Diluted	\$	0.37	\$	0.42	\$	0.24		

Certain shares of common stock issuable under stock awards have been omitted from the diluted net income per common share calculations because their inclusion is considered anti-dilutive. The following table presents the weighted potential common shares issuable under stock awards that were excluded from the computation of diluted net income per common share.

	Years Ended December 31,						
	2023	2022	2021				
	_	(In thousands)					
ti-dilutive stock award shares	399	374	17				

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, such as cash amounts deposited in restricted cash accounts in connection with the Company's credit cards. 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 for each period presented on the Consolidated Statements of Cash Flows.

	December 31,							
		2023		2022		2021		
				(In thousands)				
Cash and cash equivalents	\$	68,098	\$	56,354	\$	74,358		
Restricted cash, non-current (included in other assets, non-current)		127		104		103		
Total cash, cash equivalents and restricted cash	\$	68,225	\$	56,458	\$	74,461		

Accounts Receivable, net

	 December 31,				
	2023		2022		
	 (In thousands)				
Accounts receivable, gross	\$ 47,075	\$	34,210		
Allowance for doubtful accounts	 (138)		(148)		
Accounts receivable, net	\$ 46,937	\$	34,062		

Allowance for Doubtful Accounts

The following table presents the allowance for doubtful accounts activities.

	Years Ended December 31,					
	- :	2023		2022		2021
				(In thousands)		
Balance, beginning of year	\$	148	\$	117	\$	397
Changes to reserves (1)		73		36		_
Collection of specific reserves and uncollectible accounts written off, net of recoveries		(83)		(5)		(280)
Balance, end of year	\$	138	\$	148	\$	117

⁽¹⁾ General and specific reserves charged to expense.

Inventories, net

		December 31	l ,
	20	23	2022
		(In thousands)
Raw materials	\$	8,752 \$	11,178
Work in process		5,234	2,628
Finished goods		13,319	15,062
Inventories, gross		27,305	28,868
Valuation adjustments for excess and obsolete inventory		(1,156)	(502)
Inventories, net	\$	26,149 \$	28,366

Prepaid Expenses and Other Assets

	Dec	ember 3	1,
	2023		2022
	(In	thousands	s)
Contract assets	\$ 59	2 \$	1,720
Cloud computing arrangement implementation costs	47	4	784
Supplier advances	48	7	1,308
Insurance	75	4	637
Interest receivable	58	1	319
Other prepaid expenses and other assets	95	5	838
Total prepaid expenses and other assets	3,84	3	5,606
Restricted cash, non-current	12	7	104
Security deposits, non-current	26	1	262
Total other assets, non-current	38	3	366
Total prepaid and other assets, and other assets, non-current	\$ 4,23	1 \$	5,972

Property and Equipment

	Decem	ber 31,	
	2023		2022
	(In tho	usands)	
Machinery and equipment	\$ 30,962	\$	28,545
Leasehold improvements	18,895		17,576
Software	1,766		1,799
Office equipment, furniture, and fixtures	2,974		2,950
Automobiles	346		246
Construction in progress	1,207		2,407
Total property and equipment	56,150		53,523
Less: Accumulated depreciation and amortization	(37,451)		(33,943)
Total property and equipment, net	\$ 18,699	\$	19,580

	Ye	ars Ende	ed December 3	31,	
	 2023		2022		2021
		(In	thousands)		
Depreciation and amortization expense	\$ 4,102	\$	4,727	\$	4,490

Goodwill

Goodwill is tested for impairment annually in the third quarter of the Company's fiscal year or more frequently if indicators of potential impairment exist. The Company monitors the industries in which it operates, and reviews its business performance for indicators of potential impairment. The recoverability of goodwill is measured at the reporting unit level, which represents the operating segment. The carrying amount of goodwill as of December 31, 2023 and December 31, 2022 was \$12.8 million.

On July 1, 2023, 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 is based on the Company's best estimate of future net sales and operating expenses, is 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. The analysis performed indicated that the fair value of each reporting unit that is allocated goodwill significantly exceeds its carrying value. There was no impairment charge recorded for the year ended December 31, 2023.

Accrued Expenses and Other Liabilities

Warranty reserve 1,057 968 Income taxes payable 1,077 268 Other accrued expenses and other liabilities 2,412 2,978			Decem	ber 31,	
Current Payroll, incentives and commissions payable \$ 11,037 \$ 10,479 Warranty reserve 1,057 968 Income taxes payable 1,077 268 Other accrued expenses and other liabilities 2,412 2,978		2	2023		2022
Payroll, incentives and commissions payable \$ 11,037 \$ 10,479 Warranty reserve 1,057 968 Income taxes payable 1,077 268 Other accrued expenses and other liabilities 2,412 2,978			(In tho	usands)	
Warranty reserve 1,057 968 Income taxes payable 1,077 268 Other accrued expenses and other liabilities 2,412 2,978	Current				
Income taxes payable 1,077 268 Other accrued expenses and other liabilities 2,412 2,978	Payroll, incentives and commissions payable	\$	11,037	\$	10,479
Other accrued expenses and other liabilities 2,412 2,978	Warranty reserve		1,057		968
	Income taxes payable		1,077		268
Total accrued expenses and other liabilities 15,583 14,693	Other accrued expenses and other liabilities		2,412		2,978
	Total accrued expenses and other liabilities		15,583		14,693
Other liabilities, non-current 207 121	Other liabilities, non-current		207		121
Total accrued expenses, and current and non-current other liabilities \$ 15,790 \$ 14,814	Total accrued expenses, and current and non-current other liabilities	\$	15,790	\$	14,814

Accumulated Other Comprehensive Loss

For the year ended December 31, 2023, there was \$3.0 million of securities sold and the reclassification to other comprehensive income (loss) was immaterial. There were no reclassifications of amounts out of accumulated other comprehensive loss for the years ended December 31, 2022 and 2021, as there have been no sales of securities or translation adjustments that impacted other comprehensive income (loss) during these periods.

The tax impact of the changes in accumulated other comprehensive loss for the years ended December 31, 2023, 2022 and 2021, 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, 2023, 2022 and 2021.

Note 5 — Investments and Fair Value Measurements

Available-for-Sale Investments

The Company's investments in investment-grade short-term and long-term marketable debt instruments, such as U.S. treasury securities, corporate notes and bonds, and municipal and agency notes and bonds, are classified as available-for-sale. Available-for-sale investments are classified on the Consolidated Balance Sheets as either short-term and/or long-term investments.

The classification of available-for-sale investments on the Consolidated Balance Sheets 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."

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, thereby 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 pricing category, amortized cost, gross unrealized gains and losses, and fair value. As of the dates reported in the table, the Company had no financial liabilities and no Level 3 financial assets.

Pricing Category Cost Unrealized Cos	
Cash equivalents Money market securities Level 1 \$ 18,767 \$ - \$ - \$ 18,767 \$ 33,268 \$ - \$ - Short-term investments U.S. treasury securities Level 2 4,900 1 (1) 4,900 3,629 1 - Corporate notes and bonds Level 2 25,674 11 (18) 25,667 26,060 - (208 Municipal and agency	Fair Value
Money market securities Level 1 \$ 18,767 \$ - \$ - \$ 18,767 \$ 33,268 \$ - \$ - Short-term investments U.S. treasury securities Level 2 4,900 1 (1) 4,900 3,629 1 - Corporate notes and bonds Level 2 25,674 11 (18) 25,667 26,060 - (208) Municipal and agency	
Short-term investments U.S. treasury securities Level 2 4,900 1 (1) 4,900 3,629 1 — Corporate notes and bonds Level 2 25,674 11 (18) 25,667 26,060 — (208 Municipal and agency	
U.S. treasury securities Level 2 4,900 1 (1) 4,900 3,629 1 — Corporate notes and bonds Level 2 25,674 11 (18) 25,667 26,060 — (208 Municipal and agency	\$ 33,268
securities Level 2 4,900 1 (1) 4,900 3,629 1 — Corporate notes and bonds Level 2 25,674 11 (18) 25,667 26,060 — (208 Municipal and agency	
bonds Level 2 25,674 11 (18) 25,667 26,060 — (208 Municipal and agency	3,630
	25,852
	3,997
Total short-term investments 40,461 12 (28) 40,445 33,681 6 (208	33,479
Long-term investments	
Corporate notes and bonds	3,058
Municipal and agency notes and bonds Level 2 4,585 — (7) 4,578 — — — —	_
Total long-term investments 13,814 28 (10) 13,832 3,178 — (120	3,058
Total short and long-term investments 54,275 40 (38) 54,277 36,859 6 (328)	36,537
Total \$ 73,042 \$ 40 \$ (38) \$ 73,044 \$ 70,127 \$ 6 \$ (328)	\$ 69,805

The Company monitors its investments for impairment. It was determined that unrealized gains and losses included in accumulated other comprehensive loss at December 31, 2023 and 2022, 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 following table presents a summary of the fair value and gross unrealized losses on the available-for-sale securities that have been in a continuous unrealized loss position, aggregated by type of investment instrument. The available-for-sale securities that were in an unrealized gain position have been excluded from the table.

	Decembe	r 31,	2023	23 December			2022
	Fair Value		Gross Unrealized Fair Losses Value			Gross Unrealized Losses	
	_		(In tho	usands)			
U.S. treasury securities	\$ 2,931	\$	(1)	\$	_	\$	_
Corporate notes and bonds	15,276		(21)		28,911		(328)
Municipal and agency notes and bonds	12,956		(16)		_		_
Total available-for-sale investments with unrealized loss positions	\$ 31,163	\$	(38)	\$	28,911	\$	(328)

Sales of Available-for-Sale Investments

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

	 Ye	ars End	led December 31	,	
	2023		2022	2021	
		(In	thousands)		
Corporate notes and bonds	\$ 2,966	\$		5	

Realized losses on sales of securities were immaterial during the year ended December 31, 2023.

Note 6 — Lines of Credit

Credit Agreement

The Company entered into a credit agreement with JPMorgan Chase Bank, N.A. ("JPMC") on December 22, 2021 ("Credit Agreement"). The Credit Agreement, which will expire on December 21, 2026, provides a committed revolving credit line of \$50.0 million. The Credit Agreement requires the Company to comply with various covenants, including among other things, financial covenants to 1) maintain a leverage ratio of consolidated net debt to adjusted EBITDA, not to exceed 3.0 to 1; and 2) limit annual capital expenditures. The Credit Agreement allows the Company to, among other things, make distributions to shareholders, repurchase its stock, incur other debt or liens, or acquire or dispose of assets provided that the Company complies with certain requirements and limitations set forth in the Credit Agreement. The unused portion of the credit line is subject to a fee equal to 0.20% per annum multiplied by the amount of such unused portion.

On July 15, 2022, the Company and JPMC agreed to a modification of the Credit Agreement ("First Amendment") to change the indicated reference rate from LIBOR to SOFR. Changes in the Credit Agreement reference rate to SOFR did not materially change the provisions defined in the original Credit Agreement nor did this change materially affect the Company's financial statements. During September 2023, the Company and JPMC amended the Credit Agreement (the "Second Amendment") to only increase the maximum allowable letters of credit ("LCs") credit line component from \$25.0 million to \$30.0 million. No other components or features under the Credit Agreement (including the First Amendment dated July 15, 2022) were amended.

Revolving Loans

Revolving loans under the Credit Agreement may be in the form of 1) a base rate loan that bears interest equal to (a) the greater of the Wall Street Journal prime rate and (b) the sum of (i) one-month reserve adjusted Secured Overnight Financing Rate ("SOFR") and (ii) 2.50%, plus an applicable margin of 0.25% or 0.50%, subject to the Company's total leverage ratio, or 2) a Eurodollar loan that bears interest equal to the sum of the reserved adjusted SOFR rate for an interest period elected by the Company, plus an applicable margin of 1.25% or 1.50%, based upon the Company's total leverage ratio. The Company may request loans up to the lower of a maximum exposure of \$50.0 million or the amounts of unused credit under the Credit Agreement. The unused portion of the credit facility is subject to a facility fee in an amount equal to 0.20% per annum of the average unused portion of the revolving line. At the election of the lender following an event of default, the loans shall bear the aforementioned interest rate plus an additional 2%. As of December 31, 2023, there were no revolving loans outstanding under the Credit Agreement.

Letters of Credit

Under the Credit Agreement, the Company is allowed to request LCs up to the lower of a maximum exposure of \$30.0 million or the amounts of unused credit under the Credit Agreement. The Credit Agreement does not require any cash collateral when LCs are issued; however, at the election of the lender following a default, the lender may require the Company to deposit cash in an amount equal to 103% of the LCs exposure. LCs are subject to customary fees and expenses for issuance or renewal, and all disbursements are subject to the same interest rate provision as noted directly above under Revolving Loans. LCs are limited to a term of one year, unless extended. Under the LCs component, the Company utilized \$21.8 million of the maximum allowable credit line of \$30.0 million, which includes newly issued LCs, and previously issued and unexpired stand-by letters of credits ("SBLCs") and certain non-expired commitments under the Company's previous Loan and Pledge Agreement with Citibank, N.A. which are guaranteed under the Credit Agreement.

The following table presents the total outstanding LCs and SBLCs issued by the Company to our customers related to product warranty and performance guarantees.

	 Decem	ber 31,	
	 2023		2022
	 (In thousands)		
t	\$ 19,945	\$	15,487

See Note 7, "Commitments and Contingencies – Guarantees," for further discussion on product warranty and performance guarantees.

Note 7 — Commitments and Contingencies

Operating Lease Obligations

The Company leases office, warehouse and manufacturing facilities under operating leases in San Leandro, CA, Tracy, CA and Katy, TX that expire on various dates through fiscal year 2030. The following table presents a summary of operating lease, right of use assets and lease liabilities.

		December 31,			
		2023		2022	
Operating lease, right of use asset	\$	11,469	\$	13,115	
Lease liabilities, current	\$	1,791	\$	1,600	
Lease liabilities, non-current		11,488		13,278	
Total lease liability	\$	13,279	\$	14,878	

The following table presents certain facts regarding the Company's material property leases.

Location	Purpose	Square Footage	Expiration (1)	Option to Extend (2)
San Leandro, California	Headquarters, R&D and manufacturing	171,000	December-2028	1 / 5 years
Tracy, California	Manufacturing and warehouse	54,429	April-2030	1 / 5 years
Katy, Texas	Office, R&D, warehouse, and yard	221,220	June-2029	2 / 5 years

⁽¹⁾ Month-Year of original lease expiration

⁽²⁾ Number of renewal option(s) / Number of year(s) per renewal option

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

	_	Years Ended December 31,					
		2023		2022		2021	
	•				(In thousands)		
Operating lease expense		\$	2,571	\$	2,571	\$	2,571
Cash payments			2,580		2,650		2,431

The following table presents other information related to outstanding operating leases as of December 31, 2023.

Weighted average remaining lease term	5.5 years
Weighted average discount rate	7.0%

As of December 31, 2023, the following table presents the minimum lease payments by year under noncancelable operating leases, exclusive of execution costs.

Year	Lease Liabilities		
	(In	(In thousands)	
2024	\$	2,812	
2025		2,736	
2026		2,982	
2027		3,072	
2028		3,165	
2029 and thereafter		1,243	
Total future minimum lease payments		16,010	
Less imputed lease interest		(2,731)	
Total lease liabilities	\$	13,279	

Warranty

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

		Years Ended December 31,					
	_	2023		2022		2021	
					(In thousands)		_
Warranty reserve balance, beginning of year	9	\$	968	\$	879	\$	760
Warranty costs charged to cost of revenue			515		483		445
Utilization charges against reserve			(92)		(64)		(16)
Release of accrual related to expired warranties			(334)		(330)		(310)
Warranty reserve balance, end of year	Ç	\$	1,057	\$	968	\$	879
	_						

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, 2023. 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, 2023, the Company had approximately \$1.5 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, 2023 and 2022.

In certain cases, the Company issues product warranty and 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 LCs that have a weighted average life at inception of 33 months. See Note 6, "Lines of Credit – Letters of Credit," for information related to LCs.

Litigation

From time-to-time, the Company has been named in and subject to various proceedings and claims in connection with its business. The Company may in the future become involved in litigation in the ordinary course of business, including litigation that could be material to its business. The Company considers all claims, if any, 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, 2023, the Company was not involved in any lawsuits, legal proceedings or claims that would have a material effect on the Company's financial position, results of operations, or cash flows. Therefore, there were no material losses which were probable or reasonably possible.

Note 8 — 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,							
		2023	2022			2021			
				(In thousands)					
Income before income taxes:									
U.S.	\$	22,592	\$	25,918	\$	13,913			
Foreign		113		153		91			
Total income before income taxes	\$	22,705	\$	26,071	\$	14,004			
	_								
Current tax provision:									
Federal	\$	1,268	\$	698	\$	_			
State		13		22		10			
Foreign		51		84		80			
Current tax provision		1,332		804		90			
Deferred tax provision (benefit):									
Federal		(262)		1,104		(382)			
State		131		114		27			
Total deferred tax provision (benefit)		(131)		1,218		(355)			
Total provision for (benefit from) income taxes	\$	1,201	\$	2,022	\$	(265)			

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,				
	2023	2022	2021		
U.S. federal taxes at statutory rate	21%	21%	21%		
State income tax, net of federal benefit	_	1	_		
Foreign rate differential	_	_	1		
Stock-based compensation	(1)	(4)	(18)		
Non-deductible expenses	1	1	1		
Federal research credits	(6)	(4)	(7)		
Foreign derived intangible income	(10)	(7)	_		
Effective tax rate	5%	8%	(2%)		

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,		
	2023		2022
	(In thou	isands)	
Deferred tax assets:			
Net operating loss carry forwards	\$ 547	\$	702
Amortization of research and experimental expenditures	6,079		3,605
Accruals and reserves	4,857		4,320
Operating lease liabilities	2,870		3,199
Research and development, and foreign tax credit carry forwards	7,609		9,642
Acquired intangibles	157		321
Other	_		66
Total deferred tax assets	 22,119		21,855
Valuation allowance	(4,600)		(4,185)
Total deferred tax assets, net of valuation allowance	 17,519		17,670
Deferred tax liabilities:			
Depreciation on property and equipment	(2,545)		(2,646)
Right of use asset	(2,473)		(2,809)
Other	(10)		_
Goodwill	(2,167)		(1,952)
Total deferred tax liabilities	(7,195)		(7,407)
Net deferred tax asset	\$ 10,324	\$	10,263

In asserting the recoverability of deferred tax assets, the Company 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.

On the basis of this evaluation, as of December 31, 2023, 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 \$4.6 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.

The Company continues to assert that the accumulated foreign earnings of its subsidiaries in Spain and Canada are permanently reinvested. Due to the U.S. Tax Cuts and Jobs Act ("Tax Act") enacted in 2017, 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 Company has evaluated the impact of the global intangible low taxed income ("GILTI") and has concluded that the impact to the Company is immaterial.

The following table presents the Company's California net operating loss carryforward.

		2023 (In thousa	ber 31,	<u>≱</u> r 31,	
	Expiration Year	2	2023		2022
			(In tho	usands)	
California	2031	\$	7,391	\$	9,549

Danauskau 24

Utilization of the California net operating loss carryforward may be subject to a substantial annual limitation due to the ownership change limitations provided by the California Revenue and Taxation Code which could result in the expiration of the net operating loss carryforward before utilization. As of December 31, 2023, there are no ownership change limits on the utilization of the California net operating loss carryforward.

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

			Decem	ber 31,		
	Expiration Year		2023		2022	
		(In thous				
Federal	2040	\$	2,983	\$	5,441	
California	No Expiration Date		5,855		5,318	
Total credit carryforwards		\$	8,838	\$	10,759	

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. As of December 31, 2023, there are no ownership change limits on the utilization of these net tax credit carryforwards.

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,						
	2023		2022		2021		
		(In	thousands)				
Gross unrecognized tax benefits, beginning of year	\$ 1,505	\$	1,321	\$	1,134		
Additions of current and prior year tax positions	200		184		193		
Reductions of prior year tax positions	_		_		(6)		
Gross unrecognized tax benefits, end of year	\$ 1,705	\$	1,505	\$	1,321		

As of December 31, 2023, the Company had unrecognized tax benefits of \$1.7 million, of which \$1.0 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, 2023, there was no accrued interest or penalties associated with any unrecognized tax benefits.

There are currently no examinations by Federal, state and foreign tax authorities. The Company believes that, as of December 31, 2023, 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 9 — Segment Reporting

The Company's Chief Operating Decision-Maker ("CODM") is its chief executive officer. 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.

Income and type of expense activities that are included in the Water and Emerging Technologies segments and corporate operating expenses are as follows:

Water segment: The continued development, sales and support of the PX, hydraulic turbochargers and pumps used in seawater desalination and wastewater treatment activities.

Emerging Technologies segment: The continued development, sales and support of activities related to emerging technologies, such as the PX G1300 used in industrial and commercial refrigeration applications.

Corporate operating expenses: Corporate activities outside of the operating segments, such as audit and accounting expenses, general legal costs, board of director fees and expenses, and other separately managed general expenses not related to the identified segments.

Segment Financial Information

For each of the periods presented, operating income (loss) for each segment excludes other income and expenses, and corporate operating expenses not included in how the CODM assesses the performance of the operating segments, such as income taxes and other separately managed expenses not attributed to the operating segments. Assets and liabilities are reviewed at the consolidated level by the CODM and are not attributed to the segments. The CODM allocates resources to, and assesses the performance of, each operating segment using information about its revenue and operating income.

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

	Year Er	nded [December 3	31, 2	2023	Year Er	ar Ended December 31, 2022 Year Ended December					December 3	r 31, 2021				
	Water		nerging nnologies		Total	Water		merging hnologies		Total		Water		merging hnologies		Total	
							(In	thousands)									
Revenue	\$ 127,725	\$	624	\$	128,349	\$ 125,428	\$	163	\$	125,591	\$	103,851	\$	53	\$	103,904	
Cost of revenue	40,290		980		41,270	 38,158		77		38,235		32,670				32,670	
Gross profit (loss)	87,435		(356)		87,079	87,270		86		87,356		71,181		53		71,234	
Operating expenses																	
General and administrative	7,751		3,927		11,678	6,936		4,104		11,040		6,342		5,162		11,504	
Sales and marketing	13,691		6,053		19,744	11,065		3,047		14,112		9,559		937		10,496	
Research and development	4,251		12,750		17,001	4,151		13,758		17,909		2,589		17,480		20,069	
Total operating expenses	25,693		22,730		48,423	22,152		20,909		43,061		18,490		23,579		42,069	
Operating income (loss)	\$ 61,742	\$	(23,086)		38,656	\$ 65,118	\$	(20,823)		44,295	\$	52,691	\$	(23,526)		29,165	
Less: Corporate operating expenses					19,606					19,466						15,334	
Income from operations				\$	19,050				\$	24,829					\$	13,831	

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

	Years Ended December 31,							
	2023			2022		2021		
		-		(In thousands)				
Water	\$	2,779	\$	2,141	\$	1,823		
Emerging Technologies		521		1,864		2,199		
Corporate		802		759		480		
Total depreciation and amortization	\$	4,102	\$	4,764	\$	4,502		

Note 10 — Concentrations

Revenue by Geographic Location and Country

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.

	Ye	Years Ended December 31,				
	2023	2022	2021			
Revenue by geographic location:	<u> </u>					
United States	2%	1%	1%			
International	98%	99%	99%			
Total revenue	100%	100%	100%			
Product revenue by country: ⁽¹⁾						
Saudi Arabia	15%	47%	36%			
Algeria	18%	**	**			
United Arab Emirates	10%	**	17%			
China	15%	**	**			
Israel	**	**	14%			
Others ⁽²⁾	42%	53%	33%			
Total	100%	100%	100%			

Zero or less than 10%.

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

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

Customer Revenue Concentration

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

		Years Ended December 31,				
	Segment	2023	2022	2021		
Customer A	Water	**	**	21%		
Customer B	Water	**	18%	11%		
Customer C	Water	**	**	16%		
Customer D	Water	**	15%	10%		
Customer E	Water	13%	**	**		
Customer F	Water	**	11%	**		

Zero or less than 10%.

Long-lived Assets

All of the Company's long-lived assets were located in the United States at December 31, 2023 and 2022.

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.

	Yea	1,	
	2023	2022	2021
Vendor A	21%	21%	24%
Vendor B	19%	19%	16%
Vendor C	13%	13%	**
Vendor D	**	**	12%

^{**} Zero or less than 10%.

Note 11 — Stockholders' 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, 2023 and 2022, 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.

Share Repurchase Program

The Company's Board of Directors (the "Board"), from time-to-time, has authorized a share repurchase program under which the Company may, at the discretion of management, repurchase its outstanding common stock in the open market, or in privately negotiated transactions, in compliance with applicable state and federal securities laws. The timing and amounts of any purchase under the Company's share repurchase program is based on market conditions and other factors including price, regulatory requirements, and capital availability. The Company accounts for stock repurchases under these programs using the cost method.

On March 9, 2021, the Board authorized a share repurchase program under which the Company may repurchase its outstanding common stock, at the discretion of management, up to \$50.0 million in aggregate cost, which includes both the share value of the acquired common stock and the fees charged in connection with acquiring the common stock (the "March 2021 Authorization"). On July 1, 2022, the Company concluded all share repurchases under the March 2021 Authorization.

As of December 31, 2023, the Company has repurchased 8.1 million shares of its common stock at an aggregate cost of \$80.5 million under the March 2021 Authorization and all previous share repurchase programs.

Note 12 — 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, restricted stock units ("RSU"), stock appreciation rights, restricted stock, restricted stock awards ("RSA"), 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 and the Amended and Restated 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, 2023 were 4,098,928 shares. There were no shares available for grant under the Predecessor Plans after July 15, 2020.

Stock Options and Stock Appreciation Rights

Employee stock options and stock appreciation rights outstanding at December 31, 2023 and to be granted subsequently after December 31, 2023, generally vest over four years and expire no more than 10 years after the date of grant. Non-employee board of director grants generally vest one year after the date of grant or on the date of the annual stockholders' meeting following the date of grant, whichever date occurs first, and expire no more than 10 years after the date of grant.

Restricted Stock Units

RSUs outstanding at, and to be awarded subsequently after, December 31, 2023, generally vest 25% annually over the four years from date of grant and are dependent upon continued employment. Non-employee board of director grants generally vest one year after the date of grant or on the date of the annual stockholders' meeting following the date of grant, whichever date occurs first. As RSUs vest, the units will be settled in shares of common stock based on a one-to-one ratio. The units are valued based on the market price on the date of grant.

Restricted Stock Awards

There were no RSAs outstanding as of December 31, 2023.

Fair Value Assumptions

Stock Options and Stock Appreciation Rights

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 inputs as follows:

- Expected Term:
 - Employees: Based on historical exercise data.
 - Board of Directors: Based on the simplified method.
 - Stock Appreciation Rights: Based upon the remaining grant life at each remeasurement date.
- Expected Volatility: Based on the Company's historical data and the corresponding expected term.
- Risk-Free Interest Rate: Based on U.S. Treasury issues with terms similar to the expected term.
- Dividend Yield: Based on an expected dividend yield of zero.

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

	Ye	ars Ended December	31,
	2023	2022	2021
Weighted average expected life (years)	9.1	4.1	4.0
Weighted average expected volatility	60.4%	48.7%	49.3%
Risk-free interest rate	3.87% - 3.87%	1.44% - 3.90%	0.30% - 1.51%
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.

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 weighted average forfeiture rates for all employees used in determining the expense in the stock-based compensation expense table above.

	Years Ended December 31,			
	2023	2022	2021	
Stock options, stock appreciation rights and RSUs	6.4%	9.2%	8.1%	

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,				
	 2023		2022		2021
	 		(In thousands)		
Stock-based compensation expense charged to:					
Cost of revenue	\$ 719	\$	506	\$	414
General and administrative	3,661		3,436		2,917
Sales and marketing	2,333		1,592		1,483
Research and development	1,325		977		1,242
Total stock-based compensation expense	\$ 8,038	\$	6,511	\$	6,056
Stock-based compensation expense by type of award:					
Stock options and stock appreciation rights	\$ 1,985	\$	2,837	\$	3,161
RSUs	6,053		3,674		2,895
Total stock-based compensation expense	\$ 8,038	\$	6,511	\$	6,056

Stock Option and Stock Appreciation Rights Activities

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

	Number of Shares			Aggregate Intrinsic Value ⁽¹⁾
	(In thousands)	(Per share)	(In years)	(In thousands)
Balance, December 31, 2020	3,620	\$ 7.48		
Granted	613	14.39		
Exercised	(1,518)	6.96		\$ 16,952
Forfeited	(171)	11.26		
Balance, December 31, 2021	2,544	9.21		
Granted	403	19.13		
Exercised	(429)	7.32		6,387
Forfeited	(97)	13.66		
Balance, December 31, 2022	2,421	11.02		
Granted	14	22.13		
Exercised	(511)	9.38		5,619
Forfeited	_	_		
Balance, December 31, 2023	1,924	\$ 11.54	5.5	\$ 14,264
Vested and exercisable as of December 31, 2023	1,537	\$ 10.28	5.0	\$ 13,246
Vested and exercisable as of December 31, 2023 and expected to vest thereafter	1,902	\$ 11.47	5.5	\$ 14,232

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, 2023 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, 2023 or the last trading day prior to December 31, 2023.

Restricted Stock Unit Activities

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

	Number of Shares	Weighted Average Grant Date Fair Value
	(In thousands)	(Per share)
Balance, December 31, 2020	687	\$ 9.10
Awarded	387	15.44
Vested	(230)	8.98
Forfeited	(150)	11.14
Balance, December 31, 2021	694	12.23
Awarded	322	19.61
Vested	(268)	12.03
Forfeited	(60)	15.16
Balance, December 31, 2022	688	15.51
Awarded	546	23.97
Vested	(294)	14.02
Forfeited	(21)	19.91
Balance, December 31, 2023	919	20.91

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,					
	2023		2023 2022		2021	
				(In thousands)		
Stock options	\$	2,724	\$	2,683	\$	3,298
RSUs		4,112		3,226		2,060
Total grant date fair value of stock options and RSUs vested during the period	\$	6,836	\$	5,909	\$	5,358

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, 2023.

	Unamortized Compensation Weighted Average Costs Service Perio		
	(In t	housands)	(In years)
Stock options	\$	5,267	0.8
RSUs		14,769	2.3
Total unamortized compensation costs, net of adjusted forfeitures	\$	20,036	

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, 2023. 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, 2023, 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

(b) As set forth below, during the three months ended December 31, 2023, one officer (within the meaning of Rule 16a-1(f) under the Securities Exchange Act of 1934, as amended) has adopted or terminated any Rule 10b5-1 trading arrangement and/or any non-Rule 10b5-1 trading arrangement (as defined in Item 408 of Regulation S-K).

Name	Title	Date of Adoption or Termination ⁽¹⁾	Status (2)	Plan Type
Rodney Clemente	SVP, Water	November 27, 2023	Adoption	Rule 10b5-1 trading arrangement (3)

⁽¹⁾ Effective (a) date of adoption; or (b) date of termination, of registrant's Rule 10b5-1 trading arrangement.

Item 9C — Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

⁽²⁾ Activity related to registrant's Rule 10b5-1 trading arrangement.

⁽³⁾ This Rule 10b5-1 trading arrangement had a term beginning on February 27, 2024 and ending on November 27, 2024. Under the trading arrangement, 28,985 shares of Energy Recovery's common stock may be sold when the market value of the vested shares equals or exceeds \$20.00.

PART III

Certain information required by Part III is omitted from this report because we will file with the SEC a definitive proxy statement pursuant to Regulation 14A, or the 2024 Proxy Statement ("Proxy Statement"), no later than 120 days after the end of fiscal year 2023, and certain information included therein is incorporated herein by reference.

Item 10 — Directors, Executive Officers and Corporate Governance

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

Item 11 — Executive Compensation

The information required by this Item is included in and incorporated by reference from the Proxy Statement under the captions "Director Compensation," "Executive Compensation," "Compensation Committee Interlocks and Insider Participation," "Compensation Discussion and Analysis," "Report of the Compensation Committee" and "Compensation Policies and Practices as They Relate to Risk Management."

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, 2023.

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)	2,800,543	\$11.54	4,098,928
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, and the Amended and Restated 2008 Equity Incentive Plan.

The information required by this Item is included in and incorporated by reference from the Proxy Statement under the captions "Security Ownership of Certain Beneficial Owners and Management," "Equity-Based Incentive Compensation" and "Additional Information Regarding Executive Compensation."

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 captions "Related Person Policies and Transactions" and "Information About the Board of Directors and Corporate Governance Matters."

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. 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		Incorporated by Reference				Filed
Number	Exhibit Description	Form	File No.	Exhibit	Filing Date	Herewith
3.1	Amended and Restated Certificate of Incorporation, dated June 25, 2008, and Certificate of Amendment thereto, dated June 10, 2021.	10-Q	001-34112	3.1	8/6/2021	
3.2	Amended and Restated Bylaws, effective as of April 14, 2021.	8-K	001-34112	3.1	4/16/2021	
4.1	Description of Securities.	10-K	001-34112	4.1	2/24/2022	
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*	Energy Recovery Inc. Amended and Restated 2008 Equity Incentive Plan.	DEF14A	001-34112	Appendix A	4/27/2012	
10.3*	Energy Recovery, Inc. Change in Control Severance Plan dated March 5, 2012.	8-K	001-34112	10.1	3/9/2012	
10.4*	Energy Recovery, Inc. Annual Incentive Plan effective as of January 1, 2016.	8-K	001-34112	10.1	3/2/2016	
10.5*	Energy Recovery, Inc. 2016 Incentive Plan.	DEF14A	001-34112	Appendix A	4/27/2016	
10.6	Offer Letter to Mr. William Yeung, dated May 27, 2016.	8-K	001-34112	99.1	6/22/2016	
10.7	Lease Agreement, dated as of April 2, 2018, by and between Energy Recovery, Inc. and D/C Doolittle Sub LLC.	8-K	001-34112	10.1	4/18/2018	
10.8	Offer Letter to Mr. Joshua Ballard, as Chief Financial Officer.	8-K	001-34112	2.2	8/15/2018	
10.9	Employment Agreement with Mr. Rodney Clemente.	8-K	001-34112	10.3	8/27/2018	
10.10	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	
10.11	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	
10.12	Offer of Employment with Mr. Robert Mao, as President and Chief Executive Officer.	8-K/A	001-34112	10.1	5/22/2020	
10.13*	Energy Recovery, Inc. 2020 Incentive Plan and Forms of Award Agreements.					Χ
10.14	Energy Recovery, Inc. Severance Plan dated as of February 5, 2021	8-K	001-34112	10.1	2/10/2021	
10.15	Credit Agreement by and between Energy Recovery, Inc. as Borrower, and JPMorgan Chase Bank N.A. as Lender dated December 22, 2022.	8-K	001-34112	10.1	1/6/2022	
10.16	First Amendment to the Credit Agreement by and between Energy Recovery, Inc. as Borrower, and JPMorgan Chase Bank N.A. as Lender dated July 15, 2022.	10-Q	001-34112	10.1	8/3/2022	
10.17	Second Amendment to the Credit Agreement by and between Energy Recovery, Inc. as Borrower, and JPMorgan Chase Bank N.A. as Lender dated September 30, 2023.	10-Q	001-34112	10.1	11/1/2023	
10.18	Offer Letter to Mr. David W. Moon, as President and CEO.	8-K/A	001-34112	10.1	1/31/2024	
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	

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Exhibit			Incorporated	by Reference		Filed
Number	Exhibit Description	Form	File No.	Exhibit	Filing Date	Herewith
21.1	List of subsidiaries of the Company.					Χ
23.1	Consent of Deloitte & Touche LLP, Independent Registered Public Accounting Firm.					Χ
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
97.1	Energy Recovery, Inc. Compensation Recovery ("Clawback") Policy dated July 25, 2023.					Х
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.					Χ

^{*} Indicates management compensatory plan, contract or arrangement.

Item 16 — Form 10-K Summary

None.

^{**} 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.

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, as of the 21st day of February, 2024.

ENERGY RECOVERY, INC.

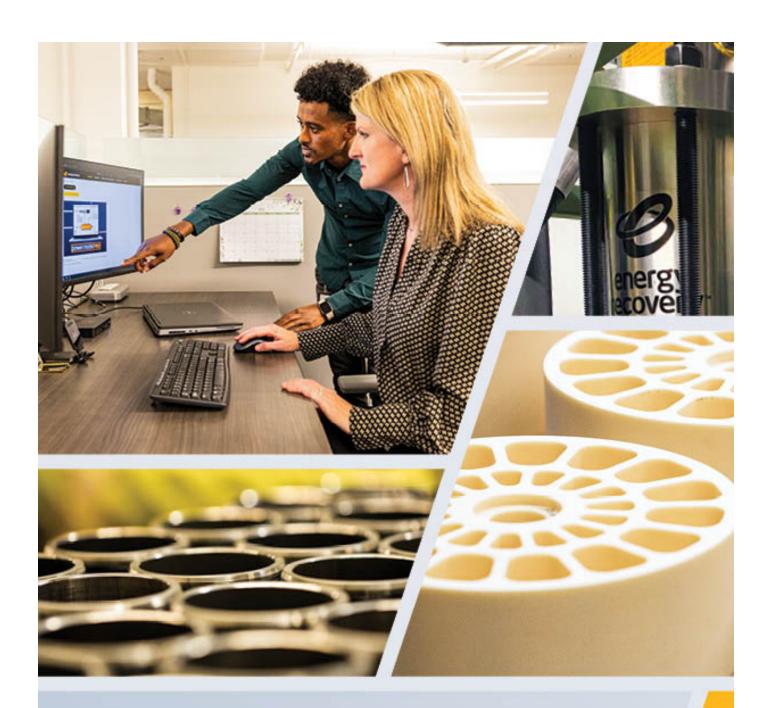
/s/ DAVID W. MOON

David W. Moon

President and Chief Executive Officer

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

Signature	Title	Date
/s/ DAVID W. MOON David W. Moon	Director, and President and Chief Executive Officer (Principal Executive Officer)	February 21, 2024
/s/ JOSHUA BALLARD Joshua Ballard	Chief Financial Officer (Principal Financial and Accounting Officer)	February 21, 2024
/s/ PAMELA TONDREAU Pamela Tondreau	Chairperson of the Board, Director	February 21, 2024
/s/ ALEXANDER J. BUEHLER Alexander J. Buehler	Director	February 21, 2024
/s/ JOAN K. CHOW Joan K. Chow	Director	February 21, 2024
/s/ ARVE HANSTVEIT Arve Hanstveit	Director	February 21, 2024
/s/ ROBERT YU LANG MAO Robert Yu Lang Mao	Director	February 21, 2024
/s/ COLIN R. SABOL	Director	February 21, 2024





Energy Recovery (Nasdaq: ERII) is a trusted global leader in energy efficiency technology.

Building on our pressure exchanger technology platform, we design and manufacture reliable, high-performance solutions that generate cost savings and increase energy efficiency across several industries. With a strong foundation in the desalination industry, Energy Recovery has delivered transformative solutions that increase operational efficiency and provide a positive environmental impact to our customers worldwide for more than 30 years. Head quartered in the San Francisco Bay Area, Energy Recovery has manufacturing, research, and development facilities across California and Texas, with sales and on-site technical support available globally.

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