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

FORM 10-K

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

For the fiscal year ended December 31, 2021

OR

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

For the transition period from _________ to __________

Commission File Number: 001-36894

SOLAREDGE TECHNOLOGIES, INC.
(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of incorporation or organization)**	**20-5338862** **(IRS Employer Identification No.)**
1 HaMada Street **Herziliya Pituach, Israel** **(Address of Principal Executive Offices)**	**4673335** **(Zip Code)**

972 (9) 957-6620
Registrant's telephone number, including area code
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	**Name of each exchange on which registered**
Common stock, par value $0.0001 per share	SEDG	**NASDAQ (Global Select Market)**

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act

Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes ☐ No ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes ☒ No ☐

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

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

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

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes ☐ No ☒

The aggregate market value of the registrant’s voting and non-voting common stock held by non-affiliates of the registrant on June 30, 2021, the last business day of the registrant’s most recently completed second fiscal quarter was approximately $12,748,438,796 (assuming that the registrant’s only affiliates are its officers, directors and non-institutional 10% stockholders) based upon the closing market price on that date of $276.37 per share as reported on the Nasdaq Global Select Market.

As of February 14, 2022, there were 52,818,655 shares of the registrant’s common stock, par value of $0.0001 per share, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

The information required by Part III of this report, to the extent not set forth herein, is incorporated herein by reference from our definitive proxy statement relating to the Annual Meeting of Stockholders to be held in 2022, which definitive proxy statement shall be filed with the Securities and Exchange Commission within 120 days after the end of the annual period to which this report relates.

FISCAL YEAR FORM 10-K

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K and the documents incorporated herein by reference contain forward-looking statements that are based on our management's expectations, estimates, projections, beliefs and assumptions and on information currently available to our management. The forward-looking statements are contained principally in "Item 1. Business," "Item 1A. Risk Factors" "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations." and "Item 7A. Quantitative and Qualitative Disclosures About Market Risk". This discussion contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include information concerning our possible or assumed future results of operations, business strategies, technology developments, new products and services, financing and investment plans, competitive position, industry and regulatory environment, effects of acquisitions, growth opportunities, and the effects of competition. Forward-looking statements include statements that are not historical facts and can be identified by terms such as "anticipate," "believe," "could," "seek," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "will," "would," or similar expressions and the negatives of those terms.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Given these uncertainties, you should not place undue reliance on forward-looking statements. Also, forward-looking statements represent our management's beliefs and assumptions only as of the date of this filing. Important factors that could cause actual results to differ materially from our expectations include those discussed in Item 1A, Risk Factors, as well as those discussed elsewhere in this Annual Report on Form 10-K, including:

- Existing and future responses to and effects of Covid-19;
- future demand for renewable energy including solar energy solutions;
- changes to net metering policies or the reduction, elimination or expiration of government subsidies and economic incentives for on-grid solar energy applications;
- changes in the U.S. trade environment, including the recent imposition of import tariffs;
- federal, state, and local regulations governing the electric utility industry with respect to solar energy;
- the retail price of electricity derived from the utility grid or alternative energy sources;
- interest rates and supply of capital in the global financial markets in general and in the solar market specifically;
- competition, including introductions of power optimizer, inverter and solar photovoltaic ("PV") system monitoring products by our competitors;
- developments in alternative technologies or improvements in distributed solar energy generation;
- historic cyclicality of the solar industry and periodic downturns;
- defects or performance problems in our products;
- our ability to forecast demand for our products accurately and to match production with demand;
- our dependence on ocean transportation to timely deliver our products in a cost-effective manner;
- our dependence upon a small number of outside contract manufacturers and limited or single source suppliers;
- capacity constraints, delivery schedules, manufacturing yields, and costs of our contract manufacturers and availability of components;
- delays, disruptions, and quality control problems in manufacturing;
- shortages, delays, price changes, or cessation of operations or production affecting our suppliers of key components;
- business practices and regulatory compliance of our raw material suppliers;
- performance of distributors and large installers in selling our products;
- our customers' financial stability, creditworthiness, and debt leverage ratio;
- our ability to retain key personnel and attract additional qualified personnel;
- our ability to effectively design, launch, market, and sell new generations of our products and services;
- our ability to maintain our brand and to protect and defend our intellectual property;
- our ability to retain, and events affecting, our major customers;
- our ability to manage effectively the growth of our organization and expansion into new markets;
- our ability to integrate acquired businesses;
- fluctuations in global currency exchange rates;
- unrest, terrorism, or armed conflict in Israel;
- general economic conditions in our domestic and international markets;
- consolidation in the solar industry among our customers and distributors;
- our ability to service our debt; and
- the other factors set forth under "Item 1A. Risk Factors."

The preceding list is not intended to be an exhaustive list of all of our forward-looking statements. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that future results, levels of activity, performance and events and circumstances reflected in the forward-looking statements will be achieved or will occur. Except as required by law, we assume no obligation to update these forward-looking statements, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

PART I

ITEM 1. Business

Introduction

We are a leading provider of an optimized inverter solution that changed the way power is harvested and managed in photovoltaic (also known as PV) systems. Our direct current, or DC, optimized inverter system maximizes power generation while lowering the cost of energy produced by the PV system for improved return on investment, or RoI. Additional benefits of the DC optimized inverter system include: comprehensive and advanced safety features, improved design flexibility, efficient integration (DC coupled) with SolarEdge storage solutions, and improved operation and maintenance, or O&M, with remote monitoring at the module-level. The typical SolarEdge optimized inverter system consists of inverters, power optimizers, a communication device which enables access to a cloud based monitoring platform and, in many cases, a battery and additional smart energy management solutions. Our solutions address a broad range of solar market segments, from residential solar installations to commercial and small utility scale solar installations. Since we began commercial shipments in 2010, we have shipped approximately 29.5 gigawatts (“GW”) of our DC optimized inverter systems and our products have been installed in solar PV systems in 133 countries.

Since introducing the optimized inverter solution in 2010, SolarEdge has expanded its activity to other areas of smart energy technology, both through organic growth and through acquisitions. By leveraging world-class engineering capabilities and with a relentless focus on innovation, SolarEdge now offers energy solutions which include not only residential, commercial, and large scale PV systems but also product offerings in the areas of energy storage systems, or ESS, and backup, electric vehicle, or EV components and charging capabilities, home energy management, grid services and virtual power plants (“VPPs”) , lithium-ion batteries and uninterrupted power supplies, known as UPS solutions.

We primarily sell our products indirectly to thousands of solar installers through large distributors and electrical equipment wholesalers and directly to large solar installers and engineering, procurement, and construction firms (“EPCs”). Our customers include leading providers of solar PV systems to residential and commercial end users, key solar distributors, and electrical equipment wholesalers, as well as several PV module manufacturers that offer PV modules with our power optimizer physically embedded into their modules.

The PV industry is surveyed by IHS Markit, an analytics company that ranked SolarEdge as the top PV inverter supplier world-wide by revenues, as of their published “IHS PV Inverter Market Tracker - Fourth Quarter 2021”. As of December 31, 2021, we have shipped in the aggregate approximately 83.9 million power optimizers and 3.5 million inverters. More than 2.45 million PV installations, many of which may include multiple inverters, are currently connected to and monitored through our cloud-based monitoring platform.

The SolarEdge Solution. Our DC optimized inverter system maximizes power generation at the individual PV module level while lowering the cost of energy produced by the solar PV system and providing comprehensive and advanced safety features. Our solution consists of inverters, power optimizers, a communication device which enables access to our cloud-based monitoring platform and addresses a broad range of solar market segments, from residential solar installations to commercial and small utility-scale solar installations. Additional smart energy features and hardware that can be added to our solution include a battery pack for storage of energy and a home energy automation system which enables greater savings for the system owner.

The key advantages of our solution over a traditional string inverter PV system include:

- ***Maximized PV module power output.*** Our power optimizers provide module-level or MPP, tracking and real-time adjustments of current and voltage to the optimal working point of each individual PV module. This enables each PV module to continuously produce its maximum power potential independent of other modules in the same string, thus minimizing module mismatch and partial shading losses. By performing these adjustments at a very high rate, our power optimizers also solve the dynamic MPP losses associated with traditional inverters.

- ***Optimized architecture with economies of scale.*** Our system shifts certain functions of the traditional inverter to our power optimizers while keeping the DC to AC function and grid interaction in our inverter. As a result, our inverter is smaller, more efficient, more reliable and less expensive than inverters used in traditional inverter systems. The cost savings that we have achieved on the inverter enable our system to be priced at a cost per watt that is comparable with traditional inverter systems of leading manufacturers. As a PV system grows in size, our inverter benefits from economies of scale, making our technology viable for large commercial and utility-scale applications.

- ***Enhanced system design flexibility.*** Unlike a traditional inverter system that requires each string to be the same length, use the same type of PV modules and be positioned at the same angle toward the sun, our system allows significant design flexibility by enabling the installer to place PV modules in uneven string lengths and on multiple roof facets. This design flexibility:

    - Increases the amount of the available roof that can be utilized for power production. Unlike traditional inverter systems, our system does not require each string to be the same length, use the same type of PV modules or be positioned at the same angle toward the sun. As a result, our system is significantly less prone to wasted roof space resulting from rooftop asymmetries and obstructions.

    - Reduces the number of field change orders. For example, some installers use remote tools to estimate the size and configuration of an installation in connection with the customer acquisition process. This is especially common for high-volume residential arrays, where an exhaustive survey of rooftop obstructions would be uneconomical. In some cases, installers discover that their preliminary design, based on remote tools, cannot be implemented due to unexpected shading or other obstructions. With traditional inverter system designs, an obstructed module may require a significant system redesign and a modification of the customer contract to take into account the changed system design. Our DC optimized inverter solution enables an installer to compensate or adjust for most obstructions without materially changing the original design or requiring a modification to the customer contract.

- ***Reduced balance of system costs.*** Our DC optimized inverter system allows significantly longer strings to be connected to the same inverter (as compared to a traditional inverter system). This minimizes the cost of cabling, fuse boxes and other ancillary electric components. These factors result in easier installations with shorter design times and a lower initial cost per watt, while enabling larger installations per rooftop.

- ***Continuous monitoring and control to reduce operation and maintenance costs.*** Our cloud-based monitoring platform provides full data visibility at the module level, string level, inverter level and system level. The data can be accessed remotely by any web-enabled device, allowing comprehensive analysis, immediate fault detection and alerts. These monitoring features reduce O&M costs for the system owner by identifying and locating faults, enabling remote testing and reducing field visits.

- ***Enhanced safety.*** We have incorporated module-level safety mechanisms in our system to protect installers, electricians and firefighters. Each power optimizer is configured to reduce output to 1volt unless the power optimizer receives a fail-safe signal from a functioning inverter. As a result, if the inverter is shut down (e.g., for system maintenance, due to malfunction, in the event of a fire or otherwise), the DC voltage throughout the system is reduced to a safe level. Our DC optimized inverters comply with the applicable safety requirements of the areas in which they are sold, providing incremental cost savings to installers by eliminating the need for additional hardware such as DC breakers, switches or fire-proof ducts required by traditional inverter systems. In the U.S., the SolarEdge SafeDC feature is compliant with NEC 2014 & NEC 2017 Rapid Shutdown functionality, section 690.12. SolarEdge inverters also have a built-in safety feature designed to mitigate the effects of some arcing faults that may pose a risk of fire, in compliance with the UL1699B arc detection standard.

- ***High reliability.*** Solar PV systems are typically expected to operate for at least 25 years under harsh outdoor conditions. High reliability is critical and is facilitated by systems and components that have low heat generation, solid and stable materials, and an absence of moving parts. We have designed our system to meet these stringent requirements. Our power optimizers dissipate much less heat than microinverters because no DC-AC inversion occurs at the module level. As a result, less heat is dissipated beneath the PV module, which improves lifetime expectancy and the reliability of our power optimizers. Our power optimizers' high switching frequency allows the use of ceramic capacitors with a low, fixed rate of aging and a proven life expectancy in excess of 25 years. Further, we use automotive-grade application specific integrated circuits ("ASICs") that embed many of the required electronics . This reduces the number of components and consequently the potential points of failure.

- ***Energy Storage.*** Our DC optimized inverter system allows solar energy to be directly stored in batteries without any conversion, thereby eliminating energy losses that are associated with such conversions and improving the RoI of PV associated battery systems.

- ***Energy Management.*** Strategically located at the intersection between PV modules, home usage, and the grid, inverters are well positioned to act as smart energy managers. Our smart inverters incorporate the management of PV energy, battery storage, smart devices, and grid interaction. By enabling smart energy management in our inverter, system owners can not only store solar energy but also control the timing of their PV energy consumption in order to increase their energy independence, take advantage of lower time-of-use rates, reduce electricity bills, and improve overall system RoI.

- ***Distributed Energy Generation.*** As the electric grid transitions from centralized power stations to a network of distributed, renewable energy sources, our inverter acts as a local control system that can manage the energy resources underlying such distributed network. Our inverters are a key part of developing a distributed and interactive grid that can help support grid stability. One such example is inverter-enabled charging and discharging of batteries as part of a virtual power plant to help manage the load on the grid and support grid stability.

Our PV Solar Products Offering

SolarEdge began its commercial sales with a product offering of simplified inverters, power optimizers, and cloud-based monitoring platform. As the solar energy industry has evolved, SolarEdge has developed innovative solutions to further enhance smart energy technology, including inverters that include compatibility with batteries for increased self-consumption and storage, inverters that allow EV charging, smart meters, smart energy devices (sockets, water heater controllers, wireless relay) and smart PV modules. This product expansion has enabled us to increase average revenue per installation, or ARPI.

SolarEdge Power Optimizer. Our DC power optimizer is a highly reliable and efficient DC-to-DC converter which is connected by installers to each PV module or embedded by PV module manufacturers into their modules as part of the manufacturing process. Our power optimizer increases energy output from the PV module to which it is connected by continuously tracking the MPP of each module and controlling its working point. The power optimizer's ability to track the MPP of each PV module and its ability to increase or decrease its output voltage enables the inverter's input voltage to remain fixed under a large variety of string configurations. This feature enhances flexibility in PV system designs, enabling use of different string lengths in a single PV system connected to the same inverter, use of PV modules situated on multiple orientations connected to the same inverter and using varied PV module types in the same string. In addition, our power optimizers monitor the performance of each PV module and communicate this data to our inverter using our proprietary power line communication. In turn, the inverter transmits this information to our monitoring server. Each power optimizer is equipped with our proprietary safety mechanism which automatically reduces the output voltage of each PV module to 1 volt unless the power optimizer receives a fail-safe signal from a functioning inverter. As a result, if the inverter is shut down (e.g., for system maintenance, due to malfunction, in the event of a fire or otherwise), the DC voltage throughout the system is reduced to a safe level.

Our power optimizers are designed to withstand high temperatures and harsh environmental conditions and contain multiple bypass features that localize failures and enable continued system operation in the vast majority of cases of power optimizer's failure. Our power optimizers are compatible with the vast majority of modules on the market today and carry a 25-year product warranty. Our power optimizers are designed to be used with our inverters to provide power optimization. Monitoring and safety features can also be achieved with third party inverters by adding supplemental communications hardware. During the year ended December 31, 2019, the year ended December 31, 2020 and the year ended December 31, 2021, revenues derived from the sale of power optimizers represented 44.5%, 42.9% and 42.2% of total revenues, respectively.

SolarEdge Inverter. Our DC-to-AC inverters contain sophisticated digital control technology with efficient power conversion architecture resulting in superior solar power harvesting and high reliability, and are designed to work exclusively with our DC power optimizers. A proprietary power line communication receiver is integrated into each inverter, receiving data from our power optimizers, storing this data and transmitting it to our monitoring server when an internet connection exists. Since each string which is equipped with our power optimizers provides fixed input voltage to our inverter, the inverter is able to operate at its highest efficiency at all times and therefore is more cost efficient, energy efficient and reliable. Like our power optimizers, our inverters are designed to withstand harsh environmental conditions. Since the power rating of an inverter determines how many PV modules it can serve, larger installations require inverters with higher power ratings. We currently offer a single-phase inverter designed to address the residential market (1 kilowatt (“kW”) to 11.4 kW) which is based on our HD-Wave technology and a three-phase inverter designed to address the residential market in certain European countries and Australia as well as the commercial market (4 kW to 120 kW). Our single-phase inverters support a range of smart energy capabilities. In 2020, we launched the SolarEdge energy hub inverter and home backup solution for the U.S. residential market. The SolarEdge energy hub inverter contains built-in consumption monitoring, embedded revenue-grade production metering ,integrated arc fault protection, rapid shutdown and is ready for a battery. In 2021, we launched the new SolarEdge energy hub inverter models ranging from 7.6 kW up to 11.4 kW PV power and 10.3 kW backup power. Both the SolarEdge energy hub inverter and the SolarEdge energy bank battery, described below, are part of the new SolarEdge full residential solution, the “SolarEdge Home”, an intelligent smart energy management system that allows homeowners to better manage and monitor solar energy production, consumption and backup storage in real time. Our product offering also includes our commercial three-phase 120kw inverter with Synergy technology and enhanced power capabilities, which is designed to enable quick and easy installation and inventory management for the commercial market. The vast majority of our inverters are sold with a 12 year warranty that is extendable to 20 or 25 years for an additional cost. During the year ended December 31, 2019, the year ended December 31, 2020 and the year ended December 31, 2021 revenues derived from the sale of inverters represented 43.9%, 44.0% and 42.2% of total revenues, respectively.

EV Charging Inverter. SolarEdge’s EV charging inverter offers homeowners the ability to charge electric vehicles up to six times faster than a standard Level 1 charger through an innovative solar boost mode that utilizes grid and PV charging simultaneously. This inverter is the world’s first EV charger with an integrated PV inverter. Reducing the burden of installing separately a standalone EV charger and a PV inverter, the EV charging inverter eliminates the need for additional wiring, conduit and a breaker installation. By installing an inverter that has an integrated EV charge, no additional dedicated circuit breaker is needed, saving space and eliminating the need for a potential upgrade to the main distribution panel.

Storage Solutions. In 2021, we launched our residential battery, the SolarEdge energy bank, which is a 10 kW single phase battery that integrates with our SolarEdge energy hub family of inverters. The SolarEdge energy bank battery provides homeowners the ability and the backup to power their homes even when the grid is off. The battery also works in tandem with the SolarEdge energy management system to optimize the use of solar energy in places where the feed in tariffs are less favorable (maximum self-consumption). The SolarEdge energy bank battery connects with the SolarEdge inverter through DC-coupling, which minimizes the number of DC to AC conversions which are typical in competing technologies, saving energy and enabling higher efficiency. The solution is based on a single inverter for both solar PV and storage. To optimize self-consumption, the battery is charged and discharged to meet consumption needs and reduce the amount of power acquired from the grid. With the SolarEdge backup solution, unused solar PV power is stored in a battery and used during a power outage, when a combination of solar PV power and battery is used to power important sources such as the refrigerator, communication devices, lighting, and AC outlets. Our proprietary monitoring platform provides visibility into the battery's status, solar PV production, and self-consumption, while offering easy maintenance with remote access to inverter and battery software. Multiple batteries can be connected to a single SolarEdge energy hub inverter, adding more available power to backup more significant loads such as air-conditioners or refrigerators. In addition, SolarEdge inverters can be connected to third party batteries via the SolarEdge StorEdge solution, where batteries can perform both maximum self- consumption and backup functions.

Some existing SolarEdge systems can be upgraded with a storage solution for both backup or on-grid maximum self-consumption use.

SolarEdge Software. We offer a variety of professional software tools from system design to monitoring:

Our “Designer platform” is a free web-based tool that helps solar professionals plan, build and validate our residential and commercial systems from inception to installation.

Our “Mapper app” provides SolarEdge installers with an efficient, streamlined process for registering the physical layout of new PV sites in the SolarEdge monitoring platform. Installers use the Mapper app to scan SolarEdge power optimizer and inverter barcodes, creating a virtual map of the PV site in the monitoring platform to help facilitate remote diagnostics.

Making installations quick and simple, our “SetApp” is used to activate and configure SolarEdge inverters during commissioning directly through a smartphone.

In 2021, we launched the mySolarEdge application version 2.0 which enables system owners to easily track their real-time system production and household energy consumption, view their inverter and battery status for quick troubleshooting, and control the battery's back-up capabilities, all from the convenience of their mobile phones.

Our cloud-based monitoring platform collects power, voltage, current and system data sent from our inverters and power optimizers and allows users to view the data at the module level, string level, inverter level and system level from most browsers or from most smart phones and tablets. The monitoring software continuously analyzes data and flags potential problems. The monitoring software includes features which are used on a routine basis by integrators, installers, maintenance staff, and system owners to improve a solar PV system’s performance by maximizing solar power harvesting and reducing O&M costs by increasing system up-time and detecting PV module performance issues more effectively. Connection to the monitoring server is completed during installation by the installer. The installer then receives full access to system data through the monitoring software and can select the amount of data to be shared with the system owner.

Smart Energy Management. There are two separate energy technology industries that exist today, solar energy production and automation technology. Inverters are taking on an expanded role in energy management and automation, and,in order to address these market needs, we are developing and providing automation products. This line of products, when used with the SolarEdge PV solution, is designed to allow system owners to increase self-consumption by shifting energy usage to match peak solar PV production as well as offer a convenient, wireless control option over various building and/or home devices. An example of this solution, would be using excess solar PV energy to heat water or the ability to remotely turn on or off certain power sources such as lighting or electrical appliances. The introduction of these products is dependent upon certification and region specific needs and as such, these products are not yet available in all of the geographies in which SolarEdge operates.

Grid Services. As PV and storage continue to proliferate around the world, energy production is transitioning from a centralized system to a distributed network model, where energy is produced close to the location in which it is consumed and stored. This model creates an opportunity for new interconnected and decentralized energy networks offering improved grid reliability and stability, new energy services and reduction of grid infrastructure costs. SolarEdge grid services deliver near real-time aggregative control and data reporting, enabling the pooling of distributed energy resources — photovoltaic systems, battery storage, electric vehicle chargers, and loads — in the cloud for the creation of virtual power plants ("VPP"). The SolarEdge grid services and VPP solution provides sophisticated management platforms to enable real-time, aggregated control of available energy resources to meet ever-changing supply needs and demand. Our distributed energy resources management system or DERMS application and application program interfaces ("APIs") are used by utilities for countering peak demand events. In 2021, SolarEdge continued to generate revenues from selling grid services in the U.S., Europe and Australia, including services provided to independent system operators, energy retailers, national installers and others.

Product Roadmap

Our products reflect the innovation focus and capabilities of our technology departments as well as the importance we place on creating value for our customers. Our core solar product roadmap is divided into five categories: power optimizers, inverters, software, energy storage, and smart energy management.

Power Optimizers. We currently sell our third and fourth generations of power optimizers (P-Series and S-Series, respectively) which were designed for fully automated assembly and are based on our third and fourth generation ASICs, respectively. A key element of our reliability strategy, and a significant differentiator relative to our competitors, is our use of proprietary ASICs to control, among other things, our power optimizer’s power conversion, safety features, and PV module monitoring. Instead of using large numbers of discrete components, our power optimizer uses a single proprietary ASIC, thus reducing the total number of components in an electrical circuit and thereby improving reliability. In 2021, we launched our fourth generation power optimizer which uses fourth generation ASIC that provides higher efficiency and incorporates a new safety mechanism for PV systems including connector level fault detection. Each new ASIC generation reduces the number of components required for any given functionality, adds more functions to the optimizer, and meaningfully improves the efficiency of the power optimizer. The efficiency improvement reduces the energy losses which in turn reduces the amount of heat dissipation. This enables design of a more cost-effective and usually smaller enclosure and also keeps the electronics cooler, thereby improving the power optimizer’s reliability. Our research and development teams continuously work on further improving our ASICs and releasing new generations of this improved technology.

Inverters. Our inverter roadmap includes both new products as well as additional capabilities for existing inverters. Our inverter roadmap is intended to serve four purposes: (i) expand addressable markets by developing new and larger inverters designed specifically for larger commercial installations and utility-scale projects; (ii) improve the electronics to increase the total power throughput while minimally changing the existing enclosure, thereby reducing the actual cost per watt and increasing economies of scale; (iii) improve ease of installation by integrating additional functionality required in certain installations in order to reduce costs of additional hardware and subcontractors’ labor costs; and (iv) improve the inverter's functionality to serve as a hub for home energy management, integrating, controlling and optimizing the main home energy sources and loads.

Software. We continue to expand our software offering with introduction of new tools and features . This includes both professional web-based software and system owner applications such as the fleet management, the site designer tool, mySolarEdge consumer app and installer applications.

Our cloud-based monitoring platform is continuously growing by the amount of data aggregated. We are continuously developing tools to accommodate our growth and further enhance our service offering. We plan to continue developing algorithms that detect and pinpoint problems that can affect power production in field systems. We further plan to add more capabilities through our public API to allow users to build and integrate our system into their own systems and build and share useful applications based on monitoring data gathered by our software.

Energy Storage. Our residential storage solution, launched in 2021, is designed to integrate with our single-phase inverters to provide optimal energy management, maximum efficiency, longer backup times and ease of use for the homeowners. Our DC-coupled SolarEdge residential battery for the single-phase inverters are currently available in North America and Europe and are expected to be introduced to additional global markets. We expect to continue to expand our storage solutions to cover more applications, specifically a three- phase solution, as well as improve battery management, efficiency and integration with energy management systems.

Smart Energy Management. Our smart energy management offering manages and controls PV production, home consumption, storage, home generator and grid interaction, is designed to automatically use excess PV power to increase self-consumption of solar energy, and reduce energy bills and carbon footprints. The offering controls electrical loads such as, pool pumps, fans, lighting and other home appliances by using several accessories such as a smart socket, smart switch relays and more, and is able to divert excess solar energy to heat water. We are developing new features and capabilities for the smart energy suite which is constantly evolving. Specifically, we have current plans to add the ability to control additional energy loads and are developing capabilities for the commercial segment. We also plan on expanding the availability of our smart energy products, including smart energy management devices, to new geographies and use cases.

Products from Non-Solar Businesses

In 2018, we expanded our product offering by completing the acquisition of the assets of a business for the development, manufacturing and sale of uninterrupted power supply or UPSs (“Critical Power”). In January 2019, we further expanded our product offering by completing the acquisition of approximately 99.9% of SolarEdge Automation Machines SPA (“SolarEdge Automation Machines”) and its wholly owned subsidiary SolarEdge eMobility SPA (“SolarEdge e-Mobility”) (formerly S.M.R.E Spa and I.E.T Spa, respectively). During 2019, we also completed the acquisition of Kokam Co., Ltd. (“Kokam”), a provider of Lithium-ion cells, batteries and energy storage solutions. SolarEdge Automation Machines manufactures automated machinery for industrial applications and SolarEdge e-Mobility develops, manufactures and sells end-to-end e-Mobility solutions for electric and hybrid vehicles used in motorcycles and light commercial vehicles. These acquisitions allow us to offer a variety of products and solutions in addition to the SolarEdge solution, in adjacent markets.

UPS products. Our Critical Power product offering includes a range of UPS and power supply solutions for use in various applications including data-centers, communications, defense, healthcare, industrial, financial, transportation, government and, retail. The products include UPS solutions ranging from 10 kW to 1.2 MW, modular power systems for the telecommunications market, and different control and management solutions. In 2021, we further enhanced our three-phase modular product family offered in the U.S. by improving the hardware configuration and introducing a new version of the software for both 208V and 480V systems, which are intended to improve the products' performance. We also introduced a new cost effective standalone UPS system for applications ranging from 10 kW to 40 kW.

Lithium-ion batteries and related products. Founded in 1989, Kokam, develops, manufactures and sells premium lithium-ion battery cells, batteries and energy storage solutions. Kokam’s patented cell manufacturing technology allows us to provide energy solutions of improved performance, safety, and reliability which can integrate with a wide-variety of industries, including Energy Storage Systems known as ESS, UPS, EVs, and marine. This year we began the construction of an additional factory in Korea for the manufacturing of 2GW of cell capacity which is expected to begin operation in the second half of 2022.

Products for e-Mobility. Through the acquisition of SolarEdge e-Mobility and SolarEdge Automation Machines, SolarEdge added to its product offering components for e-Mobility, automated production machines and telematics software. These solutions include innovative powertrain technology integrated with the gearbox, engine, battery, BMS, software, electronics and batteries for light goods vehicles, light commercial vehicles and e-motorcycles. During 2021, we announced that we were selected and are supplying full electrical powertrain units and batteries for the production of the Fiat E-Ducato light commercial vehicle in Europe.

New Products or Product Categories

We continuously evaluate opportunities to expand our product offerings and services to our customers. We may from time to time develop new products or services that are a natural extension of our existing business, or may engage in acquisitions of businesses or product lines with the potential to strengthen our market position, enable us to enter attractive markets, expand our technological capabilities, or provide synergistic opportunities.

Sales and Marketing Strategy

Our solar business strategy is to focus on penetrating new geographic regions and increasing our market share. More specifically, we focus on markets where electricity prices, irradiance and government policies make solar PV installations economically viable. Our solar products have been installed in 133 countries.

We target our sales and marketing efforts to the largest distributors, electrical equipment wholesalers, EPC contractors and installers in each of the countries where we operate. In the U.S., Germany, Italy, the Netherlands, Poland and Australia, our products are carried and actively sold by most of the top solar PV distributors as well as the largest electrical distribution companies that are active in solar PV. We anticipate that an increasing percentage of solar PV equipment sales will also occur through electrical equipment wholesalers who sell to a broad range of electrical contractors, and we are focused on cultivating these global relationships. As of December 31, 2021, based on the number of installer accounts on our monitoring portal over 45,000 installers around the world have installed SolarEdge solar PV systems. We also sell our power optimizers pre-installed onto several PV modules for manufacturers that offer PV modules with our power optimizer physically embedded into their modules.

Additionally, as further detailed below, we have a number of programs focused on educating installers and other industry professionals about our technology, and we use a combination of road shows, webinars, and partner trainings to educate them how best to design, sell, and implement our technology in their projects. Most of these activities were converted to on-line platforms since the start of the Covid-19 pandemic to enable continued training, education and marketing during the global pandemic.

Our battery business strategy focuses on utilizing Kokam’s battery technology in our residential and commercial solar products and using any remaining manufacturing capacity for generating revenues from the sale of battery cells, modules and systems to other applications including ESS, e-mobility, marine and other applications. In the future we intend to further integrate our batteries into the UPS products and other applications.

Our Customers

We derive a significant portion of our revenues from key solar distributors, electrical equipment wholesalers and large installers in the U.S. and worldwide. In 2021, two of our customers, Consolidated Electrical Distributors Inc. (CED) and Sunrun Inc. (Sunrun) together represented 30.9% of our revenues. None of our other customers accounted for more than ten percent of our revenues in the year ended December 31, 2021.

Training and Customer Support

We offer our installer base a comprehensive package of customer support and training services which include pre-sales support, ongoing trainings, and technical support before, during, and after installation. We also provide customized support programs to PV module manufacturers, large installers and distributors to help prioritize and track support issues, thereby enabling short cycle times for issue resolution.

In 2021, as Covid-19 related lockdowns continued to make in-person training events impractical in many countries, we continued to offer training programs in a hybrid approach by combining hands-on and digital learning techniques. As a result, we were able to significantly increase our overall training reach, offering more than 400 training events and attracting approximately 50,000 participants.

In 2021 we continued to improve and enhance our "Edge Academy", an intuitive web-based learning portal that aims to help SolarEdge installers improve their installation skills and minimize installation time. As part of the Edge Academy, installers can complete two levels of certification programs: a Scholar certification program, which is offered in 12 different languages; as well as the SolarEdge Expert Training certification program, which is only available to installers that have completed the Scholar program and provides them with in-depth knowledge of our products, further enhancing their ability to install SolarEdge products.

Furthermore, in 2021, we conducted an organization wide, global and extensive training need analysis as preparation for a new training strategy implementation. The new training is designed to determine the needs of individual installers and offer them training programs tailored to these needs.

In addition, in 2021, we launched the SolarEdge energy bank battery certification path for installers. The certification is required for our installers to be able to install our full storage solution.

In 2021, we published over 120 new product training videos on our YouTube channel in multiple languages, which were viewed over 2 million times. Our mobile learning tools continue to be available to installers, assisting in improving their ability to quickly and efficiently install our products.

In addition to the above, we support our commercial system customers with design consulting throughout their sales process and installation.

Our technical support organization includes local expert teams, tech centers, an online service portal and live chat service. Our toll-free call and live chat centers are open Monday through Friday at least from 9:00 a.m. to 6:00 p.m. in every region in which we sell our products. In addition, customers can open and track support cases 24/7 utilizing our online portal. All support cases are monitored via a customer relationship management system in order to provide service, track closure of all customer issues and further improve our customer service. Our call centers have access to our cloud-based monitoring platform database, which enables real-time remote diagnostics.

Customer service and satisfaction continues to be a key component of our business and we consider it integral to our success in the future. We maintain high levels of customer engagement through our call centers in California, Australia, Japan, Israel, India and Bulgaria. During 2021, we added an additional call center in Philippines, which is operated through a third party supplier, to better serve our customers in west coast, United States. In addition to our call centers, we have field service engineers located in the geographies where we are active, and support our customers with commissioning of large projects, introduction of new technologies and features and on-the-job training of new installers. As of December 31, 2021, our customer support and training organization consisted of 626 employees worldwide.

Our Technology

We have drawn on our expertise in the fields of power electronics, magnetic design, mechanical and heat dissipation capabilities, control loops and algorithms and power line communications to design and develop what we believe to be the most advanced commercial solutions for harvesting power from solar PV systems. Our advanced technologies are explained in more detail below.

As part of our growth strategy, we have acquired companies that have technologies that can leverage our expertise in power electronics and power optimization. By combining acquired resources with our current research and development teams, we are expanding our activities into other essential areas such as e-Mobility, battery storage and energy storage systems.

Power optimizers

Our power optimizers are DC/DC step up/step down (buck boost) converters designed and developed to operate in harsh outdoor environments at very high conversion efficiency. Our power optimizers include proprietary power electronics customized to efficiently convert power from the PV module to the inverter. The components are selected and the conversion topology is designed for the power optimizer specifications, and the power optimizer design is verified for consistent performance and reliability in numerous lab tests and simulations.

A key factor in the performance of our power optimizer is determined by the digital control algorithms and closed-loop control mechanism. The power optimizer's control is built into our advanced ASIC which is responsible for all critical digital control functions of the power optimizer, including detailed power analysis, digital control of the power conversion subsystem, power line communications and networking. Since each power optimizer handles the power and voltage of a single module, we are able to reach a high degree of semiconductor integration by leveraging low cost silicon in standard semiconductor packages. As a result, much of the functionality of our power optimizer can be integrated into a standard ASIC instead of use of discrete electronic components, resulting in lower costs and higher reliability.

The ASIC performs the critical power analysis and power conversion control functions of the power optimizer. The power analysis functions process the state and working parameters at the power optimizer's input and output, and together with advanced digital control and state machine logic, control the power conversion function. In addition, our digital control system uses technology that allows the solar PV installation to anticipate and adapt to changing operating conditions, and to protect itself against system anomalies. In 2021, we incorporated our fourth generation ASIC in our new generation of power optimizers (S-series). In addition, we added cable temperature monitoring functionality to this new generation of optimizers to improve their safety.

Each power optimizer in the array is connected to the inverter by a power line communications networking link. Our power line communications link uses a proprietary networking technology that we developed, utilizing the existing DC wiring between the power optimizers and the inverter to transmit and receive data between these devices.

Inverters

Most of our inverters are designed for single-stage DC/AC conversion. Using our inverter in combination with the power optimizers allows the inverter control loop to maintain a regulated DC voltage level at its input, thereby allowing for long, uneven, and multi-faceted strings while also enabling custom, cost efficient, and reliable inverter design and component selection. All of the power components, as well as the main magnetic components for our inverters, can then be optimized for DC/AC inversion at high efficiency.

Our inverters’ digital control algorithms are implemented using programmable digital signal processors which allow for flexibility and adaptation of control loops for various grids and for the requirements and standards of different grid operators across geographies. We have already implemented the control mechanisms necessary to support advanced grid codes and standards that are required to support high penetration of solar energy into utility grids. We continue to develop and manufacture our own DSP (ASIC) in our inverters which enables us to improve our control loops, increase our cost savings and be less dependent on third party suppliers in our manufacturing process. The DSP (ASIC) performs the critical power analysis and power conversion control functions of the inverter. The power analysis functions process the state and working parameters at the power inverter’s input and output, and together with advanced digital control and state machine logic controls the power conversion function. In addition, our digital control system uses technology that allows the inverter to anticipate and adapt to changing operating conditions, and to protect itself against system anomalies as well as comply with applicable regulations in the different regions in which we operate.

Our DSP (ASIC) is also in charge of the power line communications ("PLC") networking link. Our PLC uses a proprietary networking technology that we developed, utilizing the existing DC wiring between the power optimizers and the inverter to transmit and receive data between these devices.

We have developed and continue to develop in-house design and manufacturing capabilities for magnetic components in order to decrease dependence on suppliers, reduce costs and have better control over our production processes.

Batteries

In 2021, we released our first lithium-ion residential batteries for sale in the U.S. and Europe through our solar distribution channels. Our batteries are composed of lithium cells, a battery management system ("BMS"), bi-directional DC/DC high efficiency converter that allows charge and discharge of the battery, as well as user interface. Our DC/DC converter uses digital control algorithms, which are implemented using a programmable digital signal processor. Therefore, both the battery and optimizers are connected to the same DC bus allowing the battery to be directly charged by the DC current generated by the optimizers and bypassing the AC conversion.

Our efficient DC-coupled battery is designed to connect with our single-phase inverters (up to three batteries per inverter), and provides 9.7 kWh of backup power. Our batteries can be connected to our cloud-based monitoring platform, reporting information on the battery status, solar production, and self-consumption data.

Manufacturing

We have designed our manufacturing processes to produce high quality products at competitive costs. The strategy is threefold: outsource, automate, and localize. We currently contract to have our solar products manufactured by two of the world’s leading global electronics manufacturing service providers, Jabil Circuit, Inc. (“Jabil”) and Flex Industrial Ltd. (“Flex”). By using contract manufacturers, we are able to access advanced manufacturing equipment, processes, skills and capacity on a “capital light” budget. Our contract manufacturers are responsible for funding the capital expenses incurred in connection with the manufacture of our products, except with regard to end-of-line testing equipment and other specific manufacturing equipment utilized in assembling our products or sub-components which are financed and owned by the Company. We expect to continue this funding arrangement in the future, with respect to any expansions to such existing lines. Further, contracting with global providers, such as Jabil and Flex, gives us added flexibility to manufacture certain products in China and Vietnam, closer to target markets in Asia and the North American west coast, as well as other products in Hungary, closer to target markets in Europe and the North American east coast, in each case, potentially increasing responsiveness to customers while reducing costs and delivery times. In addition, as part of our manufacturing regionalization efforts, we are expanding our manufacturing capabilities with a new manufacturing site in Mexico, which is planned to start volume manufacturing during the second half of 2022. Once ramped, we believe this site will significantly increase our capacity and give us further flexibility to manage growing demand.

During 2021, we reached full manufacturing capacity in our manufacturing facility located in the North of Israel “Sella 1”, from which we began commercial shipments to the U.S. of optimizers and inverters in 2020. The proximity of Sella 1 to our R&D team and labs enables us to accelerate new product development cycles as well as define equipment and manufacturing processes of newly developed products which can then be adopted by our contract manufacturers worldwide.

We have developed propriety automated assembly lines for the manufacturing of our power optimizers. These assembly lines, currently operating in all of our manufacturing facilities, enable the manufacturing of more than 5,000 optimizers per machine per day. We invest resources in additional automated assembly lines as well as in automated machinery for subassembly and self-manufacturing of certain components used in our products, and we own and are responsible for funding all of the capital expenses related thereto. The current and expected capital expenses associated with these automated assembly lines and other machinery is funded out of our cash flows.

We source our raw materials through various component manufacturers and invest resources in continued cost-reduction efforts as well as verifying second and third sources so as to limit dependence on sole suppliers.

Our Korean subsidiary, Kokam, has a manufacturing facility for lithium-ion cells and batteries that has the capacity to manufacture up to 150 MWh per annum. In 2020, we began construction of “Sella 2”, a 2GWh Li-Ion battery factory in Korea. The new factory is being constructed to meet the growing global demand for Li-Ion batteries, specifically in the energy storage system (ESS) and e-Mobility markets. Sella 2 is expected to begin operation in the second half of 2022.

SolarEdge e-Mobility has a manufacturing and assembly facility in Umbertide, Italy, for our e-Mobility division. Furthermore, during 2021, we began manufacturing a portion of our batteries for the SolarEdge e-Mobility business in Hungary.

Reliability and Quality Control

Our power optimizers are either connected to each PV module by installers, or embedded in each PV module by PV module manufacturers. Our power optimizers are designed to be as reliable as the PV module itself and capable of withstanding the same operating and environmental conditions.

Our reliability methodology includes a multi-level plan with design analysis, sub-system testing of critical components by Accelerated Life Testing, and integrative testing of design prototypes by Highly Accelerated Life Testing and large sample groups. As part of our reliability efforts, we subject components to industry standard conditions and tests including in accelerated life chambers that simulate burn-in, thermal cycling, damp-heat, and other stresses. We also conduct out of box audits (OBA) on our finished products. In addition, online reliability tests (ORT) are conducted on our optimizers and we test complete products in stress tests and in the field. Our rigorous testing processes have helped us to develop highly reliable products.

In order to verify the quality of each of our products when it leaves the manufacturing plant, each component, sub-assembly, and final product are tested multiple times during production. These tests include Automatic Optical Inspection, In-Circuit Testing, Board- Functional Testing, Safety Testing, and Integrative Stress Testing. We employ a serial number-driven manufacturing process auditing and traceability system that allows us to control production line activities, verify correct manufacturing processes and to achieve item-specific traceability.

As a part of our quality and reliability approach, failed products from the field are returned and subjected to root cause analysis, the results of which are used to improve our product and manufacturing processes and design and further reduce our field failure rate.

Certifications

Our products and systems comply with the applicable regulatory requirements of the jurisdictions in which they are sold as well as all other major markets around the world. These include safety regulations, electromagnetic compatibility standards and grid compliance.

Research and Development

We devote substantial resources to research and development with the objective of developing new products and systems, adding new features to existing products and systems and reducing unit costs of our products and systems. Our development strategy is to identify features, products, and systems for both software and hardware that reduce the cost and improve the effectiveness of our solutions for our customers. We measure the effectiveness of our research and development by metrics including product unit cost, efficiency, reliability, power output, and ease of use.

We have a strong research and development team with wide ranging experience in power electronics, semiconductors, power line communications and networking, chemical, mechanical and software engineering. In addition, many members of our research and development team have expertise in solar technologies. As of December 31, 2021 our research and development organization had a headcount of 1,105 employees.

Intellectual Property

The success of our business depends, in part, on our ability to maintain and protect our proprietary technologies, information, processes, and know-how. We rely primarily on patent, trademark, copyright and trade secrets laws in the U.S. and similar laws in other countries, confidentiality agreements and procedures and other contractual arrangements to protect our technology. As of December 31, 2021, SolarEdge had 405 issued patents worldwide and 397 patent applications pending for examination. A majority of our patents relate to DC power optimization and DC to AC conversion for alternative energy power systems, power system monitoring and control, battery technology and management systems. Our issued patents are scheduled to expire between 2022 and 2039.

We continually assess opportunities to seek patent protection for those aspects of our technology, designs, and methodologies and processes that we believe provide significant competitive advantages.

We rely on trade secret protection and confidentiality agreements to safeguard our interests with respect to proprietary know-how that is not patentable and processes for which patents are difficult to enforce. We believe that many elements of our manufacturing processes involve proprietary know-how, technology, or data that are not covered by patents or patent applications, including technical processes, test equipment designs, algorithms, and procedures.

All of our research and development personnel are required to enter into confidentiality and proprietary information agreements with us. These agreements address intellectual property protection issues and require our employees to assign to us all of the inventions, designs, and technologies they develop during the course of employment with us.

Our customers and business partners are required to enter into confidentiality agreements before we disclose any sensitive aspects of our technology or business plans.

Competition

The markets for our solar products are competitive, and we compete with manufacturers of traditional inverters, as well as manufacturers of other MLPE systems. The principal areas in which we compete with other companies include:

- product and system performance and features;

- total cost of ownership;

- reliability and duration of product warranty;
- customer service and support;
- breadth of product line;
- local sales and distribution capabilities;
- compliance with applicable certifications and grid codes;
- size and financial stability of operations; and
- size of installed base.

Recent market trends show an increased focus on safety features in rooftop installations, and the emergence of standards that are evolving to address such concerns. In particular, the arc fault detection and interruption (AFDI) and rapid shutdown (RSD) standards in the US market, have led to the introduction of module-level rapid-shutdown devices from our competitors. We believe the existence of rapid shutdown capabilities built into our optimizers positions us well in this regard, and could serve as a competitive advantage. Additionally, in 2020 we have seen PV module manufacturers introduce larger PV modules with higher power levels reaching over 600W. This market trend, which comes as a result of PV cell manufacturers introducing larger cell sizes such as M10 and M12 as well as different module build configurations, leads to market interest in higher power rating optimizers, micro inverters, and other MLPE devices. The increasing demand for storage and battery solutions is an additional noteworthy market trend which is expected to increase the attachment rate of storage to PV installations in the coming years.

Our DC optimized inverter system competes principally with products from traditional inverter manufacturers, such as SMA Solar Technology AG, ABB Ltd. and Huawei Technologies Co. Ltd. as well as from other Chinese inverter manufacturers. In the North American residential market, we compete with traditional inverter manufacturers, as well as microinverter manufacturers such as Enphase Energy, Inc. In addition, several new entrants to the MLPE market, including low-cost Asian manufacturers, have recently announced plans to ship or have already shipped similar products. We believe that our DC optimized inverter system offers significant technology and cost advantages that reflect a competitive differentiation over traditional inverter systems and microinverter technologies.

The markets for our energy storage division products are competitive as well, and we compete with global cell and battery manufacturers in the ESS market. Our energy storage solutions compete with products from global manufactures such as LG Energy Solutions, Samsung SDI, CATL, BYD and Panasonic.

Our residential lithium-ion batteries compete with global manufacturers of both lithium-ion and other residential battery storage solutions such as Tesla, LG Energy solutions, BYD and Enphase Energy.

In the UPS market, our UPS products compete with products and solutions from global UPS providers such as Schneider Electric, Eaton and Vertiv.

The vehicle e-Mobility component market is dominated primarily by manufacturers such as Robert Bosch GmbH, ZF Friedrichshafen AG, Dana Incorporated and Magna International. As the global e-Mobility market expands, major automotive manufacturers, such as Toyota, Honda, Tesla, General Motors, and Ford, have increased their investments in the electric and hybrid vehicle components in order to increase their market share.

Government Incentives

U.S. federal, state, and local government bodies as well as non-U.S. government bodies, provide incentives to owners, end users, distributors, and manufacturers of solar PV systems to promote solar electricity in the form of rebates, tax credits, lower VAT rate and other financial incentives such as system performance payments, payments for renewable energy credits associated with renewable energy generation, and exclusion of solar PV systems from property tax assessments. The market for on grid applications, where solar power is used to supplement a customer’s electricity purchased from the utility network or sold to a utility under tariff, often depends in large part on the availability and size of these government subsidies and economic incentives, which vary from time to time by geographic market.

Import Tariffs

Escalating trade tensions between the United States and China have led to increased tariffs and trade restrictions, including tariffs applicable to some of our products. As of June 2019, the U.S. trade representative (“USTR”) imposed import tariffs of 25% on a long list of products imported from China, including inverters and power optimizers. On January 15, 2020, the United States and China entered into an initial trade deal, which preserves the initial tariffs from 2018 and indicates additional sanctions may be imposed if China breaches the terms of the deal.

In order to mitigate the negative effect of increased tariffs, we increased our manufacturing capabilities at our Vietnam manufacturing facility beginning in the fourth quarter of 2019. We reached full manufacturing capacity in our manufacturing facility in Israel, Sella 1, and are planning to start volume manufacturing in Mexico during the second half of 2022. For the year ended December 31, 2021, the majority of our products being imported to the U.S. are manufactured in Vietnam, Israel and Hungary and are therefore not subject to the aforementioned tariffs.

Seasonality

The solar energy market is subject to seasonal and quarterly fluctuations affected by weather. For example, during the winter months in Europe and the northeastern U.S. where the climate is particularly cold and snowy, it is typical to see a decline in PV installations and this decline can impact the timing of orders for our products.

Sustainable, Responsible and Transparent Business Practices

During 2021, we continued making progress in our Environmental, Social and Governance ("ESG") performance and disclosure. Our ESG practices are guided by our social purpose: “To power the future of energy so we can all enjoy better living and a cleaner, greener future.”, and our social mission: “Shaping the future of sustainable energy production, energy storage and e-mobility through innovation”. We have crafted a comprehensive sustainability strategy with 2025 targets in several areas. Our third annual Sustainability Report, published in 2021, meets the requirements of leading global sustainability disclosure standards, GRI (Global Reporting Initiative) and SASB (Sustainability Accounting Standards Board) aligning our disclosure with leading corporations around the world and with the expectations of investors and other stakeholders. Our sustainability strategy, includes the following pillars:

- **Powering Clean Energy**: Accelerating the uptake of clean energy, delivering new smart energy, innovative solutions and improving the lifecycle impacts of our products. As a business founded upon the acceleration of clean energy, we strive to reduce our climate impact by minimizing GHG (greenhouse gas) emissions and transitioning to renewable electricity usage in our facilities. In 2021, we conducted a first lifecycle analysis for three of our key products, examining the carbon footprint of all product life stages. The analysis has recently been conducted, and we are currently examining its results, as well as considering reduction opportunities. Furthermore, we have set a target of reducing 30% of our Scope 1+2 GHG emissions per revenue, by 2025 (compared with the 2020 basis). We have set another target of achieving near-zero e-waste to landfill by 2025. In 2020, a total of 85% of all waste at our owned and operated sites was recycled.

- **Powering People:** Maintaining leading responsible employment practices, upholding human rights and investing in communities. In 2021, we increased our workforce to support SolarEdge’s business growth, and maintained responsible employment practices, including an enhanced focus on safety. Also, in 2021, we published a new statement on human rights in Xinjiang, China, confirming that we do not maintain any manufacturing facilities in, or source any material directly from, this region, as well as our commitment to taking necessary actions to prevent any connection between SolarEdge and human rights abuses in China, as in any other region. We continued to donate to causes that support technology education and other social causes in areas in which we have a presence.

- **Powering Business:** Maintaining and reinforcing ethical conduct throughout our value chain, advancing climate resilience, improving the efficiency of our resource consumption and ethical sourcing of raw materials and components. In 2021 we published our supplier code of conduct ("SCoC"), which includes provisions regarding, among others, ethics, safety, environmental protection, human rights, and fair employment. As of December 31, 2021, over 100 key suppliers have signed their acknowledgment of the SCoC terms. In 2021, we also conducted on-site audits of three contract manufacturers and one major raw material supplier of ours in connection with their compliance with the SCoC requirements, and are aiming to expand these efforts in 2022.

We believe that our sustainability strategy aligns directly with 10 United Nations Sustainable Development Goals (SDGs), and our products and activities are most critical to achievement of SDG #7, Affordable Clean Energy.

Human Capital

We believe our success depends on our ability to attract and retain outstanding employees at all levels of our business. As of December 31, 2021, we had 3,964 employees (full time and part time). Of these employees, 1,105 were engaged in research and development, 453 in sales and marketing, 2,052 in operations, production, Q&R, and support, and 354 in general and administrative capacities. Of our employees, 2,189 were based in Israel, 483 were based in Korea, 262 were based in the U.S., 187 were based in China, 253 were based in Italy, and an additional 590 were based elsewhere.

Except for our SolarEdge Automation Machines employees and the employees of SolarEdge e-Mobility, none of our employees are represented by a labor union. We have not experienced any employment-related work stoppages, and we consider relations with our employees to be good.

Recruitment: As a rapidly growing business, we rely on the success of our recruitment efforts to attract and retain technically skilled people who can support our ongoing innovation and expansion. We aim to be inclusive in our hiring practices focusing on the best talent for the role, welcoming all genders, nationalities, ethnicities, abilities and other dimensions of diversity.

Employee benefits: We aim to provide our employees with competitive salary and benefits that enable them to achieve a good quality of life and plan for the future. Our benefits differ according to local norms and market preferences, but typically include all salary and social benefits required by local law (including retirement saving programs, paid vacation and sick leave) and many additional benefits that go beyond legal requirements in local markets.

Leadership, Training and Development: We aim to provide our employees with advanced professional and development skills so that they can perform effectively in their roles and build their capabilities and career prospects for the future. We maintain a leadership program for managers and team leaders and deliver advanced professional training for sales, research and development and other functional teams as part of our extensive training program each year. Furthermore, we partner with local educational resources to offer formal learning programs on a variety of subjects for the personal development and advancement of our workforce.

Diversity, Equity and Inclusion: During the past three years, we have more than doubled the total number of women in our organization, adding women at all levels. We are striving to increase the presence of women in executive and management positions as part of our 2025 target to promote gender parity and equal pay.

We are taking active steps to increase the diversity of our workforce and inclusiveness of our employee base. For example, in 2021, we engaged in several partnerships with social organizations in Israel, designed to increase our recruitment of candidates from the Arab-Israeli population, ultra-orthodox women, and individuals with disabilities. Additionally, in 2021, as part of our commitment to creating a platform for gender equalization within the workforce, we initiated a global program for the professional development of key talent among women within the Company.

Workplace safety and health: We believe that all accidents and injuries at work are preventable and we strive to achieve a zero-injury culture across our offices and operations. We comply with applicable occupational health and safety regulations and are certified to Occupational Health and Safety Quality Management Standard ISO 45001:2018. Our injury rates are low.

During the Covid-19 pandemic, we have been offering most of our employees the flexibility to work remotely when possible and have implemented rigorous hygiene and social distancing practices in the workplace. We also offer our employees free antigen testing. Additionally, we provide resources to our employees, such as information and subsidized counseling for a large population of our employees, to address the psychological challenges caused by the pandemic.

Corporate Information

We were incorporated in Delaware in 2006. Our principal executive offices are located at 1 HaMada Street, Herziliya Pituach 4673335, Israel and our telephone number at this address is 972 (9) 957-6620. Our website is www.solaredge.com.

We file annual, quarterly and current reports, proxy statements and other documents with the Securities and Exchange Commission (the “SEC”), pursuant to the Securities Exchange Act of 1934 (the “Exchange Act”). Our reports, proxy statements and other documents filed electronically with the SEC are available at the website maintained by the SEC at *www.sec.gov*.

We use the Investor Relations portion of our website at *www.solaredge.com*, as a routine channel of distribution of important information such as press releases, analyst presentations, corporate governance practices and corporate responsibility information, financial information including our annual, quarterly, and current reports, our proxy statements, and, if applicable, amendments to those reports, filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such reports with, or furnish them to, the SEC. We also make available on the Investor Relations portion of our website at *www.solaredge.com* our earnings presentation and other important information, which we encourage you to review. All such postings and filings are available on our Investor Relations website free of charge.

ITEM 1A. Risk Factors

Risk Factors Summary

The following summarizes the principal factors that make an investment in our company speculative or risky, all of which are more fully described in the Risk Factors section below. This summary should be read in conjunction with the Risk Factors section and should not be relied upon as an exhaustive summary of the material risks facing our business. The order of presentation is not necessarily indicative of the level of risk that each factor poses to us.

We face risks related to our business and our industry, including those related to:

- Our ability to maintain our current level of profitability.
- The rapidly evolving and competitive nature of the solar industry.
- Demand for solar energy solutions.
- The dependence of our e-Mobility business on orders from a leading automotive manufacturer.
- The impact of declines in the retail price of electricity derived from the utility grid or from alternative energy sources.
- The impact of increases in interest rates or tightening of the supply of capital on the ability of end-users to finance the cost of a solar PV system.
- The impact of increased competition as new and existing competitors introduce power optimizers, inverters, solar PV system monitoring and other smart energy products.
- Developments in alternative technologies or improvements in distributed solar energy generation.
- The cyclicality of the solar industry.
- Defects or performance problems in our products.
- Our dependence on a small number of outside contract manufacturers.
- Any delays, disruptions, or quality control problems in our manufacturing operations.
- Our dependence on a limited number of suppliers for key components and raw materials in our products to adequately meet anticipated demand.
- Our reliance on distributors and large installers to assist in selling our products.
- Mergers in the solar industry among our current or potential customers.
- Our planned expansion into new geographic markets or new product lines or services.
- Our ability to build our non-solar businesses and manage future growth effectively.
- Our ability to raise the funds necessary to settle conversion of our Convertible Senior Notes or Notes in cash or to repurchase the Notes upon a fundamental change.
- Any unauthorized access to, disclosure, or theft of personal information we gather, store, or use.
- Attempts by third parties, our employees, or our vendors mighty to gain unauthorized access to our network or seek to compromise our products and services.
- Our entry into business engagements with military bodies as our customers.
- Our ability to successfully execute future acquisitions or be effective in integrating such acquisitions.
- Any damage or injury caused by Lithium-Ion used in our battery cells and packs.
- Conditions in Israel that may affect our operations.
- Difficulties in enforcing a judgment of a U.S. court against our officers and directors, to assert U.S. securities laws claims in Israel, or to serve process on our officers and directors.
- The ongoing Covid-19 pandemic.
- Our dependence on ocean transportation to deliver our products in a timely and cost efficient manner.
- Fluctuations in currency exchange rates.
- Issues related to corporate social responsibility

We face risks related to legal, compliance and regulatory matters, including those related to:

- Any reduction, elimination or expiration of government subsidies and economic incentives for on-grid solar electricity.
- Changes to net metering policies.
- Technical and economic barriers to the purchase and use of solar PV systems resulting from current or future regulations.

We face risks related to intellectual property, including those related to:

- Our ability to protect our intellectual property and other proprietary rights.
- Any claims by third parties that we are infringing upon their intellectual property rights.
- Any claims for remuneration or royalties for assigned service invention rights by our employees.
- The impairment of our goodwill or other intangible assets.

We face risks related to the ownership of our common stock, including those related to: Related to the Ownership of Our Common Stock

- Volatility of our stock price.
- Provisions in our certificate of incorporation and by-laws that may have the effect of delaying or preventing a change of control or changes in our management.
- The forum selection clause contained in our certificate of incorporation.
- Our lack of plans to pay any cash dividends on our common stock in the foreseeable future.

The summary risk factors described above should be read together with the text of the full risk factors in the Risk Factors sections and the other information set forth in this Annual Report on Form 10-K, including our consolidated financial statements and the related notes, as well as in other documents that we file with the SEC. The risks summarized above or described in full below are not the only risks that we face. Additional risks and uncertainties not precisely known to us, or that we currently deem to be immaterial may also materially adversely affect our business, financial condition, results of operations and future growth prospects.

Risk Factors

You should carefully consider the risks described below together with the other information set forth in this report, which could materially affect our business, financial condition and future results. The risks described below are not the only risks facing our company. Risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition and operating results.

Risks related to Our Business and Our Industry

We cannot be certain that we will sustain our current level of profitability in the future.

Our revenue and profitability for the year ended December 31, 2020 did not grow as we previously anticipated mainly due to the adverse effects of Covid-19 on demands for our products, and on the global economy in general. In 2021, we experienced an increase in revenues and profitability when compared to the same period in 2020. However, in the future, our revenues from both solar and non-solar business may not grow at the pace we anticipate, or may decline for a number of reasons, many of which are outside our control, including a decline in demand for our products, increased competition, a decrease in the growth of the solar industry, the short term and long term effects of Covid-19 on our industry and business and the recent industry trends including component shortages and supply chain disruptions due to ocean freight capacity, shipping times and port congestions as well as inflationary pressure, or our failure to continue to capitalize on growth opportunities. If we fail to maintain sufficient revenue to support our operations, we may not be able to sustain profitability.

In addition, we expect to incur additional costs and expenses related to the continued development and expansion of our business, including in connection with recent or future acquisitions as well as ongoing marketing and developing our products, development of our own manufacturing facilities, expanding into new product markets and geographies, maintaining and enhancing our research and development operations and hiring additional personnel. We do not know whether our revenues will grow rapidly enough to absorb these costs, or the extent of these expenses or their impact on our results of operations.

The rapidly evolving and competitive nature of the solar industry makes it difficult to evaluate our future prospects. Our entry into other adjacent markets through recent acquisitions is new and highly competitive and it is difficult to evaluate our future in these new markets as well.

The rapidly evolving and competitive nature of the solar industry makes it difficult to evaluate our current business and future prospects. In addition, we have limited insight into emerging trends that may adversely affect our business, financial condition, results of operations and prospects. Our non-solar businesses in adjacent markets, such as storage and e-Mobility are new to us and these are highly competitive markets in which we will need to compete. We have encountered and will continue to encounter risks and difficulties frequently experienced by growing companies in rapidly changing industries, including unpredictable and volatile revenues and increased expenses as our business continues to grow. The viability and demand for our products may be affected by many factors beyond our control, including:

- cost competitiveness, reliability and performance of solar PV systems compared to conventional and non-solar renewable energy sources and products;
- competing new technologies at more competitive prices than those we offer for our products;
- availability and amount of government subsidies and incentives to support the development and deployment of solar energy solutions;
- the extent of deregulation in the electric power industry and broader energy industries to permit broader adoption of solar electricity generation;
- prices of traditional carbon-based energy sources;
- levels of investment by end-users of solar energy products, which tend to decrease when economic growth slows; and
- the emergence, continuance or success of, or increased government support for, other alternative energy generation technologies and products.

If demand for solar energy solutions does not continue to grow or grows at a slower rate than anticipated, our business and results of operations will suffer.

Our revenues are primarily derived from products utilized in solar PV installations. Thus, our future success depends on continued demand for solar energy solutions and the ability of vendors to meet this demand. The solar industry is an evolving industry that has experienced substantial changes in recent years, and we cannot be certain that consumers, businesses, or utilities will adopt solar PV systems as an alternative energy source at levels sufficient to grow our business. If demand for solar energy solutions fails to continue to develop sufficiently, demand for our products will decrease, resulting in an adverse impact on our ability to increase our revenue and grow our business.

The current revenues generated from our e-Mobility business are dependent on orders from a leading automotive manufacturer. The automotive industry is facing significant shortages of components for their assembly and their slowdown in manufacturing could delay orders of our powertrain kits.

Shortages in components in the automotive industry, including semiconductors, due in large part to strong cross-industry demand, have presented challenges and global production disruptions. Many leading automotive manufacturers have announced that these shortages will remain constrained and could extend into 2023. As a result, during 2021, our leading customer announced temporary suspensions of its manufacturing due to component shortages. These suspensions may occur again in 2022 and cause delays of orders for our powertrain units and an accumulation of inventory related to the production of these products, which in turn may have an adverse effect on our revenues, profitability and other financial results from this business.

Additionally, projects in the automotive industry are long term and involve a long qualification process. Our e-Mobility business currently does not have additional substantial projects in the pipeline beyond the project with Stellantis, which was announced in February 2021. Our inability to enter into additional projects may have an adverse effect on our revenues, profitability and other financial results from the e-Mobility business.

A drop in the retail price of electricity derived from the utility grid or from alternative energy sources may harm our business, financial condition, results of operations, and prospects.

Decreases in the retail prices of electricity from the utility grid, or other renewable energy resources, would make the purchase of solar PV systems less economically attractive and would likely lower sales of our products. The price of electricity derived from the utility grid could decrease as a result of:

- construction of a significant number of new power generation plants, including plants utilizing natural gas, nuclear, coal, renewable energy, or other generation technologies;
- relief of transmission constraints that enable local centers to generate energy less expensively;
- reductions in the price of natural gas, or alternative energy resources other than solar;
- utility rate adjustment and customer class cost reallocation;
- energy conservation technologies and public initiatives to reduce electricity consumption;
- development of smart-grid technologies that lower the peak energy requirements of a utility generation facility;
- development of new or lower-cost energy storage technologies that have the ability to reduce a customer’s average cost of electricity by shifting load to off-peak times; and
- development of new energy generation technologies that provide less expensive energy.

Moreover, technological developments in the solar components industry could allow our competitors and their customers to offer electricity at costs lower than those that can be offered by us to our customers, which could result in reduced demand for our products. If the cost of electricity generated by solar PV installations incorporating our systems is high relative to the cost of electricity from other sources, our business, financial condition, and results of operations may be harmed.

An increase in interest rates or tightening of the supply of capital in the global financial markets could make it difficult for end-users to finance the cost of a solar PV system and could reduce the demand for smart energy products and thus demand for our products.

Many end-users depend on financing to fund the initial capital expenditure required to develop, build, or purchase a solar PV system. As a result, an increase in interest rates or a reduction in the supply of project debt financing or tax equity investments, could reduce the number of solar projects that receive financing or otherwise make it difficult for our customers or the end-users to secure the financing necessary to develop, build, purchase, or install a solar PV system on favorable terms, or at all, and thus lower demand for our products which could limit our growth or reduce our net sales. In addition, we believe that a significant percentage of end-users install solar PV systems as an investment, funding the initial capital expenditure through financing. An increase in interest rates could lower such end-user’s return on investment on a solar PV system, increase equity return requirements or make alternative investments more attractive relative to solar PV systems, and, in each case, could cause such end-users to seek alternative investments. Furthermore, the continuous effects of Covid-19 on the economy may detrimentally influence the end-users' willingness to invest in solar PV systems, both due to end-users’ economic uncertainty as well as the market’s unwillingness to extend favorable financial terms to the end-users.

The market for our products is highly competitive and we expect to face increased competition as new and existing competitors introduce power optimizers, inverters, solar PV system monitoring and other smart energy products, which could negatively affect our results of operations and market share.

The market for solar PV solutions is highly competitive. We principally compete with traditional inverter manufacturers as well as microinverter manufacturers. Currently, our DC optimized inverter system competes with products from traditional inverter manufacturers, microinverter manufacturers, as well as emerging technology companies offering alternative MLPE products. Over the past few years, several new entrants to the inverter and MLPE market, including low-cost Asian manufacturers, have announced plans to ship or have already shipped products in markets in which we sell our products, including, with respect to sales in the United States, Australia and in Europe. We expect competition to intensify as new and existing competitors enter the market. In addition, there are several new entrants that are proposing solution to the rapid shutdown functionality which has become a regulatory requirement for PV rooftop solar systems in the United States. If these new technologies are successful in offering a price competitive and technological attractive solution to the residential solar PV market, this could make it more difficult for us to maintain market share.

Several of our existing and potential competitors have the financial resources to offer competitive products at aggressive or below-market pricing levels, which could cause us to lose sales or market share or require us to lower prices for our products in order to compete effectively. If we have to reduce our prices by more than we anticipated, or if we are unable to offset any future reductions in our average selling prices by increasing our sales volume, reducing our costs and expenses or introducing new products, our revenues and gross profit would suffer.

In addition, competitors may be able to develop new products more quickly than us, may partner with other competitors to provide combined technologies and competing solutions and may be able to develop products that are more reliable or that provide more functionality than ours.

Developments in alternative technologies or improvements in distributed solar energy generation may have a material adverse effect on demand for our offerings.

Significant developments in alternative technologies, such as advances in other forms of distributed solar PV power generation, storage solutions, such as batteries, the widespread use or adoption of fuel cells for residential or commercial properties or improvements in other forms of centralized power production, may have a material adverse effect on our business and prospects. Any failure by us to adopt new or enhanced technologies or processes, or to react to changes in existing technologies, could result in product obsolescence, the loss of competitiveness of our products, decreased revenue and a loss of market share to competitors.

The solar industry has historically been cyclical and experienced periodic downturns.

Our future success partly depends on continued demand for solar PV systems in the end-markets we serve, including the residential and commercial sectors in the United States and Europe. The solar industry has historically been cyclical and has experienced periodic downturns which may affect demand for our products. The solar industry has undergone challenging business conditions in past years, including downward pricing pressure for PV modules, mainly as a result of overproduction, and reductions in applicable governmental subsidies, contributing to demand decreases. Therefore, there is no assurance that the solar industry will not suffer significant downturns in the future, which will adversely affect demand for our solar products and our results of operations.

Defects or performance problems in our products could result in loss of customers, reputational damage, and decreased revenue, and we may face warranty, indemnity, and product liability claims arising from defective products.

Although our products meet our stringent quality requirements, they may contain undetected errors or defects, especially when first introduced or when new generations are released. Errors, defects, or poor performance can arise due to design flaws, defects in raw materials or components or manufacturing difficulties, which can affect both the quality and the yield of the product. Any actual or perceived errors, defects, or poor performance in our products could result in the replacement or recall of our products or components thereof, shipment delays, rejection of our products, damage to our reputation, lost revenue, diversion of our personnel from our product development efforts, and increases in customer service and support costs, all of which could have a material adverse effect on our business, financial condition, and results of operations.

Furthermore, defective components may give rise to warranty, indemnity, or product liability claims against us that exceed any revenue or profit we receive from the affected products. In most cases, we offer a minimum 12-year limited warranty for our inverters, extendable to twenty-five years for an additional cost, a 25-year limited warranty for our power optimizers and a 10-year limited warranty for our residential energy bank battery. Our limited warranties cover defects in materials and workmanship of our products under normal use and service conditions; therefore, we bear the risk of warranty claims long after we have sold products and recognized revenue. While we do have accrued reserves for warranty claims, our estimated warranty costs for previously sold products may change to the extent future products are not compatible with earlier generation products under warranty. Our warranty accruals are based on our assumptions and we do not have a long history of making such assumptions. As a result, these assumptions could prove to be materially different from the actual performance of our systems, causing us to incur substantial unanticipated expenses to repair or replace defective products in the future or to compensate customers for defective products. Our failure to accurately predict future claims could result in unexpected volatility in, and have a material adverse effect on, our financial condition. In particular, our residential energy hub battery is new on the market and we do not have the experience in servicing this product yet.

If one of our products were to cause injury to someone or cause property damage, then we could be exposed to product liability claims and lawsuits which could result in significant costs and liabilities if damages are awarded against us. Further, any product liability claim we face could be expensive to defend and could divert management’s attention. The successful assertion of a product liability claim against us could result in potentially significant monetary damages, penalties or fines, subject us to adverse publicity, damage our reputation and competitive position, and adversely affect sales of our products. In addition, product liability claims, injuries, defects, or other problems experienced by other companies in the residential solar industry could lead to unfavorable market conditions for the industry as a whole.

We depend upon a small number of outside contract manufacturers. Our operations could be disrupted if we encounter problems with these contract manufacturers.

While we are manufacturing a small portion of our products in Israel, we still heavily rely upon our contract manufacturers to manufacture most of our products. We mainly rely on two contract manufacturers. Any change in our relationship or contractual terms with our contract manufacturers, or changes in our contract manufacturers’ ability to comply with their contractual obligations could adversely affect our financial condition and results of operations. Our reliance on a small number of contract manufacturers makes us vulnerable to possible capacity constraints and reduced control over component availability, delivery schedules, manufacturing yields and costs. Even though we have commenced manufacturing in our facility in Israel, the expected production volumes will not be sufficient to relieve our significant dependence on our contract manufacturers. In addition, we remain heavily dependent on suppliers of the components needed for our manufacturing.

The revenues that our contract manufacturers generate from our orders represent a relatively small percentage of their overall revenues. Therefore, fulfilling our orders may not be considered a priority in the event of constrained ability to fulfill all of their customer obligations in a timely manner, especially considering restrictions imposed by Covid-19. In addition, the facilities in which our products are manufactured are located outside of the U.S., currently in China, Vietnam, Israel, Hungary and most recently, Mexico, where the ramping up process has recently begun. The location of these facilities outside of key markets such as the U.S. increases shipping time, thereby causing a long lead time between manufacturing and delivery. In addition, for approximately twelve weeks in the third quarter of 2021, our manufacturing facility in Vietnam was shut down due to government imposed Covid-19 related lockdowns.

If either of our contract manufacturers were unable or unwilling to manufacture our products in required volumes and at high quality levels or continue to supply under existing terms, we would have to identify, qualify, and select acceptable alternative contract manufacturers, which may not be available to us when needed or may be unable to satisfy our quality or production requirements on commercially reasonable terms. Any significant interruption in manufacturing would require us to reduce our supply of products to our customers or increase our shipping costs to make up for delays in manufacturing, which in turn could reduce our revenues, harm our relationships with our customers, subject us to liquidated damages for late deliveries, and damage our reputation with local installers and potential end-users, all of which will cause us to forego potential revenue opportunities. Further, the ramp of a new contract manufacturer is time consuming and draining on the resources of our operations team.

We may experience delays, disruptions, or quality control problems in our manufacturing operations.

Our product development, manufacturing, and testing processes are complex and require significant technological and production process expertise involving several precise steps from design to production. Any change in our processes could cause one or more production errors, requiring a temporary suspension or delay in our production line until the errors can be identified and properly rectified. This may occur particularly as we introduce new products, modify our engineering and production techniques, and/or expand our capacity. In addition, our failure to maintain appropriate quality assurance processes could result in increased product failures, loss of customers, increased warranty reserve, increased costs and delays, all of which could have a material adverse effect on our business, financial condition, and results of operations.

We depend on a limited number of suppliers for key components and raw materials in our products to adequately meet anticipated demand. Due to the limited number of such suppliers, any changes or shortages in raw materials or key components we use could result in sales delays, higher costs associated with air shipments, cancellations, and loss of market share.

We depend on limited or single source suppliers for certain key components and raw materials used to manufacture our products, making us susceptible to quality issues, shortages, and price changes. Any of these limited or single source suppliers could stop supplying, or offering at commercially reasonable prices, our components or raw materials, cease operations or be acquired by, or enter into exclusive arrangements with our competitors. Because there are a few suppliers of raw materials used to manufacture our products, it may be difficult to timely identify and/or qualify alternate suppliers on commercially reasonable terms; therefore, our ability to satisfy customer demand may be adversely affected. Transitioning to a new supplier or redesigning a product to accommodate a new component manufacturer would result in additional costs and delays that could harm our business or financial performance.

Managing our supplier and contractor relationships is particularly difficult when we are introducing new products. For example, as we began to ramp assembly and production of powertrain kits for the automotive industry, we became heavily reliant on new third-party suppliers that needed to be approved through rigorous testing and validation processes for use in our supply chain. Once selected, it is time consuming and costly to replace such vendors. The same is true for our recently introduced residential energy hub battery for production of which we rely on a single source for supply of the lithium ion cells . Any delay or shortage of supply or inability to deliver the components to our manufacturing facilities could harm our business or financial performance.

Any interruption in the supply of limited source components or raw materials for our products would adversely affect our ability to meet scheduled product deliveries to our customers and could result in lost revenue or higher expenses associated with increased air shipments required to meet customer demand in a timely manner and would harm our business. For example, we continue to experience raw material shortages due to increased lead time which may affect our ability to timely receive certain components within the previously expected lead times. These shortages may result in a delay in sales, higher costs associated with air shipments, cancellations of orders by customers,liquidated damages for late deliveries and loss of market share.

We rely on distributors and large installers to assist in selling our products, and the failure of these customers to perform as expected could reduce our future revenues.

Our customers’ decisions to purchase our products are influenced by several factors outside of our control. The agreements we have with some of our largest customers do not have long-term purchase commitments and are generally cancellable by either party after a relatively short notice period. The loss of, or events affecting, one or more of these customers could have a material adverse effect on our business, financial condition, and results of operations (see Note 2.x to our consolidated financial statements).

In addition, we do not have exclusive arrangements with our third-party distributors and large installers, many of which also market and sell products from our competitors. These distributors and large installers may terminate their relationships with us at any time and with little or no notice. Further, these distributors and large installers may fail to devote resources necessary to sell our products at the prices, in the volumes, and within the time frames that we expect, or may focus their marketing and sales efforts on products of our competitors. Termination of agreements with current distributors or large installers, failure by these distributors or large installers to perform as expected, or failure by us to cultivate new distributor or large installer relationships, could hinder our ability to expand our operations and harm our revenue and results of operations.

Mergers in the solar industry among our current or potential customers may adversely affect our competitive position.

There has been an increase in consolidation activities among distributors, large installers, and other strategic partners in the solar industry. For example, in October 2020, Sunrun, a leading provider of residential solar, battery storage and energy services, acquired Vivint Solar. If this consolidation continues, it will further increase our reliance on a small number of customers for a significant portion of our sales and may negatively impact our competitive position in the solar market.

Our planned expansion into new geographic markets or new product lines or services could subject us to additional business, financial, and competitive risks.

We have in the past, and may in the future, evaluate opportunities to expand into new geographic markets and introduce new product offerings and services. We also may from time to time engage in acquisitions of businesses or product lines with the potential to strengthen and expand our market position, technological capabilities, or provide synergy opportunities. For example, we intend to continue to introduce new products targeted at large commercial and utility-scale installations and to continue to expand into other international markets.

Our successful operation in these new markets, or any acquired business, will depend on a number of factors, including our ability to develop solutions to address the requirements of the large commercial and utility-scale solar PV markets, timely certification of new products for large commercial and utility-scale solar PV installations, acceptance of power optimizers in solar PV markets in which they have not traditionally been used, and our ability to manage increased manufacturing capacity and production and to identify and integrate any acquired businesses.

Further, we expect these new solar PV markets and additional markets we have entered, or may enter, into to have different characteristics from the markets in which we currently sell our products. Our success will depend on our ability to properly adapt to these differences, which include differing regulatory requirements, such as tax laws, trade laws, labor regulations, tariffs, export quotas, customs duties, or other trade restrictions, limited or unfavorable intellectual property protection, international, political or economic conditions, restrictions on the repatriation of earnings, longer sales cycles, warranty expectations, product return policies and cost, and performance and compatibility requirements. In addition, expanding into new geographic markets will increase our exposure to existing risks, such as fluctuations in the value of foreign currencies and increased expenses in complying with U.S. and foreign laws, regulations and trade standards, including the Foreign Corrupt Practices Act of 1977, as amended (the “FCPA”).

Failure to successfully develop and introduce these new products, successfully integrate acquired businesses, or to otherwise manage the risks and challenges associated with our potential expansion into new product and geographic markets, could adversely affect our revenues and our ability to sustain profitability.

If we fail to build our non-solar businesses and future growth effectively, we may be unable to execute our business plan, maintain high levels of customer service, or adequately address competitive challenges.

We have experienced significant growth in recent periods with our annual product sales growing rapidly from approximately 152,500 inverters and approximately 3.6 million power optimizers in the fiscal year ending June 30, 2015, to annual product sales exceeding 788,411 inverters and 18.6 million power optimizers in the year ended December 31, 2021. We intend to continue to expand our business significantly within existing and new markets. This growth has placed, and any future growth may place, a significant strain on our management, operational, and financial infrastructure. In particular, we will be required to expand, train, and manage our growing employee base and scale and otherwise improve our IT infrastructure in tandem with such headcount growth. Our management will also be required to maintain and expand our relationships with customers, suppliers, and other third parties and attract new customers and suppliers, as well as manage multiple geographic locations.

Our current and planned operations, personnel, customer support, IT, information systems, and other systems and procedures might be inadequate to support our future growth and may require us to make additional unanticipated investment in our infrastructure. Our success and ability to further scale our business will depend, in part, on our ability to manage these changes in an efficient manner. If we cannot manage our growth, we may be unable to take advantage of market opportunities, execute our business plans or strategies, or respond to competitive pressures. This could also result in declines in quality or customer satisfaction, increased costs, difficulties in introducing new offerings, or other operational difficulties. Any failure to effectively manage growth could adversely impact our business and reputation.

Conversely, the global pandemic and resulting economic downturn in many regions require our ability to be flexible and decrease expenses where growth has slowed down. Our ability to timely react to market conditions is not always in our control and any inability to do so could also adversely impact our business.

We may not have the ability to raise the funds necessary to settle conversion of our Convertible Senior Notes or Notes in cash or to repurchase the Notes upon a fundamental change, and our future debt may contain limitations on our ability to pay cash upon conversion of the Notes or to repurchase the Notes.

Holders of the Notes have the right to require us to repurchase all or a portion of their Notes upon the occurrence of a fundamental change (as defined in the Indentures governing their respective Notes) at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus accrued and unpaid special interest, if any. In addition, upon conversion of the Notes, unless we elect to deliver solely shares of our common stock to settle such conversion (other than paying cash in lieu of delivering any fractional share), we will be required to make cash payments in respect of the Notes being converted. We may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of Notes surrendered or Notes being converted. In addition, our ability to repurchase the Notes or to pay cash upon conversions of the Notes may be limited by law, regulatory authority or agreements governing our future indebtedness. Our failure to repurchase Notes at a time when the repurchase is required by the indenture governing such Notes or to pay cash upon conversion of the Notes as required by such indenture would constitute a default under such indenture. A default under the indenture governing the Notes or the fundamental change itself could also lead to a default under agreements governing our future indebtedness. If the payment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the Notes or make cash payments upon conversion of the Notes.

Any unauthorized access to, disclosure, or theft of personal information we gather, store, or use could harm our reputation and subject us to claims or litigation.

Our business and operations may be impacted by data security breaches and cybersecurity attacks, including attempts to gain unauthorized access to confidential data. We receive, store, and use certain personal information of our employees, customers, and the end-users of our customers' solar PV systems. We take steps to protect the security, integrity, and confidentiality of the personal information we process; however, we have been subject to cybersecurity attacks and other information technology system disruptions in the past and, there is no guarantee that inadvertent or unauthorized access, use or disclosure will not occur despite our efforts. Because techniques used to obtain unauthorized access or sabotage systems change frequently and generally are not identified until after they are launched against a target, we and our suppliers or vendors may be unable to anticipate these techniques or to implement adequate preventative or mitigatory measures.

Unauthorized use or disclosure of, or access to, any personal information maintained by us or on our behalf, whether through breach of our systems, breach of the systems of our suppliers or vendors by an unauthorized party, or through employee or contractor error, theft or misuse, or otherwise, could harm our business, particularly in light of the European General Data Protection Regulation, the California Consumer Privacy Act, and China Personal Information Protection Law (PIP) which came into effect November 1, 2021. If any such unauthorized use or disclosure of, or access to, such personal information were to occur, our operations could be seriously disrupted and we could be subject to demands, claims and litigation by private parties, and investigations, related actions, and penalties by regulatory authorities. In addition, we could incur significant costs in notifying affected persons and entities and otherwise complying with the multitude of foreign, federal, state, and local laws and regulations relating to the unauthorized access to, or use or disclosure of, personal information. Finally, any perceived or actual unauthorized access to, or use or disclosure of, such information could harm our reputation, substantially impair our ability to attract and retain customers, and have an adverse impact on our business, financial condition and results of operations.

Third parties, our employees, or our vendors might gain unauthorized access to our network or seek to compromise our products and services.

Occasionally, we face attempts by others, including our own employees or vendors, to access our networks, to gain unauthorized access through the Internet, introduce malicious software to our information technology (IT) systems, or corrupt the processes of hardware and software products that we manufacture and services we provide. We or our products may be a target of computer hackers, organizations or malicious attackers who attempt to gain access to our network or data centers or those of our customers or end users; steal proprietary information related to our business, products, employees, and customers; or interrupt our systems or those of our customers or others. Occasionally, we encounter intrusions or attempts at gaining unauthorized access to our network. To date, none have resulted in any material adverse impact to our business or operations, although there can be no guarantee that such impacts will not be material in the future. While we seek to detect and investigate all unauthorized attempts and attacks against our network and products, and to prevent their recurrence where practicable, we remain potentially vulnerable to additional known or unknown threats. In addition to intentional third-party cyber-security breaches, the integrity and confidentiality of Company and customer data may be compromised as a result of human error, product defects, or technological failures. Cyber-security breaches, whether successful or unsuccessful, and other IT system interruptions, including those resulting from human error and technological failures, could subject us to significant costs arising from , among others, rebuilding internal systems, reduced inventory value, providing modifications to our products and services, defending against litigation, responding to official inquiries or actions, paying damages, or taking other remedial steps with respect to third parties.

Our entry into business engagements with military bodies as our customers in the lithium-ion battery and energy storage business embodies a risk for potentially large-scale and uncapped liability.

As a result of the acquisition of Kokam, we sell a small portion of our products to customers who integrate our storage systems or cells and then sell these products to military customers. Our sales to military customers often involve standard form contracts, which may not be subject to negotiation. In particular, certain of these contracts involve unlimited damages provisions that could result in large-scale liabilities.

Our business could be materially adversely affected as a result of the risks associated with acquisitions and investments. In particular, we may not succeed in future acquisitions or be effective in integrating such acquisitions.

As part of our growth strategy, we have made a number of acquisitions, and may continue to make acquisitions and investments in the future. We frequently evaluate the tactical or strategic opportunities available related to complementary businesses, products or technologies. There can be no assurance that we will be successful in making additional acquisitions. Even if we are successful in making additional acquisitions, integrating an acquired company's business into ours or investing in new technologies may result in unforeseen operating difficulties and large expenditures and absorb significant management attention that would otherwise be available for the ongoing development of our business, both of which may result in the loss of key customers or personnel and expose us to unanticipated liabilities. Further, we may not be able to retain the key employees that may be necessary to operate the businesses we acquire and we may not be able to attract, in a timely manner, new skilled employees and management to replace them.

We may not be able to consummate acquisitions or investments that we have identified as crucial to the implementation of our strategy for other commercial or economic reasons. Further, we may not be able to obtain the necessary regulatory approvals, including those of competition authorities and foreign investment authorities, in countries where we seek to consummate acquisitions or make investments. For those and other reasons, we may ultimately fail to consummate an acquisition, even if we announce the intended acquisition.

Lithium-Ion used in our battery cells and packs can potentially catch fire or vent smoke and cause damage or injury.

The battery cells and packs produced by our subsidiary, Kokam, and the SolarEdge energy bank battery which launched during the second quarter of 2021, make use of lithium-ion cells. We regularly test our products and take safety measures when manufacturing, selling and installing battery cells and packs. However, due to the high energy density of lithium-ion cells, mishandling, inappropriate storage or delivery, non-compliance with safety instructions or field failures can potentially cause a battery cell to rapidly release its stored energy, which may in turn cause a thermal event that can ignite nearby materials, including other lithium-ion cells. As the use of lithium-ion batteries becomes more widespread, these events may occur more often, causing damage to property, injury, lawsuits and adverse publicity, which may adversely affect our reputation, results of operations or financial condition.

Conditions in Israel affect our operations and may limit our ability to develop, produce and sell our products.

Our headquarters and research and development center are located in Israel. Accordingly, political, economic, and military conditions in Israel directly affect us. Israel has been involved in a number of armed conflicts and is the target of terrorist activity, including threats from Hezbollah militants in Lebanon, Iranian militia in Syria, and others. Ongoing state of hostility, varying in degree such as rocket fire from the Gaza Strip, has occurred on an irregular basis, disrupting day-to-day civilian activity and negatively affecting business conditions. We cannot predict whether or when such armed conflicts or attacks may occur or the extent to which such events may impact us. Any future armed conflict, political instability or violence in the region may impede our ability to manage our business effectively, operate our manufacturing plant in northern Israel, engage in research and development, or otherwise adversely affect our business or operations. In the event of war, we may be forced to cease operations, which may cause delays in the distribution and sale of our products. Some of our directors, executive officers, and employees in Israel are obligated to perform annual reserve duty in the Israeli military and are subject to being called for additional active duty under emergency circumstances. In the event that our principal executive office is damaged as a result of hostile action, or hostilities otherwise disrupting the ongoing operation of our offices, our ability to operate could be materially adversely affected.

Additionally, several countries principally in the Middle East, restrict doing business with Israeli companies, and additional countries and groups may impose similar restrictions if hostilities in Israel or political instability in the region continue or increase. If instability in neighboring states results in the establishment of fundamentalist Islamic regimes or governments more hostile to Israel, or if Egypt, Turkey, or Jordan abrogates its respective peace treaty with Israel, Israel could be subject to additional political, economic, and military confines, and our operations and ability to sell our products to countries in the region could be materially adversely affected.

Any hostilities involving Israel or the interruption or curtailment of trade between Israel and its present trading partners, or significant downturn in the economic or financial condition of Israel, could have a material adverse effect on our business, financial condition, and results of operations.

The tax benefits that are available to us under Israeli law require us to meet various conditions and may be terminated or reduced in the future, which could increase our costs and taxes.

Our Israeli subsidiary was eligible for certain tax benefits provided to “Benefited Enterprises” under the Israeli Law for the Encouragement of Capital Investments, 1959 (the “Investments Law”). Beginning in January 2019, and with respect to its taxable results from 2019 onwards, our Israeli subsidiary further elected to apply the terms of the Investments Law as per “Preferred Enterprise” (“PE”) or “Preferred Technological Enterprise” (“PTE”). In order to remain eligible for the tax benefits for “Benefited Enterprises” with respect to our Israeli subsidiary’s taxable results until 2018 and with respect to its taxable results from 2019 for PE or PTE, we must continue to meet certain conditions stipulated in the Investments Law and its regulations, as amended. If these tax benefits are reduced, cancelled, or discontinued, our Israeli taxable income would be subject to regular Israeli corporate tax rates and we may be required to refund any tax benefits that we have already received, plus interest and penalties thereon. The statutory corporate tax rate for Israeli companies is 23% as of January 1, 2018 and onward. Additionally, if we increase our activities outside of Israel through acquisitions or otherwise through our Israeli subsidiary, our existing or expanded activities might not be eligible for inclusion in existing or future Israeli tax benefit programs. The Israeli government may furthermore independently determine to reduce, phase out, or eliminate entirely the benefit programs under the Investments Law, regardless of whether we then qualify for benefits under those programs at the time, which would also adversely affect our global tax rate and our results of operations.

It may be difficult to enforce a judgment of a U.S. court against our officers and directors, to assert U.S. securities laws claims in Israel, or to serve process on our officers and directors.

Many of our directors and executive officers, their assets, and most of our assets are located outside of the U.S. Consequently, a judgment obtained against any of these persons, including a judgment based on the civil liability provisions of the U.S. federal securities laws, may not be collectible in the U.S. It also may be difficult to effect service of process on these persons in the U.S. or to assert U.S. securities law claims in original actions instituted in Israel. Israeli courts may refuse to hear a claim based on an alleged violation of U.S. securities laws on the grounds of *forum non conveniens*. In addition, even if an Israeli court hears a claim, it may determine that Israeli law and not U.S. law is applicable to the claim. If U.S. law is found to be applicable, the content of applicable U.S. law must be proven as a fact by expert witnesses, which can be a lengthy and costly process. Further, an Israeli court may not enforce a judgment awarded by a U.S. or other non-Israeli court. Certain matters of procedure will also be governed by Israeli law. There is little binding case law in Israel that addresses these matters. As a result of the difficulty associated with enforcing a judgment against any of these persons in Israel, judgment against many of our directors and executive officers may be unachievable or unenforceable.

The ongoing Covid-19 pandemic, and global measures taken in response thereto have adversely impacted, and may continue to adversely impact, our operations and financial results.

The Covid-19 pandemic has had, and may continue to have, a material adverse impact on our supply chain, operations, and initially on customer demand. As a result of the Covid-19 pandemic, governmental authorities worldwide have imposed mandatory closures, stay-at-home orders, and social distancing protocols that significantly limit the movement of people, goods, and services or otherwise restrict normal business operations or consumption patterns. Our compliance with these measures has disrupted, and may continue to disrupt, our business and operations, as well as that of our key customers and suppliers. Additionally, to support the health and well-being of our employees, our workforce has spent a significant amount of time working remotely which has impacted our day-to-day operations, our ability to meet customers demand and create future sales and business opportunities. The Covid-19 pandemic has resulted in slower growth and demand for our products and may continue to impact our revenues in the following quarters, mainly contingent on the duration of the global economic downturn. In addition, since the outbreak and the restrictions on travel, our ability to travel to customers, manufacturing facilities and to suppliers has been limited and our marketing activities, exhibitions and shows have also been significantly reduced, or have been held virtually. We also have had disruption to our manufacturing in Vietnam during the third quarter of 2021 which led to a reduction of our supply in the third and fourth quarter 2021.

The full extent the effects Covid-19 will have on our business depends on numerous evolving factors that we may not be able to currently accurately predict, including: the duration and scope of the pandemic; governmental, business and individual responses to the pandemic; the effect on our customers and customer demand for our products, disruptions or restrictions on our employees' ability to work and travel, availability and long-term effectiveness of Covid-19 vaccination, especially in light of its recent, more contagious mutation.

More generally, the Covid-19 pandemic raises the possibility of an extended global economic downturn and has caused volatility in financial markets, which may continue to adversely affect demand for our products and could adversely affect our results and financial condition in subsequent quarters. For example, some of our customers could potentially experience financial difficulties, which in turn could hinder us in collecting receivables as well as cause a decrease in the demand for our products which could negatively affect our revenues. Additionally, some of our suppliers may experience delivery delays or financial difficulties, resulting in supply constraints and increased costs or delays to our productions. Furthermore, we may experience delays in timely delivery of our products to our customers, exposing us to cancellations of orders and/or potential liquidated damages resulting from our inability to timely delivery our products.

The unprecedented and continuously evolving nature of Covid-19, other pandemics or epidemics, could also have the effect of amplifying many of the other risks described in this Item 1A, *Risk Factors*.

We are dependent on ocean transportation to deliver our products in a timely and cost efficient manner. If we are unable to use ocean transportation to deliver our products, our business and financial condition could be materially and adversely impacted.

We rely on ocean transportation for the delivery of most of our products to our customers, and when unavailable, incompatible with customer delivery time requirements, or when we are unable to accommodate accelerated delivery times due to growing customer volume demands, we rely on alternative, more expensive air transportation. Our ability to deliver our products via ocean transportation could be adversely impacted by shortages in available cargo capacity, changes by carriers and transportation companies in policies and practices, such as scheduling, pricing, payment terms and frequency of service or increases in the cost of fuel, taxes and labor, disruptions to ports and other shipping facilities as a result of the Covid-19 or other epidemics, and other factors not within our control. If we are unable to use ocean transportation and are required to substitute more expensive air transportation, our financial condition and results of operations could be materially and adversely impacted.

In the year ended December 31, 2021, we experienced and continue to experience an increase in the cost of goods sold due to an increase in shipping rates that resulted from a reduction in ocean freight capacity, the accumulation of containers in the U.S and Europe that were not returned to Asia and the reduction in the availability of air freight that increased the demand for ocean freight. We also experienced and expect to continue to experience disruptions to our logistics supply chain caused by constraints in the global transportation system including limited availability of local ground transportation coupled with congestion in ports and borders.

The factors discussed above, caused transit time to almost double in 2021 compared to pre-pandemic transit time. In the second half of 2021, the Chinese rail company, which was routinely used by the us to ship products out of China, cancelled allocations of containers for shipments from China to Europe. In the fourth quarter of 2021, trucks carrying our products were stuck between the borders of Kazakhstan, Mongolia and China when such borders closed due to governmental mandates related to Covid-19. We also experienced congestion in other borders, such as the Vietnam border, which was closed periodically in 2021 due to Covid-19 governmental mandates. Even when borders were opened, there was a severe backlog of trucks waiting to cross the border which created further delays. There is no assurance that these delays and increased costs in goods sold will not continue in 2022.

Fluctuations in currency exchange rates may negatively impact our financial condition and results of operations.

Although our financial results are reported in U.S. dollars, 54.3% of our revenues in the year ended December 31, 2021 were generated in currencies other than the U.S. Dollar. In addition, a significant portion of our operating expenses are accrued in New Israeli Shekels (primarily related to payroll), the Euro and,to a lesser extent, the South Korean Won (“KRW”) and other currencies. As detailed in the Foreign Currency Exchange Risk under Item 7A -Quantitative and Qualitative Disclosures About Market Risk, our profitability is affected by movements of the U.S. dollar against the Euro, and, to a lesser extent, the New Israeli Shekel, KRW and other currencies in which we generate revenues, incur expenses, and maintain cash balances. Foreign currency fluctuations may also affect the prices of our products which are denominated primarily in U.S. dollars. If there is a devaluation of a particular currency, the prices of our products will increase relative to the local currency and may be less competitive. Despite our efforts to minimize foreign currency risks, primarily by maintaining cash balances in New Israeli Shekels, significant long-term fluctuations in relative currency values, in particular a significant change in the relative values of the Euro and, New Israeli Shekel, KRW and other currencies, against the U.S. dollar could have an adverse effect on our profitability and financial condition.

Occasionally, we may enter into derivative financial instruments to hedge the exchange rates impacts on our assets and liabilities denominated in Israeli Shekels, Euro, KRW and other currencies.

Our hedging activities may also contribute to increased losses as a result of volatility in foreign currency markets. If foreign exchange currency markets continue to be volatile, such fluctuations in foreign currency exchange rates could materially and adversely affect our profit margins and results of operations in future periods, and may make it difficult to hedge our foreign currency exposures effectively.

We are subject to risks related to corporate social responsibility.

We are facing increasing scrutiny related to our environmental, social and governance (“ESG”) practices and requested disclosures by institutional and individual investors who are increasingly using ESG screening criteria in making investment decisions. Our disclosures on these matters or a failure to satisfy evolving stakeholder expectations for ESG practices and reporting may potentially harm our reputation and impact relationships with investors. Certain market participants including major institutional investors use third-party benchmarks or scores to measure our ESG practices in making investment decisions. Furthermore,some of our customers and suppliers evaluate our ESG practices or request that we adopt certain ESG policies as a condition of awarding contracts. In addition, our failure or perceived failure to pursue or fulfill our goals, targets and objectives or to satisfy various reporting standards within the timelines we announce, or at all, could expose us to government enforced actions and/or private litigation. As ESG best-practices, reporting standards and disclosure requirements continue to develop, we may incur increasing costs related to ESG monitoring and reporting.

Risks Related to Legal, Compliance and Regulations

The reduction, elimination or expiration of government subsidies and economic incentives for on-grid solar electricity applications could reduce demand for solar PV systems and harm our business.

Federal, state, local and foreign government bodies provide incentives to promote solar electricity in the form of rebates, tax credits or exemptions and other financial incentives. The market for on-grid applications, where solar power is used to supplement a customer's electricity purchased from the utility network or sold to a utility under tariff, often depends in large part on the availability and size of government and economic incentives. Because our customers' sales are typically into the on-grid market, the reduction, elimination or expiration of government subsidies and incentives for on-grid solar electricity may negatively affect the desirability of solar electricity and could harm or halt the growth of the solar electricity industry and our business. For example, in 2015 the U.S. congress passed a multi-year extension to the solar Investment Tax Credit (ITC), such extension helped grow the U.S. solar market. As of January 1, 2021, the ITC is reduced from 30 percent to 26 percent for both residential and commercial projects and is expected to reach 10 percent for commercial projects in 2024. The reduction in the ITC could reduce the demand for solar energy solutions in the U.S. which would have an adverse impact on our business, financial condition, and results of operations. Furthermore, due to the continued economic downturn from Covid-19, many of the institutions utilizing ITC may significantly pull back or no longer have the ability to invest, meaning that financing for solar projects may become seriously diminished.

In general subsidies and incentives may expire on a particular date, end when the allocated funding is reduced or terminated due to, *inter alia*, legal challenges, adoption of new statutes or regulations or the passage of time, they often occur without warning.

In addition, several jurisdictions have adopted renewable portfolio standards mandating that a certain portion of electricity delivered by utilities to customers come from a set of eligible renewable energy resources, such as solar, by a certain compliance date. Under some programs, a utility can receive a "credit" for renewable energy produced by a third party by either purchasing the electricity directly from the producer or paying a fee to obtain the right to renewable energy generated but used or sold by the generator. A renewable energy credit allows the utility to add this electricity to its renewable portfolio requirement without actually expending the capital for generating facilities. However, there can be no assurances that such policies will continue. Reduction or elimination of renewable portfolio standards or successful efforts to meet current standards could harm or halt the growth of the solar PV industry and our business.

Changes to net metering policies may reduce demand for electricity from solar PV systems and harm our business.

Our business benefits from favorable net metering policies in most U.S. states and some European countries, that allow a solar PV system owner to pay his or her electric utility only for power usage net of production from the solar PV system. System owners receive credit for the energy that the solar installation generates to offset energy usage at times when the solar installation is not generating energy. Under a net metering program, the customer typically pays for the net energy used or receives a credit against future bills if more energy is produced than consumed.

Most U.S. states have adopted some form of net metering. Yet, net metering programs have recently come under regulatory scrutiny in some U.S. states due to allegations that net metering policies inequitably shift costs onto non-solar ratepayers by allowing solar ratepayers to sell electricity at rates that are too high for utilities to recoup their fixed costs. For example, in 2019, Louisiana Public Service Commissions adopted net metering policies aiming at lowering the solar customers' savings. In December 2021, the California Public Utilities Commission proposed lowering current net energy metering tariffs in addition to imposing a new grid-connection fee on new rooftop solar users. We cannot assure you that these programs will not be significantly modified going forward.

If the value of the credit that customers receive for net metering is reduced, end-users may be unable to recognize the current level of cost savings associated with net metering. The absence of favorable net metering policies or of net metering entirely, or the imposition of new charges that only or disproportionately affect end-users that use net metering would significantly limit demand for our products and could have a material adverse effect on our business, financial condition, results of operations and future growth.

Existing electric utility industry regulations, and changes to regulations, may present technical, regulatory, and economic barriers to the purchase and use of solar PV systems that may significantly reduce demand for our products or harm our ability to compete. In addition, determinations of various regulatory bodies regarding lack of compliance with certifications or other regulatory requirements could harm our ability to sell our products in certain countries.

Federal, state, local and foreign government regulations and policies concerning the electric utility industry, and internal policies and regulations promulgated by electric utilities, heavily influence the market for electricity generation products and services, and could deter purchases of solar PV systems sold by our customers, significantly reducing the potential demand for our products. For example, utilities commonly charge fees to larger, industrial customers for disconnecting from the electric grid or for having the capacity to use power from the electric grid for back-up purposes. These fees could increase the cost to use solar PV systems sold by our customers and make them less desirable, thereby harming our business, prospects, financial condition and results of operations. In addition, depending on the region, electricity generated by solar PV systems competes most effectively with expensive peak-hour electricity from the electric grid, rather than the less expensive average price of electricity. Modifications to the utilities' peak hour pricing policies or rate design, such as to a flat rate, could require the price of solar PV systems and their component parts to be lower in order to compete with the price of electricity from the electric grid.

Changes in current laws or regulations applicable to us or the imposition of new laws and regulations in the U.S., Europe, or other jurisdictions in which we do business could have a material adverse effect on our business, financial condition and results of operations. Any changes to government or internal utility regulations and policies that favor electric utilities could reduce the competitiveness of solar PV systems sold by our customers, and causing a significant reduction in demand for our products and services. In addition, changes in our products or changes in export and import laws and implementing regulations may delay the introduction of new products in international markets, prevent our customers from deploying our products internationally or, in some cases, prevent the export or import of our products to certain countries altogether, resulting in a material adverse effect on our business, financial condition, and results of operations.

Compliance with various regulatory requirements and standards is a prerequisite for placing our products on the market in most countries in which we do business. We have all such certifications but there are at times, challenges by local administrative telecommunications, consumer board or other authorities that can place sales bans on products. For example, in December 2021, the Swedish Electrical Safety Board announced that certain models of our power optimizers are subject to a sales ban alleging that they do not meet the EMC Directive. While we disagree with this finding and maintain our position that all current SolarEdge products are tested, approved and compliant with the EMC Directive and other EU regulations , any such rulings can have a negative impact on our business and reputation. In this specific incident, we have already begun transitioning into our next generation optimizers and do not expect any impact on our business in Sweden or elsewhere.

Risks Related To Intellectual Property

If we fail to protect, or incur significant costs in defending our intellectual property and other proprietary rights, our business and results of operations could be materially harmed.

Our success depends to a significant degree on our ability to protect our intellectual property and other proprietary rights. We rely on a combination of patents, trademarks, copyrights, trade secrets, and unfair competition laws, as well as confidentiality and license agreements and other contractual provisions with our customers, suppliers, employees, and others, to establish and protect our intellectual property (IP) and other proprietary rights. Our ability to enforce these rights is subject to litigation risks, as well as uncertainty as to the enforceability of our IP rights in various countries, specifically claims that our IP rights are invalid or unenforceable. Our assertion of IP rights may result in another party seeking to assert claims against us, which could harm our business. Our inability to enforce our IP rights under any of these circumstances can harm our competitive position and business.

We have applied for patents in the U.S., Europe, and China, some of which have been issued. We cannot guarantee that any of our pending applications will be approved or that our existing and future intellectual property rights will be sufficiently broad to protect our proprietary technology. Any failure to obtain such approvals or finding that our intellectual property rights are invalid or unenforceable could force us to, among other things, rebrand or re-design our affected products. In countries where we have not applied for patent protection or where effective intellectual property protection is not available to the same extent as in the U.S., we may be at greater risk that our proprietary rights will be misappropriated, infringed, or otherwise violated.

Our intellectual property may be stolen or infringed upon. In fact, as further detailed in Item 3 – “Legal Proceedings” we are engaged in several legal proceedings related to intellectual property. Litigation proceedings are inherently uncertain, and adverse rulings may occur, including monetary damages, injunction stopping us from manufacturing or selling certain products, or requiring other remedies. These lawsuits are intended to protect our significant investment in our intellectual property but they also may consume management and financial resources for long periods of time and may not result in favorable outcome for us, which may adversely affect our business, results of operations or financial condition.

Third parties may assert that we are infringing upon their intellectual property rights, which could divert management’s attention, cause us to incur significant costs, and prevent us from selling or using the technology to which such rights relate.

Our competitors and other third parties hold numerous patents related to technology used in our industry. Occasionally, we may also be subject to claims of intellectual property right infringement and related litigation, and, as we gain greater recognition in the market, we face a higher risk of being the subject to claims of violation of others’ intellectual property rights. For example, in May 2019, we were served with three lawsuits by Huawei Technologies Co., Ltd., a Chinese entity (“Huawei”), against our two Chinese subsidiaries and our equipment manufacturer in China. The lawsuits, filed in the Guangzhou intellectual property court, alleged infringement of three patents and asked for an injunction to manufacture, use, sale and offer for sale, and damages. In August, 2020 a first-instance judgment was issued ordering the three defendants to collectively pay damages in the amount of approximately $1.6 million (including court fees) and our appeal to the Supreme People’s Court was denied in December 2021, rendering a payment due by us to Huawei in the amount of $1.6 million. The judgement is not enforceable until February 2022. The other two lawsuits are still pending appeal at the Supreme Court level. Please see Item 3 - Legal Proceedings for additional information.

Although we are certain that we have meritorious defenses to the claims, responding to such claims can be time consuming, divert management’s attention and resources and may cause us to incur significant expenses in litigation or settlement. While we believe that our products and technology do not infringe in any material respect upon any valid third-party IP rights, we cannot be certain of successfully defending against any such claims. If we do not successfully defend or settle an IP claim, we could be liable for significant monetary damages and could be prohibited from continuing to use certain technology, business methods, content, or brands. To avoid a prohibition, we could seek a license from the applicable third party, which could require us to pay significant royalties, increasing our operating expenses. If a license is unavailable at all or unavailable on reasonable terms, we may be required to develop or license a non-violating alternative, either of which could require significant effort and expense. If we cannot license or develop a non-violating alternative, we could be forced to modify, limit or, in extreme cases, stop manufacturing and sales of our affected products in the relevant country and may be unable to effectively compete. Any of these results could adversely affect our business, financial condition, and results of operations.

We may become subject to claims for remuneration or royalties for assigned service invention rights by our employees, which could result in litigation and adversely affect our business.

We enter into agreements with our employees pursuant to which they agree that any inventions created in the scope of their employment or engagement are assigned to us or owned exclusively by us, depending on the jurisdiction, without the employee retaining any rights. A significant portion of our intellectual property has been developed by our employees in the course of their employment for us. Under the Israeli Patent Law, 5727-1967 (the “Patent Law”), inventions conceived by an employee during the scope of his or her employment with a company are regarded as “service inventions,” which belong to the employer, absent a specific agreement between the employee and employer giving the employee service invention rights. The Patent Law also provides that if there is no such agreement between an employer and an employee, the Israeli Compensation and Royalties Committee (the “Committee”), a body constituted under the Patent Law, shall determine whether the employee is entitled to remuneration for his or her inventions. Case law clarifies that the right to receive consideration for “service inventions” can be waived by the employee and that in certain circumstances, such waiver does not necessarily have to be explicit. The Committee will examine, on a case-by-case basis, the general contractual framework between the parties, using interpretation rules of the general Israeli contract laws. Further, the Committee has not yet determined the method for calculating this Committee-enforced remuneration, but rather uses the criteria specified in the Patent Law. Although our employees have agreed that any rights related to their inventions are owned exclusively by us, we may face claims demanding remuneration in consideration for such acknowledgement. As a consequence of such claims, we could be required to pay additional remuneration or royalties to our current and/or former employees, or be forced to litigate such claims, which could negatively affect our business.

If our goodwill or other intangible assets become impaired, our financial condition and results of operations could be negatively affected.

Due to our latest acquisitions, goodwill and other intangible assets totaled approximately $188.5 million, or approximately 6.5% of our total assets, as of December 31, 2021. We test our goodwill for impairment at least annually, or more frequently if an event occurs indicating the potential for impairment, and we assess on an as-needed basis whether there have been impairments in our other intangible assets, which include complex, and often subjective, assumptions and estimates. These assumptions and estimates can be affected by a variety of external factors such as industry and economic trends, and internal factors such as changes in our business strategy or our internal forecasts. To the extent that the factors described above change, we could be required to record additional non-cash impairment charges in the future, which could negatively affect our financial condition and results of operations.

Risks Related to the Ownership of Our Common Stock

We cannot assure you that our stock price will not decline or not be subject to significant volatility.

Shares of our common stock were sold in our initial public offering in March 2015 at a price of $18.00 per share, and during the year ended December 31, 2021, the reported high and low prices of our common stock ranged from $199.33 to $389.71 per share. As further detailed in the Performance Graph in Item 5 below, the price of our Common Stock in 2021 was highly volatile and may fluctuate in response to our results of operations in future periods or due to other factors, including factors specific to companies in our industry, many of which are beyond our control. As a result, our share price may experience significant volatility and may not necessarily reflect the value of our expected performance. Among other factors that could affect our stock price are:

- the addition or loss of significant customers;

- changes in laws or regulations applicable to our industry, products or services;
- speculation about our business in the press or the investment community;
- price and volume fluctuations in the overall stock market;
- volatility in the market price and trading volume of companies in our industry or companies that investors consider comparable;
- share price and volume fluctuations attributable to inconsistent trading levels of our shares;
- our ability to protect our intellectual property and other proprietary rights;
- sales of our common stock by us or our significant stockholders, officers and directors;
- the expiration of contractual lock-up agreements;
- success of competitive products or services;
- the public's response to press releases or other public announcements by us or others, including our filings with the Securities and Exchange Commission (the "SEC"), announcements relating to litigation or significant changes to our key personnel;
- the effectiveness of our internal controls over financial reporting;
- changes in our capital structure, such as future issuances of debt or equity securities;
- our entry into new markets;
- tax developments in the U.S., Europe, or other markets;
- conversion of all or portion of the Notes;
- strategic actions by us or our competitors, such as acquisitions or restructurings; and
- changes in accounting principles.

Further, the stock markets have experienced extreme price and volume fluctuations unrelated or disproportionate to the operating performance of affected companies. In addition, the stock prices of many renewable energy companies have experienced wide fluctuations that have often been unrelated to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political, and market conditions such as recessions, changes in U.S. regulations and policies with respect to renewable energy, interest rate changes, or international currency fluctuations, may cause the market price of our common stock to decline. In the past, many companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation, of which we may be the target in the future. Securities litigation against us could result in substantial cost and divert our management's attention from other business concerns, which could seriously harm our business.

Provisions in our certificate of incorporation and by-laws may have the effect of delaying or preventing a change of control or changes in our management.

Our certificate of incorporation and by-laws contain provisions that could depress the trading price of our common stock by discouraging, delaying, or preventing a change of control of our Company or changes in our management that the stockholders of our Company may believe advantageous. These provisions include:

- authorizing "blank check" preferred stock that our board of directors could issue to increase the number of outstanding shares to discourage a takeover attempt;
- providing for a classified board of directors with staggered, three-year terms, which could delay the ability of stockholders to change the membership of a majority of our board of directors;
- not providing for cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- limiting the ability of stockholders to call a special stockholder meeting;
- prohibiting stockholders from acting by written consent;
- establishing advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings;

- the removal of directors only for cause and only upon the affirmative vote of the holders of at least 66 2/3% in voting power of all the then-outstanding shares of common stock of the Company entitled to vote thereon, voting together as a single class;
- providing that our board of directors is expressly authorized to amend, alter, rescind or repeal our by-laws; and
- requiring the affirmative vote of holders of at least 66 2/3% of the voting power of all of the then outstanding shares of common stock, voting as a single class, to amend provisions of our certificate of incorporation relating to the management of our business, our board of directors, stockholder action by written consent, advance notification of stockholder nominations and proposals, calling special meetings of stockholders, forum selection and the liability of our directors, or to amend, alter, rescind, or repeal our by-laws.

In addition, we are governed by the provisions of Section 203 of the Delaware General Corporation Law (“DGCL”), which generally prohibits a Delaware corporation from engaging in a broad range of business combinations with any “interested” stockholder for a period of three years following the date on which the stockholder becomes an “interested” stockholder.

Our certificate of incorporation includes a forum selection clause, which could limit our stockholders’ ability to obtain a favorable judicial forum for disputes with us.

Our certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the sole and exclusive forum for any stockholder (including any beneficial owner) to bring (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, or employees to us or to our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL or our certificate of incorporation or by-laws, or (iv) any action asserting a claim governed by the internal affairs doctrine, will be a state court located within the State of Delaware (or, if no state court located within the State of Delaware has jurisdiction, the federal district court for the District of Delaware); in all cases subject to the court’s having personal jurisdiction over the indispensable parties named as defendants. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to the foregoing provisions. This forum selection provision may limit our stockholders’ ability to obtain a favorable judicial forum for disputes with us. It is also possible that, notwithstanding the forum selection clause that is included in our certificate of incorporation, a court outside of Delaware could rule that such a provision is inapplicable or unenforceable.

We do not intend to pay any cash dividends on our common stock in the foreseeable future.

We have never declared or paid any dividends on our common stock and currently intend to retain any future earnings and do not expect to pay any dividends in the foreseeable future. Any future determination to declare cash dividends will be made at the discretion of our board of directors, subject to applicable laws and organizational documents. As a result, capital appreciation in the price of our common stock, if any, may be your only source of gain on an investment in our common stock.

ITEM 1B. Unresolved Staff Comments.

Not applicable.

ITEM 2. Properties

Our corporate headquarters are located in Herziliya Pituach, Israel.

Leased Offices and R&D Laboratories

As of December 31, 2021, we lease office, testing, and product design facilities in Israel. In May, 2021, we signed a long-term lease agreement for the development of a 38,000 square meter campus, to be built on 16.5 acres of land, in the central area of Israel. The campus, which is scheduled to be completed in the first half of 2025, will replace our current headquarters in Herziliya, Israel.

In addition to our leased properties in Israel, we lease offices and lab facilities in California, Nevada, Germany, Netherlands, Italy, France, Australia, UK, Japan, Turkey, India, Bulgaria, Belgium, Taiwan, Korea and China as well as an R&D and call center in Bulgaria.

Manufacturing

We outsource most of our manufacturing to our manufacturing partners. We have our own manufacturing facility, Sella 1, in the North of Israel. We also have a factory in which we manufacture lithium-ion batteries for Kokam's operations, our Korean subsidiary, and have begun construction of Sella 2, our second lithium-ion cell and battery factory in Korea. For our e-Mobility division, we have manufacturing facilities in Umbria, Italy for the assembly of batteries and other components for light commercial vehicles.

Owned Properties

In addition to our leased properties, we also own manufacturing facilities in Italy, office and manufacturing facilities in South Korea, and an office space in the U.K. Additionally, we own land in South Korea on which we are building Sella 2, our second lithium-ion cell and battery factory in Korea.

We believe that our existing properties are in good condition and are sufficient and suitable for the conduct of our business for the foreseeable future. To the extent our needs change as our business grows, we expect that additional space and facilities will be available on commercially reasonable terms.

ITEM 3. Legal Proceedings

In June and July 2018, we filed three lawsuits for patent infringement against Huawei Technologies Co., Ltd., a Chinese entity, Huawei Technologies Düsseldorf GmbH, a German entity, and Wattkraft Solar GmbH, a German distributor for Huawei. The lawsuits, filed in the Mannheim District Court in Germany, assert unauthorized use of patented technology, and are intended to protect SolarEdge's significant investment in its innovative DC optimized inverter technology. Seeking monetary damages, an injunction, and recall of infringing Huawei inverters and optimizers from the German market, the lawsuit is intended to prevent the defendants from selling any multi-level inverters and optimizers infringing upon SolarEdge's PV inverter and optimizer technology protected in the asserted patents in Germany. In November 2021, we withdrew one of the infringement claims after the asserted patent was revoked. In the other two lawsuits, hearings were held and in one of the proceedings the claim was dismissed and we have appealed to a higher court. In the parallel nullity proceedings regarding this patent, a hearing has been held, but no decision has been rendered. The third lawsuit is pending a court appointed expert opinion. In addition, in January 2021, we extended this complaint to include also the second generation Huawei Smart PV Optimizers. We intend to continue to vigorously defend our patented technology.

In May 2019, we were served with three lawsuits by Huawei Technologies Co., Ltd., a Chinese entity ("Huawei"), against our two Chinese subsidiaries and our equipment manufacturer in China. The lawsuits, filed in the Guangzhou intellectual property court, alleged infringement of three patents and asked for an injunction of manufacture, use, sale and offer for sale, and damage awards. In August 2020 a first-instance judgment was issued ordering the three defendants to collectively pay damages in the amount of approximately $1.6 million (including court fees) with respect of one of the patents and our appeal to the Supreme People's Court in that case was denied in December of 2021, rendering a payment due by us to Huawei in the amount of $1.6 million. The judgement is not enforceable until the end of February 2022. In addition, in January 2021, Huawei filed a motion to increase its claimed monetary damages to approximately $7.9 million with respect to the second lawsuit. In February 2021, a preliminary injunction was rendered by the Guangzhou intellectual property court with respect to a second lawsuit and applying to seven inverter models. In line with the court's mandate, we took immediate action to make software changes to meet the court order and also appealed the decision with the Supreme People's Court which is still pending. Additionally, in October 2021, a first-instance judgment was issued with respect of the third lawsuit, ordering the three defendants to collectively pay damages in the amount of approximately $1.6 million (including court fees) with respect to one of the patents. We filed an appeal with the Supreme People's Court which remains pending. We believe that we have meritorious defenses to the claims asserted by Huawei.

In September, 2018, our German subsidiary, SolarEdge Technologies GmbH, received a complaint filed by a competitor, SMA Solar Technology AG (“SMA”). The complaint, filed in the District Court Düsseldorf, Germany, alleges that SolarEdge's 12.5kW - 27.6kW inverters infringe two of plaintiff’s patents. In its complaints, SMA requests, inter alia, an injunction, rendering account about past sales, a recall of products and a determination for a claim for damages for sales in Germany. SMA asserted a value in dispute of 5.5 million Euros (approximately $6.2 million) for both patents. We challenged the validity of both patents. In December 2019 the District Court of Düsseldorf found one of the two patents to be infringed and we appealed this decision to the Appeals Court Düsseldorf. In the parallel nullity proceedings regarding this patent, in October 2020, the German Patent Court rendered the SMA patent invalid; this invalidity has been appealed by SMA. Due to the invalidity proceedings, the infringement proceedings regarding this patent have been stayed. With respect to the other patent, in November 2019 the first instance court stayed the infringement proceedings since it considered it to be highly likely that the patent would also be invalid. We believe that we have meritorious defenses to the claims asserted and intend to vigorously defend against this lawsuit.

In addition, in the normal course of business, we may from time to time be named as a party to various legal claims, actions and complaints (including as a result of initiating such legal claims, actions or complaints on behalf of the Company). It is impossible to predict with certainty whether any resulting liability would have a material adverse effect on our financial position, results of operations or cash flows.

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

Market Information

Our common stock, par value $0.0001 per share, trades on the Nasdaq Global Select Market, where prices are quoted under the symbol "SEDG".

Holders of Record

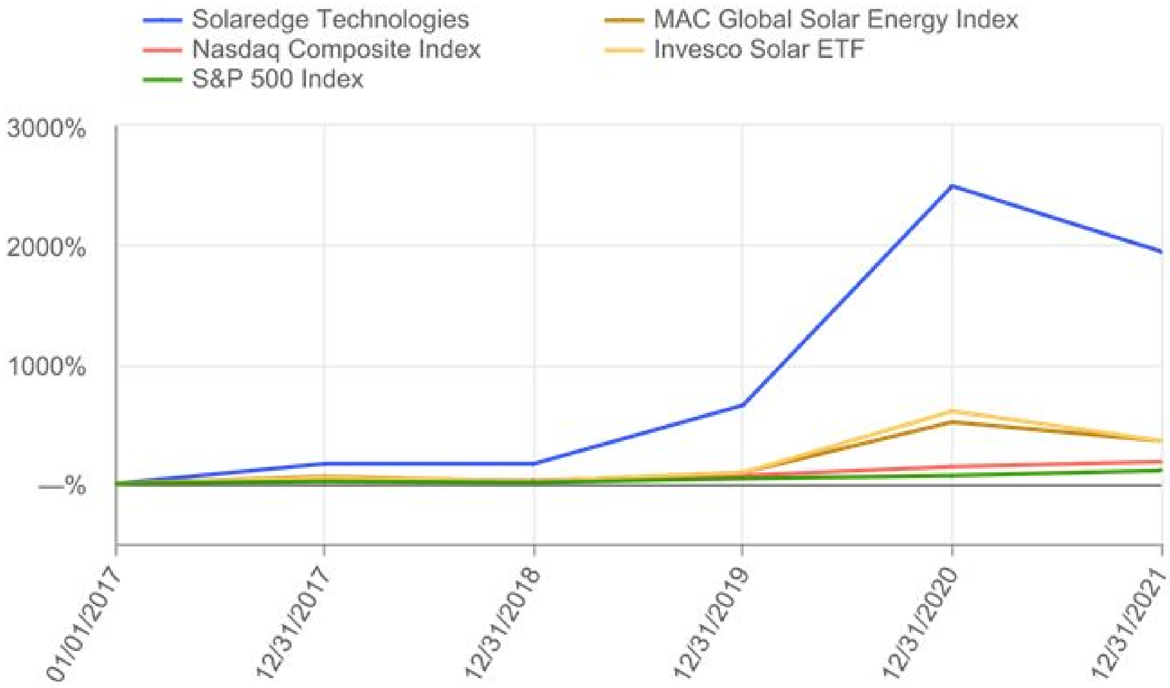
As of December 31, 2021, there were 18 holders of record of our common stock. Because many of our shares of common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders.

Dividends

We have never declared or paid any dividends on our common stock. We currently intend to retain any future earnings and do not expect to pay any dividends in the foreseeable future. Any future determination to declare cash dividends will be made at the discretion of our board of directors, subject to applicable laws and organizational documents.

Performance Graph

The following graph compares the cumulative total shareholder return on our common stock from January 1, 2017 to December 31, 2021 to that of the total return of the S&P 500 Index, the Invesco Solar ETF, the Nasdaq Composite Index and the MAC Global Solar Energy Index. As a result of our entrance into the S&P 500, we have added the S&P 500 Index and Invesco Solar ETF for 2021 in accordance with Regulation S-K and because we believe these are more relevant indexes. In future years, we will not use the Nasdaq Composite Index or the MAC Global Solar Energy Index. This graph is furnished and not “filed” with the Securities and Exchange Commission or “soliciting material” under the Securities Exchange Act of 1934 and shall not be incorporated by reference into any such filings, irrespective of any general incorporation contained in such filing.



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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the sections of this Annual Report on Form 10-K captioned "Selected Financial Data" and "Business" and our consolidated financial statements and the related notes to those statements included elsewhere in this Form 10-K. In addition to historical financial information, the following discussion and analysis contains forward looking statements that involve risks, uncertainties, and assumptions. Our actual results and timing of selected events may differ materially from those anticipated in these forward looking statements as a result of many factors, including those discussed under the sections of this Annual Report captioned "Special Note Regarding Forward Looking Statements" and "Risk Factors". For discussion related to changes in financial condition and the results of operations for the year ended December 31, 2020, refer to Item 7- Management's Discussion and Analysis of Financial Condition and Results of Operations in our Annual Report on Form 10-K/A, filed with the Securities and Exchange Commission on February 19, 2021.

Overview

We develop, manufacture and sell products that address a broad range of energy market segments through our diversified product offering, including residential, commercial and large scale photovoltaic or PV, energy storage and backup solutions, electric vehicle or EV charging, home energy management, grid services and virtual power plants, as well as products in our non-solar businesses which address e-Mobility, automation machines, lithium-ion cells and battery packs and UPS solutions.

Further information regarding our business is provided in "Part I, Item 1. Business" of this Annual Report.

In the year ended December 31, 2021, two customers accounted for 30.9% of our revenues and our top three customers (all distributors) together represented 37.8% of our revenues.

Our revenues were $1,459.3 million, and $1,963.9 million for fiscal 2020, and fiscal 2021 respectively. Gross margins were 31.6% and 32.0% for fiscal 2020, and fiscal 2021, respectively. Net profits were $140.3 million and $169.2 million for fiscal 2020 and fiscal 2021, respectively.

Performance Measures

In managing our business and assessing financial performance, we supplement the information provided by the financial statements with other operating metrics. These operating metrics are utilized by our management to evaluate our business, measure our performance, identify trends affecting our business, and formulate projections. We use metrics relating to yearly shipments (inverters shipped, power optimizers shipped, and megawatts shipped) to evaluate our sales performance and to track market acceptance of our products from year to year. We use metrics relating to monitoring (systems monitored and megawatts monitored) to evaluate market acceptance of our products and usage of our solution.

We provide the "megawatts shipped" metric, which is calculated based on nameplate capacity shipped, to show adoption of our system on a nameplate capacity basis. Nameplate capacity shipped is the maximum rated power output capacity of an inverter and corresponds to our financial results in that higher total capacities shipped are generally associated with higher total revenues. However, revenues increase with each additional unit sold, not necessarily each additional MW of capacity sold. Accordingly, we also provide the "inverters shipped" and "power optimizers shipped" operating metrics.

Covid-19 Impact & Response

Covid-19 continued to present challenges on our operations and business in 2021, primarily, operational challenges which we reported on continuously in our quarterly reports throughout the year. Although the global distribution of vaccines continues to progress and many government-imposed restrictions have been lifted or removed, the future impact of the Covid-19 pandemic remains highly uncertain. Resurgences of Covid-19 cases and the emergence of new variants may adversely impact our results of operations.Our first priority continues to be to protect and support our employees while maintaining company operations and support of our customers with as few disruptions as possible. We follow the guidance issued by applicable local authorities and health officials in each region in which we do business, including in our headquarters located in Israel.

In the third quarter of 2021, our contract manufacturer in Vietnam was forced to temporarily close its facilities due to government mandated lockdowns. The mandatory shut downs lasted 12 weeks and the Vietnam factory returned to full capacity in November of 2021. While we increased manufacturing capacity in China, Israel and Hungary in order to compensate for the Vietnam factory Covid-19 related lockdown, our aggregate overall manufacturing capacity was negatively impacted and together with shipping constraints caused by port congestions, caused a reduction in our finished goods inventory and availability to supply in the third and fourth quarter of 2021. Our manufacturing facilities in Korea (for our energy storage business), Italy (for our e-Mobility components) and Israel and our contract manufacturers' facilities in Vietnam, China, and Hungary were operational at almost full capacity in the fourth quarter of 2021 as we continued to ramp our new manufacturing site in Mexico. To the extent that there are no further lockdowns, manufacturing capacity will revert to levels that accommodate the growing demand for our products within the first half of 2022. Our customer support centers are working at full capacity, partially from home. Continued travel restrictions, however, continue to have an impact on our operations.

In 2021, we experienced and continue to experience an increase in the cost of goods sold due to an increase in shipping rates that resulted from a reduction in ocean freight capacity, the accumulation of containers in the ports in U.S and Europe that were not returned to Asia and the reduction in the availability of air freight that increased the demand for ocean freight. In the fourth quarter of 2021, we experienced and expect to continue to experience in 2022, disruptions to our logistics supply chain caused by constraints in the global transportation system including limited availability of local ground transportation coupled with congestion in shipping ports and industry-wide component shortages. These factors have impacted our ability to accurately plan and forecast the delivery of our products to customers and have also increased the total shipping time and cost of ocean freight for components and finished goods. Moreover, industry-wide component shortages require our R&D teams to focus their attention on manufacturing and production design workarounds solutions which can impact our ability to meet our plans to roll out new innovative products and services. Additionally, a customer of SolarEdge e-Mobility that has experienced disruptions in its own manufacturing process due to global component shortages has delayed the delivery date of powertrain units that were expected to be supplied by SolarEdge e-Mobility in the third quarter of 2021. We expect that the aforementioned e-Mobility project to return to normal operations during 2022.

Despite the operational hurdles detailed above, our fourth quarter 2021 revenues of $551.9 million, reflect an increase from revenues of $526.4 million in the third quarter of 2021.

Key Components of Our Results of Operations

The following discussion describes certain line items in our Consolidated Statements of Operations.

Revenues

We generate revenues from the sale of DC optimized inverter systems for solar PV installations which include power optimizers, inverters, storage and backup solutions, EV chargers, smart energy devices, our cloud-based monitoring platform as well as grid services. Our customer base mainly includes distributors, large solar installers, wholesalers, EPCs, and PV module manufacturers. In addition, we also generate revenues from the sale of lithium-ion cells, batteries and energy storage solutions, UPS systems, automation machines and EV powertrain solutions for electric vehicles.

Our revenues from the sale of solar-related products are affected by changes in the volume and average selling prices of our DC optimized inverter systems. The volume and average selling price of our systems is driven by the supply and demand for our products, changes in the product mix between our residential and commercial products, the customer mix between large and small customers, the geographical mix of our sales, sales incentives, end user government incentives, seasonality, and competitive product offerings. Revenues from the sale of energy storage system or ESS products are affected by the type of product sold (cell, battery or system) and the type of the battery that is sold. Revenues from the sale of UPS products, SolarEdge Automation Machines and SolarEdge e-Mobility products are affected by the changes in the volumes, customers' size and average selling prices of the products we sell.

Our revenue growth is dependent on our ability to expand our market share in each of the geographies in which we compete, expand our global footprint to new evolving markets, grow our production capabilities to meet demand, continue to develop and introduce new and innovative products that address the changing technology and performance requirements of our customers and expansion of the new businesses we acquired.

In the year ended December 31, 2021, 45.4% of our revenues were generated from Europe, 40.0% of our revenues were generated from the United States and 14.6% of our revenues were generated from ROW. In the year ended December 31, 2020, 42.9% of our revenues were generated from Europe, 42.0% of our revenues were from the United States and 15.1% of our revenues were generated from ROW.

Cost of Revenues and Gross Profit

Cost of revenues consists primarily of product costs, including purchases from our contract manufacturers and other suppliers, as well as costs related to shipping, customer support, product warranty, personnel, depreciation of testing and manufacturing equipment, hosting services for our cloud based monitoring platform, and other logistics services. Our product costs are affected by technological innovations, such as advances in semiconductor integration and new product introductions, economies of scale resulting in lower component costs, and improvements in production processes and automation. Some of these costs, primarily personnel and depreciation of testing and manufacturing equipment, are not directly affected by sales volume.

With respect to ESS, Automation Machines and e-Mobility products cost of revenues consists primarily of materials costs, labor costs associated with the manufacturing, variable utility, and operational costs related to the manufacturing factories, depreciation of testing and manufacturing equipment and other fixed costs.

Except for the manufacturing and assembly activities related to our acquired businesses and the manufacturing of solar products at Sella 1, we outsource our manufacturing to third-party manufacturers and negotiate product pricing on a quarterly basis.

During 2021, supply chain and operational challenges coupled with an increase in demand for our products, resulted in increased use of expedited ocean freight as well as air freight to deliver our products to our customers in a timely manner. At the beginning of 2021, a high portion of our products manufactured in non-tariff countries imported into the U.S. resulted in lower custom tariff charges; however, disruptions to our Vietnam manufacturing facilities due to Covid-19 restrictions, required us to increase manufacturing from our other manufacturing facilities that are subject to custom tariffs in the later part of the year, which consequentially caused us to temporarily incur an increase in our tariff charges. As a result of the operational challenges we faced during 2021, the levels of our finished goods inventories required to support our growth were reduced. Therefore, we expect to continue to deliver our products through expedited ocean freight and air freight. In absence of additional Covid-19 related shutdowns we expect inventory levels to return to those required to support our growing business and the reduction in expedited shipments and air freight usage during the third quarter of 2022.

We continue to develop our own manufacturing capabilities. For example, we have developed our own proprietary automated assembly lines for our power optimizers, manufacture sub-assemblies such as cables and magnetic, and own large amounts of equipment in connection with such manufacturing activities. We expect to continue to invest in additional automated assembly lines in the future. We have designed and are responsible for funding all of the capital expenses associated with existing and planned automated assembly lines. The current and expected capital expenses associated with these automated assembly lines will be funded out of our cash flows generation.

Key components of our logistics supply channel consist of third party distribution centers in the U.S., Europe, Australia, and Japan. Finished goods are either shipped to our customers directly from our contract manufacturers or shipped to third-party distribution centers and then, finally, shipped to our customers.

In the third quarter of 2020 we began commercial shipments to the United States of optimizers and inverters from Sella 1, which reached full manufacturing capacity in the second quarter of 2021.

Cost of revenues also includes our operations, production and support departments' costs. The operations and production departments are responsible for production management such as planning, procurement, supply chain, production methodologies and machinery planning, logistics management and manufacturing support to our contract manufacturers, as well as the quality assurance of our products. Our support department provides customer and technical support at various levels through our call centers around the world as well as second and third-level support services which are provided by support personnel located in our headquarters. Our employees headcount in our operations, production and support departments has grown from 1,549 as of December 31, 2020 to 2,052 as of December 31, 2021.

Gross profit may vary from quarter to quarter and is primarily affected by our average selling prices, product costs, product mix, customer mix, geographical mix, shipping method, warranty costs, and seasonality.

Operating Expenses

Operating expenses consist of research and development, sales and marketing, general and administrative and other expenses. Personnel related costs are the most significant component of each of these expense categories and include salaries, benefits, payroll taxes, commissions and stock-based compensation. Our employees headcount in our research and development, sales and marketing, and general and administrative departments has grown from 1,625 as of December 31, 2020 to 1,912 as of December 31, 2021. We expect to continue to hire significant numbers of new employees to support our growth. The timing of these additional hires could materially affect our operating expenses in any particular period, both in absolute dollars and as a percentage of revenue. We expect to continue to invest substantial resources to support our growth and anticipate that each of the following categories of operating expenses will increase in absolute dollar amounts for the foreseeable future.

Research and development expenses

Research and development expenses include personnel-related expenses such as salaries, benefits, stock-based compensation, and payroll taxes. Our research and development employees are engaged in the design and development of power electronics, semiconductors, software, power line communications, networking and chemistry. Our research and development expenses also include third-party design and consulting costs, materials for testing and evaluation, ASIC development and licensing costs, depreciation expense, and other indirect costs. We devote substantial resources to ongoing research and development programs that focus on enhancements to, and cost efficiencies in, our existing products and timely development of new products that utilize technological innovation, thereby maintaining our competitive position.

Sales and marketing expenses

Sales and marketing expenses consist primarily of personnel-related expenses such as salaries, sales commissions, benefits, payroll taxes, and stock-based compensation. These expenses also include travel, fees of independent consultants, trade shows, marketing, costs associated with the operation of our sales offices, and other indirect costs. The expected increase in sales and marketing expenses is due to an expected increase in the number of sales and marketing personnel and the expansion of our global sales and marketing footprint, enabling us to increase our penetration into new markets. These expenses will be determined to the extent that marketing activities resume, contingent upon the recovery of certain activities which have been halted due to Covid-19 such as travel, trade shows and in person customer trainings. We currently have a sales presence in many countries worldwide and intend to continue to expand our sales presence to additional regions.

General and administrative expenses

General and administrative expenses consist primarily of salaries, employee benefits, and stock-based compensation related to our executives, finance, human resources, information technology, and legal organizations, travel expenses, facilities costs, fees for professional services, and registration fees related to being a publicly-traded company. Professional services consist of audit and legal costs, remuneration to board members, insurance, information technology, and other costs. General and administrative expenses also include expenses related to legal claims and allowance for doubtful accounts in the event of uncollectible account receivables balances.

Other operating expenses (income), net

Other operating expenses (income), net, consist primarily of losses related to write-offs of tangible and intangible assets and income related to payments made to us from the Kokam acquisition escrow account with regards to a working capital adjustment and a legal claim acquired as part of the Kokam acquisition which was settled in arbitration in 2019.

Non Operating Expenses

Financial income (expense), net

Financial income (expense), net, consists primarily of interest income, interest expense, gains or losses from foreign currency fluctuations and hedging transactions.

Interest income consists of interest from our investment in available for sale marketable securities, deposits and accretion of discounts related to our investment in available for sale marketable securities.

Interest expense consists of interest related to bank loans, advance payments received for performance obligations that extend for a period greater than one year, related to Accounting Standard Codification 606, “Revenue from Contracts with Customers” (ASC 606), interest related to Accounting Standard Codification 842, “Leases” (ASC 842), amortization of premium related to our investment in available for sale marketable securities and the accretion of the debt discount and amortization of debt issuance cost associated with our Notes due 2025.

Our functional currency is the U.S. dollar. With respect to certain of our subsidiaries, the functional currency is the applicable local currency. Financial (expenses) income, net, also consists of gains or losses from foreign currency fluctuations primarily of the effect of foreign exchange differences between the U.S. dollar and the New Israeli Shekel, the Euro, the South Korean Won and other currencies related to our monetary assets and liabilities, the fair value remeasurement of hedging contracts not designated as cash flow hedge and bank charges.

Income taxes

We are subject to income taxes in the countries where we operate.

In the year ended December 31, 2020, we recorded a net income tax expense of $23.3 million, which consists of a $26.8 million current income tax expense and a $3.5 million deferred tax income. In the year ended December 31, 2021, we recorded a net income tax expense of $18.1 million, which consists of a $29.7 million current income tax expense and $11.6 million of deferred tax income. The decrease in net income tax expense was mainly attributed to a tax benefit related to the laps of a statute of limitation of uncertain tax positions and an increase in deferred tax income related to unrealized losses of foreign currency transactions. This decrease was partially offset by an increase in tax expense related to operations of our foreign subsidiaries.

On December 22, 2017, the Tax Cuts and Jobs Act (the "Tax Act") was signed into law making significant changes to U.S. income tax law. These changes include, but are not limited to, a corporate tax rate decrease from 35% to 21% effective for tax years 2018 onwards and created new taxes on certain foreign-sourced earnings and certain related-party payments.

The Tax Act required the Company to pay U.S. income taxes on accumulated foreign subsidiaries earnings not previously subject to U.S. income tax at a rate of 15.5% to the extent of foreign cash and certain other net current assets, and 8% on the remaining earnings. The total tax liability will be paid over the eight-year period provided in the Tax Act (ending 2024).

SolarEdge Technologies Ltd., our Israeli subsidiary, is taxed under Israeli law. Income not eligible for benefits under the Investments Law is taxed at the corporate tax rate. The Israeli corporate tax rate is 23%.

Our Israeli subsidiary elected tax year 2012 as a “Year of Election” for “Benefited Enterprise” under the Israeli Investments Law, which provides certain benefits, including tax exemptions and reduced tax rates. Upon meeting the requirements under the Israeli Investments Law, the two-year tax exemption has ended on December 31, 2018.

The Investment Law was amended in 2005 and was further amended as of January 1, 2011 and in August 2013 (the “2011 Amendment”). The 2011 Amendment canceled the availability of the benefits granted in accordance with the provisions of the Investments Law prior to 2011 and, instead, introduced new benefits for income generated by a “Preferred Company” through its “Preferred Enterprise” (both as defined in the 2011 Amendment). Under the 2011 Amendment, income derived by Preferred Companies from Preferred Enterprise would be subject to a uniform rate of corporate tax. The tax rate applicable to such income, referred to as “Preferred Income”, would be 7.5% in areas in Israel that are designated as Development Zone A and 16% elsewhere in Israel starting in the year 2017 and thereafter.

In December 2016, Amendment 73 to the Investments Law (the “2017 Amendment”) was published. According to the 2017 Amendment, special tax tracks for technological enterprises have been introduced, which are subject to rules that were issued by the Israeli Ministry of Finance. A Technological Preferred Enterprise (PTE), as defined in the 2017 Amendment, that is located in the central region of Israel, will be subject to tax at a rate of 12% on profits deriving from intellectual property (in Development Zone A - a tax rate of 7.5%). Our Israeli subsidiary has established its own manufacturing facilities in Israel, located in a Development Zone A.

On June 14, 2017, the Encouragement of Capital Investments Regulations (Preferred Technological Income and Capital Gain for Technological Enterprise), 2017 (the "Regulations") were published. The Regulations describe, inter alia, the mechanism used to determine the calculation of the benefits under the PTE regime. A company that complies with the terms under the PTE regime may be entitled to certain tax benefits with respect to certain income generated during the company's regular course of business and derived from the preferred intangible asset.

As of January 2019, our Israeli subsidiary elected to implement the 2011 and 2017 Amendments starting as of tax year 2019 and as a result, under the PTE regime with respect to our business activities in Israel, we expect that it will be entitled to an effective tax at a rate of approximately 12% in 2020.

The Law for the Encouragement of Industry (Taxes), 1969, (the "Industry Encouragement Law"), provides certain tax benefits for an 'Industrial Company' as such term is defined in the Industry Encouragement Law. An Industrial Company is entitled to certain tax benefits including, inter alia amortization over an eight-year period of the cost of purchased know-how and patents and accelerated depreciation rates on equipment and buildings.

Results of Operations

The following tables set forth our consolidated statements of income for the years ended December 31, 2021 and 2020. We have derived this data from our consolidated financial statements included elsewhere in this Annual Report. This information should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this Annual Report. The results of historical periods are not necessarily indicative of the results of operations for any future period.

Comparison of year ended December 31, 2021 and year ended December 31, 2020

	Year ended December 31,		2020 to 2021	
	2021	2020	Change	
	(In thousands)			
Revenues	1,963,865	1,459,271	504,594	34.6%
Cost of revenues	1,334,547	997,912	336,635	33.7%
Gross profit	629,318	461,359	167,959	36.4%
Operating expenses:				
Research and development	219,633	163,123	56,510	34.6%
Sales and marketing	119,000	95,985	23,015	24.0%
General and administrative	82,196	63,119	19,077	30.2%
Other operating expenses (income), net	1,350	(3,429)	4,779	(139.4)%
Total operating expenses	422,179	318,798	103,381	32.4%
Operating income	207,139	142,561	64,578	45.3%
Financial income (expense), net	(19,915)	21,105	(41,020)	(194.4)%
Income before income taxes	187,224	163,666	23,558	14.4%
Income taxes	18,054	23,344	(5,290)	(22.7)%
Net income	169,170	140,322	28,848	20.6%

Revenues

	Year ended December 31,		2020 to 2021	
	2021	2020	Change	
	(In thousands)			
Revenues	1,963,865	1,459,271	504,594	34.6%

Revenues increased by $504.6 million, or 34.6%, in the year ended December 31, 2021 as compared to the year ended December 31, 2020, primarily due to (i) an increase in the number of inverters and power optimizers sold, with significant growth in revenues in all geographies ; and (ii) an increase in the numbers of powertrain kits supplied by SolarEdge e-Mobility, in an aggregate amount of $55.5 million. Revenues from outside of the U.S. comprised 60.0% of our revenues in the year ended December 31, 2021 as compared to 58.0% in the year ended December 31, 2020.

The number of power optimizers recognized as revenues increased by approximately 3.1 million units, or 20.3%, from approximately 15.5 million units in 2020 to approximately 18.6 million units in 2021. The number of inverters recognized as revenues increased by approximately 125.1 thousand units, or 18.9%, from approximately 663.3 thousand units in 2020 to approximately 788.4 thousand units in 2021. Our blended ASP per watt for solar products shipped increased by 0.024, or 10.8%, in 2021 as compared to 2020. The increase in blended ASP per watt is mainly attributed to an increase in the sale of residential products out of our total solar product mix in the U.S, that are characterized with higher ASP per watt, an increase in the sale of products with enhanced capabilities such as the SolarEdge energy hub inverter that are characterized with higher ASP per watt as well as the appreciation of the Euro and other currencies against the U.S. dollar.

This increase in blended ASP per watt was partially offset by a change in our customer mix in the U.S. toward larger customers that enjoy preferential pricing due to volume commitments.

Cost of Revenues and Gross Profit

	Year ended December 31,		2020 to 2021	
	2021	2020	Change	
	(In thousands)			
Cost of revenues	1,334,547	997,912	336,635	33.7%
Gross profit	629,318	461,359	167,959	36.4%

Cost of revenues increased by $336.6 million, or 33.7%, in 2021 as compared to 2020, primarily due to:

- an increase in the volume of products sold and the increase in the cost of components used in the manufacturing of our products.
- an increase in warranty expenses and warranty accruals of $48.4 million associated primarily with an increased number of products in our install base. This increase was partially offset by various cost reductions on the different elements of our warranty expenses which include the cost of the products, shipment and other related expenses;

- a significant increase in shipment and logistic costs in an aggregate amount of $40.1 million due to (i) an increase in shipment rates; and (ii) an increase in volume shipped;

- an increase in personnel-related costs of $16.4 million related to the expansion of our production, operations, and support headcount which grew in parallel to our growing install base worldwide, the construction of our lithium-ion cell and battery factory in Korea, known as "Sella 2" and the increase in costs associated with the production of powertrain units manufactured by our SolarEdge e-Mobility division; and

- an increase in other production costs of $9.9 million, which is mainly attributed to charges from our contract manufacturers due to manufacturing disruptions related to Covid-19 lockdowns, increased logistics costs resulting from transportation disruptions and the mobilization of components among our different manufacturing sites.

These increases were partially offset by:

- a decrease in custom duties of $25.5 million attributed to lower tariff charges due to the manufacture of a higher portion of our products for the U.S. outside of China;

Gross profit as a percentage of revenue increased from 31.6% in 2020 to 32.0% in 2021 as a result of the above detailed analysis.

Operating Expenses:

Research and Development

	Year ended December 31,		**2020 to 2021**	
	2021	**2020**	**Change**	
	(In thousands)			
Research and development	219,633	163,123	56,510	34.6%

Research and development costs increased by $56.5 million or 34.6%, in 2021 compared to 2020, primarily due to:

- an increase in personnel-related costs of $48.5 million resulting from an increase in our research and development headcount as well as salary expenses associated with employee equity-based compensation. The increase in headcount reflects our continuing investment in enhancements of existing products as well as research and development expenses associated with bringing new products to the market;

- an increase in expenses related to overhead costs in an amount of $3.1 million;

- an increase in depreciation expenses of property and equipment in an amount of $3.0 million; and

- an increase in expenses related to material consumption in the manufacturing of prototypes during our development process in an amount of $2.9 million.

These increases were partially offset by:

- an increase in reimbursement of costs, in an amount of $1.7 million, related to the research and development activities performed by SolarEdge e-Mobility; and

- a decrease in expenses related to consultants and sub-contractors in an amount of $1.0 million.

Sales and Marketing

	Year ended December 31,		2020 to 2021	
	2021	2020	Change	
	(In thousands)			
Sales and marketing	119,000	95,985	23,015	24.0%

Sales and marketing expenses increased by $23.0 million, or 24.0%, in 2021 compared to 2020, primarily due to:

- an increase in personnel-related costs of $18.4 million as a result of an increase in headcount supporting our growth in all geographies, as well as salary expenses associated with employee equity-based compensation;

- an increase in expenses related to marketing activities by $2.1 million due to the renewal of marketing activities, exhibitions and shows, which were cancelled or postponed in 2020 due to Covid-19 restrictions; and

- an increase in expenses related to consultants and sub-contractors in an amount of $1.1 million.

General and Administrative

	Year ended December 31,		2020 to 2021	
	2021	2020	Change	
	(In thousands)			
General and administrative	82,196	63,119	19,077	30.2%

General and administrative expenses increased by $19.1 million, or 30.2%, in 2021 compared to 2020, primarily due to:

- an increase in personnel-related costs of $16.6 million resulting from an increase in our general and administrative headcount, the reinstatement of executive management salaries that management voluntarily reduced in early 2020 to mitigate the potential effects of Covid-19, as well as salary expenses associated with employee equity-based compensation; and

- an increase of $2.6 million related to insurance and legal expenses.

Other operating expenses (income), net

	Year ended December 31,		2020 to 2021	
	2021	2020	Change	
	(In thousands)			
Other operating expenses (income), net	1,350	(3,429)	4,779	(139.4)%

Other operating expenses were $1.4 million in 2021, compared to other operating income of $3.4 million in 2020, primarily due to:

- a decrease in income in the amount of $4.9 million related to an acquired legal claim as part of the Kokam acquisition which was settled in arbitration in 2019 and subsequently repaid to the Company in 2020; and

- an increase of $2.1 million in expenses related to write-offs of tangible assets in our solar business, which we ceased using during the second quarter of 2021.

These were partially offset by:

- an increase of $0.8 million in income related to a payment made to us from an escrow account with regards to a working capital adjustment in connection with the Kokam acquisition; and

- a decrease of $1.5 million in expenses related to write-offs of intangible assets of SolarEdge e-Mobility, which we ceased to use during 2020.

Financial income (expenses), net

	Year ended December 31,		**2020 to 2021**	
	2021	**2020**	**Change**	
	(In thousands)			
Financial income (expense), net	(19,915)	21,105	(41,020)	(194.4)%

Financial expenses were $19.9 million in 2021 compared to financial income of $21.1 million in 2020, primarily due to an increase of $55.6 million in financial expenses resulted from foreign exchange fluctuations, mainly between each of Euro, the New Israeli Shekel and the South Korean Won against the U.S. dollar.

These expenses were partially offset by an increase of $13.4 million in financial income related to hedging transactions.

Income taxes

	Year ended December 31,		**2020 to 2021**	
	2021	**2020**	**Change**	
	(In thousands)			
Income taxes	18,054	23,344	(5,290)	(22.7)%

Income taxes decreased by $5.3 million, or 22.7%, in 2021 as compared to 2020, primarily due to:

- an increase of $8.2 million in deferred tax income; and

- an increase of $6.1 million in prior years taxes income.

This was partially offset by an increase of $9.0 million of current tax expenses mainly attributed to an increase in taxable income in foreign subsidiaries.

Net Income

	Year ended December 31,		2020 to 2021	
	2021	2020	Change	
	(In thousands)			
Net income	169,170	140,322	28,848	20.6%

As a result of the factors discussed above, net income increased by $28.8 million, or 20.6% in 2021 as compared to 2020.

Liquidity and Capital Resources

The following table shows our cash flows from operating activities, investing activities, and financing activities for the stated periods:

	Year ended December 31,	
	2021	2020
	(In thousands)	
Net cash provided by operating activities	214,129	222,655
Net cash used in investing activities	(484,211)	(236,637)
Net cash provided by (used in) financing activities	(15,178)	640,484
Increase (decrease) in cash, cash equivalents and restricted cash	(285,260)	626,502

As of December 31, 2021, our cash and cash equivalents were $530.1 million. This amount does not include $650.0 million invested in available for sale marketable securities, $0.3 million invested in short-term restricted bank deposits and $1.5 million invested in long-term restricted bank deposits. Our principal uses of cash are for funding our operations, capital expenditures, other working capital requirements and other investments. As of December 31, 2021, we have open commitments for capital expenditures in an amount of approximately $168.5 million. These commitments reflect purchases of automated assembly lines and other machinery related to our manufacturing operations. We also have purchase obligations in the amount of $1,428.8 million related to raw materials and commitments for the future manufacturing of our products.

We believe that cash provided by operating activities as well as our cash and cash equivalents, and available for sale marketable securities will be sufficient to meet our anticipated cash needs for at least the next 12 months as well as in the longer term, including the self-funding of our capital expenditure and operational commitments.

Operating Activities

Cash provided by operating activities consists of net income adjusted for certain non-cash items and changes in assets and liabilities. Cash provided by operating activities decreased by $8.5 million in 2021 as compared to 2020, mainly due to unfavorable changes in working capital in 2021 compared to the prior year, partially offset by higher net income.

Investing Activities

Investing cash flows consist primarily of capital expenditures, investment in, sales and maturities of available for sale marketable securities, investment and withdrawal of bank deposits and restricted bank deposits, and cash used for acquisitions. Cash used for investing activities increased by $247.6 million in 2021 as compared to 2020, primarily driven by a $355.7 million increase in purchases of available-for-sale debt investments, net, an increase of $22.5 million in capital expenditures and an increase of $19.6 million cash used for asset acquisitions and investments in a privately held company. This increase was partially offset by a $90.4 million decrease in cash used for investment in bank deposits and restricted bank deposits, net.

Financing Activities

Financing cash flows consist primarily of, issuance and repayment of short-term and long-term debt and proceeds from the sale of shares of common stock through employee equity incentive plans. Cash used for financing activities in 2021 was $15.2 million compared to $640.5 million cash provided by financing activities in 2020, primarily due to a $617.9 million decrease in cash provided by issuance of the Notes, net, a decrease of $19.3 million in cash received from the exercise of stock-based awards net of withholding taxes remitted to the tax authorities and an increase of $17.4 million in bank loans repayments, net.

Convertible Senior Note

On September 25, 2020, we issued $632.5 million aggregate principal amount of our Convertible Senior Notes or Notes in a transaction exempt from registration pursuant to Rule 144A and Regulation S under the Securities Act. Net proceeds from the offering, after underwriters' discount and commissions and offering expenses, was $617.9 million. We intend to use the proceeds of the Notes for general corporate purposes. See Note 15 to our annual financial statements for more information.

Critical Accounting Policies and Significant Management Estimates

We prepare our consolidated financial statements in accordance with generally accepted accounting principles in the U.S. ("GAAP"). The preparation of consolidated financial statements also requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, costs and expenses, and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results could differ significantly from the estimates made by our management. To the extent that there are differences between our estimates and actual results, our future financial statement presentation, financial condition, results of operations, and cash flows will be affected. We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates. Critical accounting policies and estimates are those that we consider the most important to the portrayal of our financial condition and results of operations because they require our most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effects of matters that are inherently uncertain. See Note 2 to our annual financial statements for more information.

Revenue Recognition

We generate revenues from the sale of DC optimized inverter systems for solar PV installations which include our power optimizers, inverters, and cloud-based monitoring platform as well as other solar related products, UPS systems, Lithium-ion cells, batteries, energy storage solutions, EV powertrain solutions and machinery. Our worldwide customer base includes large solar installers, distributors, EPCs, PV module manufacturers, utility companies and other customers. Our products are fully functional at the time of shipment to the customer and do not require production, modification, or customization with the exception of some UPS and ESS systems that require installation and commissioning. We recognize revenue under the core principle that transfer of control to the customers should be depicted in an amount reflecting the consideration we expect to receive in revenue. In order to achieve that core principle, we apply the following five-step approach: (1) identify the contract with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract, and (5) recognize revenue when a performance obligation is satisfied. Provisions for rebates, sales incentives, and discounts to customers are accounted for as reductions in revenue in the same period that the related sales are recorded.

We generally sell our products to our customers pursuant to a customer’s standard purchase order and our customary terms and conditions. We do not offer rights to return our products other than for normal warranty conditions, and as such, revenue is recorded upon shipment of products to customers and transfer of title and risk of loss under standard commercial terms. We evaluate the creditworthiness of our customers to determine that appropriate credit limits are established prior to the acceptance and shipment of an order.

We provide our full web-based monitoring platform for our solar products free of charge and revenues associated with the service since that date are being recognized ratably over 25 years. In the absence of third party comparable pricing for such service, management determines the revenue levels of this service based on the costs associated with providing the service plus appropriate margins that reflect management’s best estimate of the selling price. These revenues are minimal and we do not expect this to become a significant source of revenue in the near future.

The most significant impact of the standard on our financial statements relates to advance payments received for performance obligations that extend for a period greater than one year. Applying the standard, such performance obligations are those that include a financing component, specifically: (i) warranty extension services, (ii) cloud-based monitoring, and (iii) communication services.

We recognize financing component expenses in our consolidated statement of income in relation to advance payments for performance obligations that extend for a period greater than one year. These financing component expenses are reflected in our deferred revenues balance.

See Note 2s "revenue recognition" and Note 13 "Deferred revenues" of the notes to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for additional information related to revenue recognition.

Product Warranty

We provide a standard limited product warranty for our solar products against defects in materials and workmanship under normal use and service conditions. Our standard warranty period is 25 years for our power optimizers, 12 years for our inverters, 10 years for our storage interface and a 10-year limited warranty for our residential energy hub battery. Other products are sold with standard limited warranties that typically range in duration from one to ten years, and in some cases for a longer period. In certain cases, customers can purchase an extended warranty for Critical Power products and our battery storage products that exceed the standard warranty period. In addition, customers can purchase extended warranties for inverters that increase the warranty period to up to 25 years.

Our products are designed to meet the warranty periods and our reliability procedures cover component selection, design, accelerated life cycle tests, and end-of-manufacturing line testing. However, since our history in selling power optimizers and inverters is substantially shorter than the warranty period, the calculation of warranty provisions is inherently uncertain.

We accrue for estimated warranty costs at the time of sale based on anticipated warranty claims and actual historical warranty claims experience. Warranty provisions, computed on a per-unit sold basis, are based on our best estimate of such costs and are included in our cost of revenues. The warranty obligation is determined based on actual and predicted failure rates of the products, cost of replacement and service and delivery costs incurred to correct a product failure. Our warranty obligation requires management to make assumptions regarding estimated failure rates and replacement costs.

In order to predict the failure rate of each of our products, we have established a reliability model based on the estimated mean time between failures (“MTBF”). The MTBF represents the average elapsed time predicted for each product unit between failures during operation. Applying the MTBF failure rate over our install base for each product type and generation allows us to predict the number of failed units over the warranty period and estimates the costs associated with the product warranty. Predicted failure rates are updated periodically based on data returned from the field and new product versions, as are replacement costs which are updated to reflect changes in our actual production costs for our products, subcontractors’ labor costs, and actual logistics costs.

Since the MTBF model does not take into account additional non-systematic failures such as failures caused by workmanship or manufacturing or design-related issues, and since warranty claims are at times opened for cases in which the error has been triggered by an improper installation, we have developed a supplemental model to predict such cases and recognize the associated expenses ratably over the expected claim period. This model, which is based on actual root cause analysis of returned products, identification of the causes of claims and time until each identified problem is revealed, allows us to better predict actual warranty expenses and is updated periodically based on our experience, taking into account the installed base of approximately $83.8 million power optimizers and approximately $3.5 million inverters as of December 31, 2021.

If actual warranty costs differ significantly from these estimates, adjustments may be required in the future, which could adversely affect our gross profit and results of operations. Warranty obligations are classified as short-term and long-term warranty obligations based on the period in which the warranty is expected to be claimed. The warranty provision (short and long-term) was $205.0 million and $265.2 million, in the year ended December 31, 2020 and 2021, respectively.

See Note 2u "warranty obligations" and Note 12 "Warranty obligations" of the notes to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for additional information related to product warranty.

Inventory Valuation

Our inventories comprise sellable finished goods, raw materials bought for own manufacturing or on behalf of our contract manufacturers, and faulty units returned under our warranty policy.

Sellable finished goods and raw material inventories are valued at the lower of cost or market, based on the moving average cost method. Certain factors could affect the realizable value of our inventories, including market and economic conditions, technological changes, existing product changes (mainly due to cost reduction activities), and new product introductions. We consider historic usage, expected demand, anticipated sales price, the effect of new product introductions, product obsolescence, product merchantability, and other factors when evaluating the value of inventories. Inventory write-downs are equal to the difference between the cost of inventories and their estimated fair market value. Inventory write-downs are recorded as cost of revenues in the accompanying statements of income and were $8.9 million and $7.1 million, in the year ended December 31, 2020 and 2021, respectively.

Faulty products returned under our warranty policy are often refurbished and used as replacement units. Such products are written off upon receipt.

We do not believe that there is a reasonable likelihood that there will be a material change in future estimates or assumptions that we use to record inventory at the lower of cost or market. However, if estimates regarding customer demand are inaccurate or changes in technology affect demand for certain products in an unforeseen manner, we may be exposed to losses that could be material.

See Note 2j "Inventories" and Note 4 "Inventories, net" of the notes to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for additional information related to inventory valuation.

Business Combination

We allocate the fair value of purchase consideration to the tangible assets acquired, liabilities assumed and intangible assets acquired based on their estimated fair value. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. Such valuations require our management to make significant estimates and assumptions, especially with respect to intangible assets. Significant estimates in valuing certain intangible assets include, but are not limited to, future expected cash flows from acquired technology and other intangible assets, their useful lives and discount rates. Our management’s estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates. During the measurement period, which is not to exceed one year from the acquisition date, we may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded to earnings.

See Note 2m "Business Combination" of the notes to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for additional information related to business combination.

Intangible and other long-lived assets

We evaluate the recoverability of finite-lived intangible assets for possible impairment whenever events or circumstances indicate that the carrying amount of such assets may not be recoverable. The evaluation is performed at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. Recoverability of these assets is measured by a comparison of the carrying amounts to the future undiscounted cash flows the assets are expected to generate. If such review indicates that the carrying amount of intangible assets is not recoverable, the carrying amount of such assets is reduced to fair value. We have not recorded any impairment charges during the year ended December 31, 2021.

Acquired identifiable finite-lived intangible assets are amortized on a straight-line basis or accelerated method over the estimated useful lives of the assets. We believe the basis of amortization approximates the pattern in which the assets are utilized, over their estimated useful lives. We routinely review the remaining estimated useful lives of finite-lived intangible assets. In case we reduce the estimated useful life assumption for any asset, the remaining unamortized balance is amortized or depreciated over the revised estimated useful life.

See Note 2n "Intangible Assets" of the notes to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for additional information related to intangible assets.

Goodwill

Goodwill reflects the excess of the consideration transferred, including the fair value of any contingent consideration and any non-controlling interest in the acquiree, over the assigned fair values of the identifiable net assets acquired. Goodwill is not amortized, and is assigned to reporting units and tested for impairment at least on an annual basis.

The goodwill impairment test is performed according to the following principles:

(1) An initial qualitative assessment may be performed to determine whether it is more likely than not that the fair value of the reporting unit is less than its carrying amount.
(2) If the Company concludes it is more likely than not that the fair value of the reporting unit is less than its carrying mount, a quantitative fair value test is performed. An impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value is recognized.

We complete the required annual testing of goodwill for impairment for the reporting unit on October 1 of each year and accordingly, determines whether goodwill should be impaired. During the year ended December 31, 2021, no impairment of goodwill has been identified.

See Note 2o "Goodwill" of the notes to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for additional information related to goodwill.

Income taxes

We account for income taxes in accordance with ASC 740, “Income Taxes.” ASC 740, which prescribes the use of the liability method, whereby deferred tax asset and liability account balances are determined based on differences between financial reporting and tax basis of assets and liabilities, and are measured using the enacted tax rates that will be in effect when the differences are expected to reverse.

We account for uncertain tax positions in accordance with ASC 740-10 two-step approach to recognizing and measuring uncertain tax positions. The first step is to evaluate the tax position taken or expected to be taken in a tax return by determining if the weight of available evidence indicates that it is more likely than not that, on an evaluation of the technical merits, the tax position will be sustained on audit, including resolution of any related appeals or litigation processes. The second step is to measure the tax benefit as the largest amount that is more than 50% (cumulative probability) likely to be realized upon ultimate settlement.

See Note 2ac "Income taxes" of the notes to the consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for additional information related to income taxes.

ITEM 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risk in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in foreign currency exchange rates, customer concentrations, and interest rates. We do not hold or issue financial instruments for trading purposes.

Foreign Currency Exchange Risk

Approximately 48.7%, 52.2% and 54.3% of our revenues for the years ended December 31, 2019, 2020 and 2021, respectively, were earned in non U.S. dollar denominated currencies, principally the Euro. Our expenses are generally denominated in the currencies in which our operations are located, primarily the U.S. dollar and New Israeli Shekel ("NIS"), Euro, and to a lesser extent, the South Korean Won ("KRW"). Our NIS denominated expenses consist primarily of personnel and overhead costs. Our consolidated results of operations and cash flows are, therefore, subject to fluctuations due to changes in foreign currency exchange rates and may be adversely affected in the future due to changes in foreign exchange rates. A hypothetical 10% change in foreign currency exchange rates between the Euro and the U.S. dollar would increase or decrease our net income by $68.1 million for the year ended December 31, 2021. A hypothetical 10% change in foreign currency exchange rates between the NIS and the U.S. dollar would increase or decrease our net income by $24.4 million for the year ended December 31, 2021. A hypothetical 10% change in foreign currency exchange rates during the year ended December 31, 2021, between the KRW and the U.S. dollar would increase or decrease our net income by $19.6 million for the year ended December 31, 2021.

For purposes of our consolidated financial statements, local currency assets and liabilities are translated at the rate of exchange to the U.S. dollar on the balance sheet date and local currency revenues and expenses are translated at the exchange rate as of the date of the transaction or at the average exchange rate to the U.S. dollar during the reporting period.

To date, we have used derivative financial instruments, specifically foreign currency forward contracts, to manage exposure to foreign currency risks by hedging portions of the anticipated payroll payments denominated in NIS. Our foreign currency forward contracts are expected to mitigate exchange rate changes related to the hedged assets. Those hedging contracts are designated as cash flow hedges.

In addition, we also entered into derivative instrument arrangements to hedge the Company’s exposure to currencies other than the U.S. dollar, mainly put and call options to sell Euro for U.S. dollars, forward contracts to sell AUD for U.S. dollars, forward contracts to sell Euro for U.S. dollars and forward contracts to sell U.S. dollars for KRW. These derivative instruments are not designated as cash flow hedges.

We had cash, cash equivalents and restricted cash of $827.1 million and $530.1 million at the end of the year ending December 31, 2020 and the year ended December 31, 2021, respectively, which was held for working capital purposes. We had available-for-sale marketable securities with an estimated fair value of 291.1 million and 650.0 million on December 31, 2020 and December 31, 2021, respectively. In addition, we had bank deposits of $60.1 million as of December 31, 2020. We had restricted bank deposits of $2.6 million and $1.9 million as of December 31, 2020 and December 31, 2021, respectively.

Additionally, our hedging activities may also contribute to increased losses as a result of volatility in foreign currency markets. If foreign exchange currency markets continue to be volatile, such fluctuations in foreign currency exchange rates could materially and adversely affect our profit margins and results of operations in future periods. Also, the volatility in the foreign currency markets may make it difficult to hedge our foreign currency exposures effectively.

Concentrations of Major Customers

Our trade accounts receivables potentially expose us to a concentration of credit risk with our major customers. For the year ended December 31, 2021, two major customers accounted for 30.9% of our total revenues, and as of December 31, 2021, two major customers accounted for approximately 39.3% of our consolidated trade receivables balance. For the year ended December 31, 2020, one major customer accounted for 14.8% of total revenues, and as of December 31, 2020, two major customers accounted for approximately 34.6% of our consolidated trade receivables balance. We currently do not foresee a credit risk associated with these receivables.

Commodity Price Risk

We are subject to risk from fluctuating market prices of certain commodity raw materials, including copper, which are used in our products. Prices of these raw materials may be affected by supply restrictions or other market factors from time to time, and we do not enter into hedging arrangements to mitigate commodity risk. Significant price changes for these raw materials could reduce our operating margins if we are unable to recover such increases from our customers, and could harm our business, financial condition, and results of operations.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Financial Statements

Subsequent Events

None.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of SolarEdge Technologies Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of SolarEdge Technologies Inc. and subsidiaries (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of income, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2021, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 22, 2022 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

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 the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the account or disclosure to which it relates.

Description of the Matter	As described in Notes 2u and 12 to the consolidated financial statements, as of December 31, 2021, the warranty obligation was $265,160 thousand. Substantially all of the Company's warranty obligations are related to the solar business. The calculation of such warranty obligations requires significant judgment due to the inherent complexity in estimating the amount and timing of future warranty costs. The Company's products include a warranty of up to 12 years for inverters and up to 25 years for its power optimizers. In order to predict the failure rate of each product, the Company established a reliability model based on the estimated mean time between failures ("MTBF") and an additional model to capture non-systematic failures. Predicted failure rates are updated periodically based on new product versions and analysis of the root cause of actual failures, as are warranty related replacement costs. Auditing the management’s valuation of warranty obligations was complex and subject to judgment calls due to the significant estimation required in determining its amount. In particular, the warranty obligation is subject to significant assumptions such as product failure rates, the average cost of products
How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design and tested the operating effectiveness of internal controls over the accounting for warranties, including management's assumptions and data underlying the warranty obligation valuation. Our substantive audit procedures included, among others, look back analyses and testing the accuracy and completeness of the underlying data used in management's warranty obligation valuation assessment. We assessed the accuracy of historical data used in estimating forecasted failure rates, repair replacement ratios and other warranty related costs and compared them to actual warranty claims. In addition, we involved a specialist to assess the assumptions and the precision of the inputs underlying the MTBF model, including, evaluating the appropriateness of the MTBF model and its consistency with data obtained from external sources.

/s/ Kost Forer Gabbay & Kasierer
A Member of Ernst & Young Global

We have served as the Company's auditor since 2007.
Tel-Aviv, Israel
February 22, 2022

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of SolarEdge Technologies Inc.

Opinion on Internal Control Over Financial Reporting

We have audited SolarEdge Technologies Inc. and subsidiaries' internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), (the COSO criteria). In our opinion, SolarEdge Technologies Inc. and subsidiaries (the "Company") maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2021 and 2020, the related consolidated statements of income, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2021, and the related notes and our report dated February 22, 2022 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying 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/ Kost Forer Gabbay & Kasierer
A Member of Ernst & Young Global

Tel-Aviv, Israel
February 22, 2022

SOLAREDGE TECHNOLOGIES INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except per share data)

	December 31, 2021	December 31, 2020
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 530,089	$ 827,146
Marketable securities	167,728	143,687
Trade receivables, net of allowances of $2,626 and $2,886, respectively	456,339	218,706
Inventories, net	380,143	331,696
Prepaid expenses and other current assets	176,992	198,106
Total current assets	1,711,291	1,719,341
LONG-TERM ASSETS:		
Marketable securities	482,228	147,434
Deferred tax assets, net	27,572	11,676
Property, plant and equipment, net	410,379	303,408
Operating lease right-of-use assets, net	47,137	41,600
Intangible assets, net	58,861	67,818
Goodwill	129,629	140,479
Other long-term assets	24,963	5,353
Total long-term assets	1,180,769	717,768
Total assets	$ 2,892,060	$ 2,437,109

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

SOLAREDGE TECHNOLOGIES INC.
CONSOLIDATED BALANCE SHEETS (Cont.)
(in thousands, except per share data)

	December 31, 2021	December 31, 2020
LIABILITIES AND STOCKHOLDERS’ EQUITY		
CURRENT LIABILITIES:		
Trade payables, net	$ 252,068	$ 162,051
Employees and payroll accruals	74,465	63,738
Warranty obligations	71,480	62,614
Deferred revenues and customers advances	17,789	24,648
Accrued expenses and other current liabilities	109,379	123,048
Total current liabilities	525,181	436,099
LONG-TERM LIABILITIES:		
Convertible senior notes, net	621,535	573,350
Warranty obligations	193,680	142,380
Deferred revenues	151,556	115,372
Finance lease liabilities	40,508	26,173
Operating lease liabilities	38,912	35,194
Other long-term liabilities	10,649	22,784
Total long-term liabilities	1,056,840	915,253
COMMITMENTS AND CONTINGENT LIABILITIES		
STOCKHOLDERS’ EQUITY:		
Common stock of $0.0001 par value - Authorized: 125,000,000 shares as of December 31, 2021 and December 31, 2020; issued and outstanding: 52,815,395 and 51,560,936 shares as of December 31, 2021 and December 31, 2020, respectively	5	5
Additional paid-in capital	687,295	603,891
Accumulated other comprehensive income (loss)	(27,319)	3,857
Retained earnings	650,058	478,004
Total stockholders’ equity	1,310,039	1,085,757
Total liabilities and stockholders’ equity	$ 2,892,060	$ 2,437,109

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

SOLAREDGE TECHNOLOGIES INC.
CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except per share data)

	Year ended December 31,		
	2021	**2020**	**2019**
Revenues	$ 1,963,865	$ 1,459,271	$ 1,425,660
Cost of revenues	1,334,547	997,912	946,322
Gross profit	629,318	461,359	479,338
Operating expenses:			
Research and development	219,633	163,123	121,351
Sales and marketing	119,000	95,985	87,984
General and administrative	82,196	63,119	49,361
Other operating expenses (income), net	1,350	(3,429)	30,696
Total operating expenses	422,179	318,798	289,392
Operating income	207,139	142,561	189,946
Financial income (expense), net	(19,915)	21,105	(11,343)
Income before income taxes	187,224	163,666	178,603
Income taxes	18,054	23,344	33,646
Net income	$ 169,170	$ 140,322	$ 144,957
Net loss attributable to Non-controlling interests	-	-	1,592
Net income attributable to SolarEdge Technologies, Inc.	$ 169,170	$ 140,322	$ 146,549
Net basic earnings per share of common stock	$ 3.24	$ 2.79	$ 3.06
Net diluted earnings per share of common stock	$ 3.06	$ 2.66	$ 2.90
Weighted average number of shares used in computing net basic earnings per share of common stock	52,202,182	50,217,330	47,918,938
Weighted average number of shares used in computing net diluted earnings per share of common stock	55,971,030	52,795,475	50,195,661

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

SOLAREDGE TECHNOLOGIES INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in thousands, except per share data)

	Year ended December 31,		
	2021	**2020**	**2019**
Net income	$ 169,170	$ 140,322	$ 144,957
Other comprehensive income (loss), net of tax:			
Net change related to available-for-sale securities	(4,949)	(24)	920
Net change related to cash flow hedges	874	-	-
Foreign currency translation adjustments on intra-entity transactions that are of a long-term investment nature	(17,420)	-	-
Foreign currency translation adjustments, net	(9,681)	5,690	(2,205)
Total other comprehensive income (loss)	(31,176)	5,666	(1,285)
Comprehensive income	$ 137,994	$ 145,988	$ 143,672
Comprehensive loss attributable to Non-controlling interests	-	-	981
Comprehensive income attributable to SolarEdge Technologies, Inc.	$ 137,994	$ 145,988	$ 144,653

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

SOLAREDGE TECHNOLOGIES INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except per share data)

	SolarEdge Technologies, Inc. Stockholders' Equity							
	Common stock		Additional paid in Capital	Accumulated Other comprehensive Income (loss)	Retained earnings	Total	Non-controlling interests	Total stockholders' equity
	Number	Amount						
Balance as of December 31,2018	46,052,802	$ 5	$ 371,794	$ (524)	$ 191,133	$ 562,408	$ 8,318	$ 570,726
Issuance of Common Stock upon exercise of employees and non-employees stock-based awards	1,691,896	* -	3,498	-	-	3,498	-	3,498
Issuance of Common stock under employees stock purchase plan	142,713	* -	5,568	-	-	5,568	-	5,568
Equity based compensation expenses to employees and non-employees	-	-	60,353	-	-	60,353	-	60,353
Treasury Stock	(183,395)	* -	(2)	-	-	(2)	-	(2)
Issuance of Common stock upon business combination	1,194,046	* -	34,601	-	-	34,601	-	34,601
Non-controlling interests related to business combination	-	-	-	-	-	-	67,734	67,734
Change in non-controlling interests	-	-	(20)	-	-	(20)	(73,479)	(73,499)
Other comprehensive loss adjustments	-	-	-	(1,285)	-	(1,285)	(981)	(2,266)
Net income	-	-	-	-	146,549	146,549	(1,592)	144,957
Balance as of December 31, 2019	48,898,062	$ 5	$ 475,792	$ (1,809)	$ 337,682	$ 811,670	$ -	$ 811,670
Issuance of Common Stock upon exercise of employee and non-employees stock-based awards	2,579,004	* -	16,671	-	-	16,671	-	16,671
Issuance of Common stock under employee stock purchase plan	83,870	* -	7,783	-	-	7,783	-	7,783
Equity based compensation expenses to employees and non-employees	-	-	67,309	-	-	67,309	-	67,309
Equity component of convertible senior notes, net	-	-	36,336	-	-	36,336	-	36,336
Other comprehensive loss adjustments	-	-	-	5,666	-	5,666	-	5,666
Net income	-	-	-	-	140,322	140,322	-	140,322
Balance as of December 31, 2020	51,560,936	$ 5	$ 603,891	$ 3,857	$ 478,004	$ 1,085,757	$ -	$ 1,085,757

* Represents an amount less than $1.

SOLAREDGE TECHNOLOGIES INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Cont.)
(in thousands, except per share data)

	SolarEdge Technologies, Inc. Stockholders' Equity							
	Common stock		Additional paid in Capital	Accumulated Other comprehensive Income (loss)	Retained earnings	Total	Non-controlling interests	Total stockholders' equity
	Number	Amount						
Balance as of December 31, 2020	51,560,936	$ 5	$ 603,891	$ 3,857	$ 478,004	$ 1,085,757	$ -	$ 1,085,757
Cumulative effect of adopting ASU 2020-06	-	-	(36,336)	-	2,884	(33,452)	-	(33,452)
Issuance of Common Stock upon exercise of employee and non-employees stock-based awards	1,204,861	* -	6,486	-	-	6,486	-	6,486
Issuance of Common stock under employee stock purchase plan	49,598	* -	10,661	-	-	10,661	-	10,661
Equity based compensation expenses to employees and non-employees	-	-	102,593	-	-	102,593	-	102,593
Other comprehensive income adjustments	-	-	-	(31,176)	-	(31,176)	-	(31,176)
Net income	-	-	-	-	169,170	169,170	-	169,170
Balance as of December 31, 2021	52,815,395	$ 5	$ 687,295	$ (27,319)	$ 650,058	$ 1,310,039	$ -	$ 1,310,039

* Represents an amount less than $1.

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

SOLAREDGE TECHNOLOGIES INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands, except per share data)

	Year ended December 31,		
	2021	**2020**	**2019**
Cash flows provided by operating activities:			
Net income	$ 169,170	$ 140,322	$ 144,957
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation of property, plant and equipment	29,359	22,355	17,261
Amortization of intangible assets	10,176	9,479	9,634
Amortization of debt discount and debt issuance costs	2,903	3,185	-
Amortization of premium and accretion of discount on available-for-sale marketable securities, net	9,462	1,168	92
Stock-based compensation expenses	102,593	67,309	60,353
Deferred income taxes, net	(12,045)	(2,738)	(6,037)
Exchange rate fluctuations and other items, net	20,697	3,860	8,174
Changes in assets and liabilities:			
Inventories, net	(43,051)	(149,661)	(22,544)
Prepaid expenses and other assets	(39,444)	(3,276)	(67,323)
Trade receivables, net	(247,723)	86,538	(124,071)
Trade payables, net	91,709	3,333	47,837
Employees and payroll accruals	26,519	18,315	18,592
Warranty obligations	60,524	32,274	50,780
Deferred revenues and customers advances	29,936	(21,438)	83,137
Other liabilities, net	3,344	11,630	38,158
Net cash provided by operating activities	214,129	222,655	259,000
Cash flows from investing activities:			
Investment in available-for-sale marketable securities	(579,377)	(223,705)	(160,054)
Proceed from sales and maturities of available-for-sale marketable securities	202,188	141,839	142,744
Investment in privately-held company	(16,643)	-	-
Purchase of property, plant and equipment	(149,251)	(126,790)	(72,562)
Withdrawal from (investment in) bank deposits, net	60,096	(54,752)	4,860
Withdrawal from (investment in) restricted bank deposits, net	798	25,267	(26,145)
Business combinations, net of cash acquired	-	-	(38,435)
Other investing activities	(2,022)	1,504	(3,261)
Net cash used in investing activities	$ (484,211)	$ (236,637)	$ (152,853)

SOLAREDGE TECHNOLOGIES INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS (Cont.)
(in thousands, except per share data)

	Year ended December 31,		
	2021	2020	2019
Cash flows from financing activities:			
Repayment of bank loans	$ (16,073)	$ (15,595)	$ (9,514)
Proceeds from exercise of stock-based awards and payment of withholding taxes	2,203	21,500	9,066
Proceeds from issuance of convertible senior notes, net	-	617,869	-
Proceeds from bank loans	-	16,944	249
Change in non-controlling interests	-	-	(71,468)
Other financing activities	(1,308)	(234)	(1,354)
Net cash provided by (used in) financing activities	(15,178)	640,484	(73,021)
Increase (decrease) in cash and cash equivalents	(285,260)	626,502	33,126
Cash and cash equivalents at the beginning of the period	827,146	223,901	187,764
Effect of exchange rate differences on cash and cash equivalents	(11,797)	(23,257)	3,011
Cash and cash equivalents at the end of the period	$ 530,089	$ 827,146	$ 223,901
Supplemental disclosure of non-cash activities:			
Right-of-use asset recognized with corresponding lease liability	$ 20,526	$ 29,623	$ 37,298
Issuance of common stock upon business combination	$ -	$ -	$ 34,601
Supplemental disclosure of cash flow information:			
Cash paid for income taxes	$ 45,977	$ 38,990	$ 41,076
Cash paid for interest on bank loans	$ 36	$ 321	$ 1,096

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

NOTE 1: GENERAL

SolarEdge Technologies, Inc. (the "Company") and its subsidiaries design, develop, and sell an intelligent inverter solution designed to maximize power generation at the individual photovoltaic ("PV") module level while lowering the cost of energy produced by the solar PV system and providing comprehensive and advanced safety features. The Company's products consist mainly of (i) power optimizers designed to maximize energy throughput from each and every module through constant tracking of Maximum Power Point individually per module, (ii) inverters which invert direct current (DC) from the PV module to alternating current (AC) including the Company's future ready energy hub inverter which supports among other things, connection to a DC - coupled battery for backup capabilities, (iii) a remote cloud-based monitoring platform, that collects and processes information from the power optimizers and inverters to enable customers and system owners, to monitor and manage the solar PV system (iv) a residential storage and backup solution that is used to increase energy independence and maximize self-consumption for homeowners including a battery ,and (v) additional smart energy management solutions.

The Company and its subsidiaries sell products worldwide through large distributors, electrical equipment wholesalers, as well as directly to large solar installers and engineering, procurement and construction firms.

The Company has expanded its activity to other areas of smart energy technology organically and through acquisitions. The Company now offers a variety of energy solutions, which include lithium-ion cells, batteries and energy storage systems ("Energy Storage"), full powertrain kits for electric vehicles, or EVs ("e-Mobility"), uninterrupted power supply solutions or UPS ("Critical power"), as well as automated machines for industrial use ("Automation Machines").

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The consolidated financial statements are prepared according to United States generally accepted accounting principles ("U.S. GAAP").

a. Principles of consolidation:

The consolidated financial statements include the accounts of the Company and its subsidiaries. Intercompany transactions and balances including profit from intercompany sales not yet realized outside the Company have been eliminated upon consolidation.

b. Use of estimates:

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, costs and expenses and related disclosures in the accompanying notes. The Company bases its estimates on historical experience and on various other assumptions that the Company believes to be reasonable under the circumstances. On an ongoing basis, the Company evaluates these assumptions, judgments and estimates. Actual results may differ from these estimates.

c. Financial statements in U.S. dollars:

A major part of the Company's operations is carried out in the United States, Israel and certain other countries. The functional currency of these entities is the U.S. dollar. Financing activities, including cash investments are primarily made in U.S. dollars.

Accordingly, monetary accounts maintained in currencies other than the U.S. dollar are translated into U.S. dollars in accordance with Financial Accounting Standards Board Accounting Standards Codification ("ASC") No. 830 "Foreign Currency Matters". All transaction gains and losses of the re-measurement of monetary balance sheet items are reflected in the statements of income as financial income or expenses, as appropriate.

The financial statements of other Company's subsidiaries whose functional currency is other than the U.S. dollar have been translated into U.S dollars. Assets and liabilities have been translated using the exchange rates in effect as of the balance sheet date. Statements of income amounts have been translated using the average exchange rate for the relevant periods.

The resulting translation adjustments are reported as a component of stockholders' equity in accumulated other comprehensive income (loss). Gains and losses arising from intercompany foreign currency transactions that are of a long-term investment in nature are reported in the same manner as translation adjustments.

d. Cash and cash equivalents:

Cash equivalents are short-term, highly liquid investments that are readily convertible to cash, with original maturities of three months or less at the date acquired.

e. Short-term bank deposits:

Short-term bank deposits are deposits with an original maturity of more than three months and less than a year from the date of investment and which do not meet the definition of cash equivalents. The deposits are presented according to their term deposits.

f. Restricted bank deposits:

Short-term restricted bank deposits possess an original maturity of more than three months and less than a year from the date of investment. Long-term restricted bank deposits possess an original maturity of more than one year from the date of investment. Restricted bank deposits are primarily used as collateral for the Company's office leases and credit cards.

g. Marketable Securities:

Marketable securities consist of corporate and governmental bonds. The Company determines the appropriate classification of marketable securities at the time of purchase and re-evaluates such designation at each balance sheet date. In accordance with FASB ASC No. 320 "Investments - Debt and Equity Securities", the Company classifies marketable securities as available-for-sale.

Available-for-sale securities are stated at fair value, with unrealized gains and losses reported in accumulated other comprehensive income (loss), a separate component of stockholders' equity, net of taxes. Realized gains and losses on sales of marketable securities, as determined on a specific identification basis, are included in financial income (expenses), net. The amortized cost of marketable securities is adjusted for amortization of premium and accretion of discount to maturity, both of which, together with interest, are included in financial income (expenses), net.

The Company classifies its marketable securities as either short-term or long-term based on each instrument's underlying contractual maturity date. Marketable securities with maturities of 12 months or less are classified as short-term and marketable securities with maturities greater than 12 months are classified as long-term.

On each reporting period, the Company evaluates whether declines in fair value below carrying value are due to expected credit losses, as well as the ability and intent to hold the investment until a forecasted recovery occurs, in accordance with ASC 326. Allowance for credit losses on AFS debt securities are recognized as a charge in financial income (expenses), net, on the consolidated statements of income, and any remaining unrealized losses, net of taxes, are included in accumulated other comprehensive income (loss) in stockholders' equity.

The Company has not recorded credit losses for the years ended December 31, 2021 and 2020. There was no other-than-temporary-impairment charge for any unrealized losses in 2019.

The Company determines realized gains or losses on sale of marketable securities on a specific identification method and records such gains or losses in financial income (expenses), net on the consolidated statements of income.

h. Investment in privately-held companies:

The Company's equity investments are investments in equity securities of privately-held companies, that are not traded and therefore not supported with observable market prices. The Company elected to account for its equity investments without readily determinable market values that either (i) do not meet the definition of in-substance common stock or (ii) do not provide the Company with control or significant influence using Accounting Standards Update ("ASU") 2016-01.

Under ASU 2016-01, the Company adjusts the carrying value of its investments to fair value upon observable transactions for identical or similar investments of the same issuer.

The Company periodically evaluates the carrying value of the investments in privately-held companies when events and circumstances indicate that the carrying amount of the investment may not be recovered. The maximum loss the Company can incur for its investments is their carrying value.

The Company may determine the fair value by reviewing equity valuation reports, current financial results, long-term plans of the privately-held companies, the amount of cash that the privately-held companies have on-hand, the ability to obtain additional financing and overall market conditions in which the privately-held companies operate or based on the price observed from the most recent completed financing.

All gains and losses on investments in privately-held companies, realized and unrealized, are recognized in financial income (expenses), net.

i. Trade receivables:

Trade receivables are stated net of credit losses allowance. The Company is exposed to credit losses primarily through sales of products. The allowance against gross trade receivables reflects the current expected credit loss inherent in the receivables portfolio determined based on the Company's methodology. The Company's methodology is based on historical collection experience, customer creditworthiness, current and future economic condition and market condition. Additionally, specific allowance amounts are established to record the appropriate provision for customers that have a higher probability of default. Trade receivables are written off after all reasonable means to collect the full amount have been exhausted.

(in thousands, except per share data)

The following table provides a roll-forward of the allowance for credit losses that is deducted from the amortized cost basis of trade receivables to present the net amount expected to be collected:

	Year Ended December 31, 2021
Balance, at beginning of the period	$ 2,886
Decrease in provision for expected credit losses	(142)
Amounts written off charged against the allowance and others	(118)
Balance, at end of the period	$ 2,626

j. Inventories:

Inventories are stated at the lower of cost or net realizable value. Cost includes depreciation, labor, material and overhead costs. Inventory reserves are provided to cover risks arising from slow-moving items or technological obsolescence. The Company periodically evaluates the quantities on hand relative to historical, current, and projected sales volume. Based on this evaluation, an impairment charge is recorded when required to write-down inventory to its net realizable value. Cost of finished goods and raw materials is determined using the moving average cost method.

k. Property, plant and equipment:

Property, plant and equipment are stated at cost, net of accumulated depreciation and government grants. Assets under construction represent the construction or development stage of property and equipment that have not yet been placed in service for the Company's intended use. Depreciation is calculated by the straight-line method over the estimated useful life of the assets, at the following rates:

	%
Buildings and plants	2.5-5.7 (mainly 5.4)
Computers and peripheral equipment	14.3-33.3 (mainly 33.3)
Office furniture and equipment	7-25 (mainly 7)
Machinery and equipment	10-20 (mainly 10)
Laboratory and testing equipment	7-20 (mainly 10)
Leasehold improvements	over the shorter of the lease term or useful economic life

l. Leases:

The Company determines if an arrangement is a lease at inception. Contracts containing a lease are further evaluated for classification as an operating or finance lease. In determining the leases classification the Company assesses among other criteria: (i) 75% or more of the remaining economic life of the underlying asset is a major part of the remaining economic life of that underlying asset; and (ii) 90% or more of the fair value of the underlying asset comprises substantially all of the fair value of the underlying asset. Operating leases are included in operating lease right-of-use ("ROU") assets, other current liabilities and long-term operating lease liabilities in the Company's consolidated balance sheets. Finance leases are included in property, plant and equipment, net, other current liabilities, and long-term finance lease liabilities in the Company's consolidated balance sheets. ROU assets represent the right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. For leases with terms greater than 12 months, the Company records the ROU asset and liability at commencement date based on the present value of lease payments according to their term.

The Company uses incremental borrowing rates based on the estimated rate of interest for collateralized borrowing over a similar term of the lease payments at commencement date. The ROU asset also includes any lease payments made and excludes lease incentives. Lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expenses are recognized on a straight-line basis over the lease term or the useful life of the leased asset.

In addition, the carrying amount of the ROU and lease liabilities are remeasured if there is a modification, a change in the lease term, a change in the in-substance fixed lease payments or a change in the assessment to purchase the underlying asset.

m. Business Combination:

The Company allocates the fair value of the purchase price to the tangible assets acquired, liabilities assumed and intangible assets acquired based on their estimated fair value. The excess of the fair value of the purchase price over the fair values of these identifiable assets and liabilities is recorded as goodwill. Such valuations require management to make significant estimates and assumptions, especially with respect to intangible assets.

Significant estimates in valuing certain intangible assets include, but are not limited to, future expected cash flows from acquired technology and discount rates. Management’s estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates. During the measurement period, which does not exceed one year from the acquisition date, the Company may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the finalization of the measurement period, any subsequent adjustments are recorded to earnings.

n. Intangible Assets:

The Company evaluates the recoverability of finite-lived intangible assets for possible impairment whenever events or circumstances indicate that the carrying amount of such assets may not be recoverable.

The evaluation is performed at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. Recoverability of these group of assets is measured by a comparison of the carrying amounts to the future undiscounted cash flows the group of assets is expected to generate.

If such review indicates that the carrying amount of intangible assets is not recoverable, the carrying amount of such assets is reduced to fair value.

Acquired identifiable finite-lived intangible assets are amortized on a straight-line basis or accelerated method over the estimated useful lives of the assets. The basis of amortization approximates the pattern in which the assets are utilized, over their estimated useful lives. The Company routinely reviews the remaining estimated useful lives of finite-lived intangible assets. In case the Company reduces the estimated useful life for any asset, the remaining unamortized balance is amortized or depreciated over the revised estimated useful life (see Note 8).

For the years ended December 31, 2021, 2020 and 2019, no impairment losses have been identified.

o. Goodwill:

Goodwill reflects the excess of the consideration transferred, including the fair value of any contingent consideration and any non-controlling interest in the acquiree, over the assigned fair values of the identifiable net assets acquired. Goodwill is not amortized, and is assigned to reporting units and tested for impairment at least on an annual basis, in the fourth quarter of the fiscal year.

The goodwill impairment test is performed according to the following principles:

(1) An initial qualitative assessment may be performed to determine whether it is more likely than not that the fair value of the reporting unit is less than its carrying amount.
(2) If the Company concludes it is more likely than not that the fair value of the reporting unit is less than its carrying amount, a quantitative fair value test is performed. An impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value is recognized.

The Company has not recorded any impairment charges of goodwill during the years ended December 31, 2021, 2020 and 2019.

p. Impairment of long-lived assets:

The Company’s long-lived assets, other than goodwill and intangible assets, including right-of-use assets, are reviewed for impairment in accordance with ASC 360 “Property, Plants and Equipment”, whenever events or changes in circumstances indicate that the carrying amount of an asset (or asset group) may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset (or asset group) to the future undiscounted cash flows expected to be generated by the assets (or asset group). If such assets are considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the assets exceeds their fair value.

For the years ended December 31, 2021, 2020 and 2019, no impairment losses have been identified.

q. Severance pay:

The employees of the Company’s Israeli subsidiary are included under Section 14 of the Severance Pay Law, 1963, under which these employees are entitled only to monthly deposits made in their name with insurance companies, at a rate of 8.33% of their monthly salary. These payments cause the Company to be released from any future obligation under the Israeli Severance Pay Law to make severance payments in respect of those employees; therefore, related assets and liabilities are not presented in the consolidated balance sheets.

For the years ended December 31, 2021, 2020 and 2019, the Company recorded $14,231, $10,598 and $7,285 in severance expenses related to its employees, respectively.

r. Derivatives and Hedging:

The Company accounts for derivatives and hedging based on ASC 815 ("Derivatives and Hedging"). ASC 815 requires the Company to recognize all derivatives on the balance sheet at fair value. The accounting for changes in the fair value (i.e., gains or losses) of a derivative instrument depends on whether it has been designated and qualifies as part of a hedging relationship and further, on the type of hedging relationship.

To protect against the increase in value of forecasted foreign currency cash flows resulting from salary denominated in the Israeli currency, the New Israeli Shekels ("NIS"), during the year ended December 31, 2021, the Company instituted a foreign currency cash flow hedging program whereby portions of the anticipated payroll denominated in NIS for a period of one to nine months with hedging contracts.

Accordingly, when the dollar strengthens against the NIS, the decline in present value of future foreign currency expenses is offset by losses in the fair value of the hedging contracts. Conversely, when the dollar weakens, the increase in the present value of future foreign currency cash flows is offset by gains in the fair value of the hedging contracts. These hedging contracts are designated as cash flow hedges, as defined by ASC 815 and are all effective hedges.

The Company also entered into derivative instrument arrangements to hedge the Company's exposure to currencies other than the U.S. dollar. These derivative instruments are not designated as cash flow hedges, as defined by ASC 815, and therefore all gains and losses, resulting from fair value remeasurement, were recorded immediately in the statement of income, as a financial (expense) income, net.

s. Revenue recognition:

Revenues are recognized in accordance with ASC 606; revenue from contracts with customers is recognized when control of the promised goods or services is transferred to the customers, in an amount that the Company expects in exchange for those goods or services.

The Company's products consist mainly of (i) power optimizers, (ii) inverters, (iii) residential batteries, (iv) a related cloud-based monitoring platform, (v) communication services, (vi) UPS units, (vii) Lithium-ion cells and other storage solutions (viii) powertrain kits for EVs, and (ix) automated machinery for manufacturing lines.

The Company recognizes revenue under the core principle that transfer of control to the Company's customers should be depicted in an amount reflecting the consideration the Company expects to receive in revenue.

In order to achieve that core principle, the Company applies the following five-step approach: (1) identify the contract with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract, and (5) recognize revenue when the performance obligation is satisfied.

(1) Identify the contract with a customer

A contract is an agreement or purchase order between two or more parties that creates enforceable rights and obligations. In evaluating the contract, the Company analyzes the customer's intent and ability to pay the amount of promised consideration (credit risk) and considers the probability of collecting substantially all of the consideration.

The Company determines whether collectability is reasonably assured on a customer-by-customer basis pursuant to its credit review policy. The Company typically sells to customers with whom it has a long-term business relationship and a history of successful collection. For a new customer, or when an existing customer substantially expands its commitments, the Company evaluates the customer's financial position, the number of years the customer has been in business, the history of collection with the customer, and the customer's ability to pay, and typically assigns a credit limit based on that review.

(2) Identify the performance obligations in the contract

At a contract's inception, the Company assesses the goods or services promised in a contract with a customer and identifies the performance obligations. The main performance obligations are the provisions of the following: delivery of the Company's products; cloud based monitoring services; extended warranty services and communication services.

(3) Determine the transaction price

The transaction price is the amount of consideration to which the Company is entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties. Generally, the Company does not provide price protection, stock rotation, and/or right of return. The Company determines the transaction price for all satisfied and unsatisfied performance obligations identified in the contract from contract inception to the beginning of the earliest period presented. Rebates or discounts on goods or services are accounted for as variable consideration. The rebate or discount program is applied retrospectively for future purchases. Provisions for rebates, sales incentives, and discounts to customers are accounted for as reductions in revenue in the same period the related sales are recorded.

Accrual for rebates for direct customers is presented net of receivables. Accrual for sale incentives related to non-direct customers is presented under accrued expenses and other current liabilities. The Company accrued $152,717 and $65,131 for rebates and sales incentives as of December 31, 2021 and 2020, respectively.

When a contract provides a customer with payment terms of more than a year, the Company considers whether those terms create variability in the transaction price and whether a significant financing component exists.

As of December 31, 2021, the Company has not provided payment terms of more than a year.

The performance obligations that extend for a period greater than one year are those that include a financial component: (i) warranty extension services, (ii) cloud-based monitoring, and (iii) communication services. The Company recognizes financing component expenses in its consolidated statement of income in relation to advance payments for performance obligations that extend for a period greater than one year. These financing component expenses are reflected in the Company's deferred revenues balance.

(4) Allocate the transaction price to the performance obligations in the contract

The Company performs an allocation of the transaction price to each separate performance obligation, in proportion to their relative standalone selling prices.

(5) Recognize revenue when a performance obligation is satisfied

Revenue is recognized when or as performance obligations are satisfied by transferring control of a promised good or service to a customer. Control either transfers over time or at a point in time, which affects when revenue is recorded.

Revenues from sales of products are recognized when control is transferred (based on the agreed International Commercial terms, or "INCOTERMS"). Revenues related to warranty extension services, cloud-based monitoring, and communication services are recognized over time on a straight-line basis.

Deferred revenues consist of deferred cloud-based monitoring services, communication services, warranty extension services and advance payments received from customers for the Company's products. Deferred revenues are classified as short-term and long-term deferred revenues based on the period in which revenues are expected to be recognized (see Note 13).

t. Cost of revenues:

Cost of revenues includes the following: product costs consisting of purchases from contract manufacturers and other suppliers, direct and indirect manufacturing costs, shipping and handling, support, warranty expenses and changes in warranty provision, provision for losses related to slow moving and dead inventory, personnel and logistics costs.

Shipping and handling costs, which amounted to $116,574, $101,597 and $113,635, for the years ended December 31, 2021, 2020 and 2019, respectively, are included in the cost of revenues in the consolidated statements of income. Shipping and handling costs include custom tariff charges and all other costs associated with the distribution of finished goods from the Company's point of sale directly to its customers.

u. Warranty obligations:

The Company provides a product warranty for its solar segment related products as follows: a standard 10-year limited warranty for its residential batteries, a standard 12-year limited warranty for the majority of its inverters, that is extendable to 20 or 25 years for an additional cost and a 25-year limited warranty for power optimizers.

In certain cases, the Company provides an extended warranty for inverters that increases the warranty period for up to 25 years.

The Company maintains reserves to cover the expected costs that could result from the standard warranty. The warranty liability is in the form of product replacement and associated costs. Warranty reserves are based on the Company's best estimate of such costs and are included in cost of revenues. The reserve for the related warranty expenses is based on various factors including assumptions about the frequency of warranty claims on product failures, derived from results of accelerated lab testing, field monitoring, analysis of the history of product field failures, and the Company's reliability estimates.

The Company has established a reliability measurement system based on the units' estimated mean time between failure, or MTBF, a metric that equates to a steady-state failure rate per year for each product generation. The MTBF predicts the expected failure rate of each product within the Company's products installed base during the expected product warranted lifetime.

The Company performs accelerated life cycle testing, which simulates the service life of the product in a short period of time.

The accelerated life cycle tests incorporate test methodologies derived from standard tests used by solar module vendors to evaluate the period over which solar modules wear out. Corresponding replacement costs are updated periodically to reflect changes in the Company's actual and estimated production costs for its products, rate of usage of refurbished units as a replacement of faulty units, and other costs related to logistic and subcontractors' services associated with the replacement products.

In addition, through the collection of actual field failure statistics, the Company has identified several additional failure causes that are not included in the MTBF model. Such causes, which mostly consist of design errors, workmanship errors caused during the manufacturing process and, to a lesser extent, replacement of non-faulty units by installers, result in generating additional replacement costs to the replacement costs projected under the MTBF model.

For other products, the Company accrues for warranty costs based on the Company's best estimate of product and associated costs. The Company's other products are sold with a standard limited warranty that typically range in duration from one to ten years.

Warranty obligations are classified as short-term and long-term obligations based on the period in which the warranty is expected to be claimed.

v. Convertible senior notes:

Prior to January 1, 2021, the Company separated the Notes into liability and equity components. On issuance, the carrying amount of the equity components was recorded as a debt discount and subsequently amortized to interest expense. Total initial issuance costs of $14,631 related to the Notes were allocated between the liability and equity components in the same proportion as the allocation of the total proceeds to the liability and equity components. The Company initially allocated issuance costs of $13,501 and $1,130 to the liability and equity components, respectively. The issuance costs attributable to the equity component were netted against the respective equity component in additional paid-in capital. Issuance costs attributable to the liability component are being amortized to interest expense over the respective term of the Notes using the effective interest rate method.

Effective January 1, 2021, the Company early adopted ASU 2020-06 using the modified retrospective approach. The Notes are accounted for as a single liability measured at its amortized cost, as no other embedded features require bifurcation and recognition as derivatives. Adoption of the new standard resulted in an increase of retained earnings in an amount of $2,884, a decrease of an additional paid-in capital in an amount of $36,336, an increase of convertible senior notes, net, in an amount of $45,282 and a decrease of deferred tax liabilities, net, in an amount of $11,830. The impact of adoption of this standard on the Company's earnings per share was immaterial.

The Company's Convertible Senior Notes are included in the calculation of diluted Earnings Per Share ("EPS") if the assumed conversion into common shares is dilutive, using the "if-converted" method. This involves adding back the periodic non-cash interest expense net of tax associated with the Notes to the numerator and by adding the shares that would be issued in an assumed conversion (regardless of whether the conversion option is in or out of the money) to the denominator for the purposes of calculating diluted EPS, unless the Notes are antidilutive (See Note 20).

w. Research and development costs:

Research and development costs, are charged to the consolidated statement of income as incurred.

x. Concentrations of credit risks:

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents, short-term bank deposits, restricted bank deposits, marketable securities, trade receivables and other accounts receivable.

Cash and cash equivalents, short-term bank deposits and restricted bank deposits are mainly invested in major banks in the U.S., Israel and Korea. Management believes that the financial institutions that hold the Company's investments are financially sound and, accordingly, minimal credit risk exists with respect to these investments.

The Company's debt marketable securities include investments in highly-rated corporate debentures (located mainly in U.S., UK, France, South Korea, Netherlands and other countries) and governmental bonds. The financial institutions that hold the Company's debt marketable securities are major financial institutions located in the United States. The Company believes its debt marketable securities portfolio is a diverse portfolio of highly-rated securities and the Company's investment policy limits the amount the Company may invest in an issuer (see Note 2g.).

The trade receivables of the Company derive from sales to customers located primarily in the United States and Europe.

The Company performs ongoing credit evaluations of its customers for the purpose of determining the appropriate allowance for credit losses (see Note 2i.). The Company generally does not require collaterals, however, in certain circumstances, the Company may require letters of credit, other collateral, or additional guarantees. From time to time, the Company may purchase trade credit insurance.

The Company had two major customers (customers with attributable revenues that represents more than 10% of total revenues) for the year ended December 31, 2021 and one major customer for the years ended December 31, 2020, and 2019 that accounted for approximately 30.9%, 14.8% and 20.4% of the Company’s consolidated revenues, respectively. All of the revenues from these customers were generated in the solar segment.

The Company had two major customers (customer with a balance that represents more than 10% of total trade receivables, net) as of December 31, 2021 and 2020 that accounted in the aggregate for approximately 39.3% and 34.6%, of the Company’s consolidated trade receivables, net, respectively.

y. Concentrations of supply risks:

The Company depends on two contract manufacturers and several limited or single source component suppliers. Reliance on these vendors makes the Company vulnerable to possible capacity constraints and reduced control over component availability, delivery schedules, manufacturing yields, and costs.

As of December 31, 2021 and 2020, two contract manufacturers collectively accounted for 27.9% and 48.5% of the Company’s total trade payables, net, respectively.

During 2020, the Company started production in its manufacturing facility in the North of Israel, “Sella 1”. During the second quarter of 2021, Sella 1 reached full manufacturing capacity.

z. Fair value of financial instruments:

The following methods and assumptions were used by the Company in estimating the fair value of its financial instruments:

The carrying value of cash and cash equivalents, short-term bank deposits, restricted bank deposits, trade receivables, net, long term bank loans and current maturities, prepaid expenses and other current assets, trade payables, net, employee and payroll accruals and accrued expenses and other current liabilities approximate their fair values due to the short-term maturities of such instruments.

Assets measured at fair value on a recurring basis as of December 31, 2021 and 2020 are comprised of money market funds, derivative instruments and debt marketable securities (see Note 11).

The Company applies ASC 820 “Fair Value Measurements and Disclosures”, with respect to fair value measurements of all financial assets and liabilities. Fair value is an exit price, representing the amount that would be received for the sale of 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 a liability.

A three-tiered fair value hierarchy is established as a basis for considering such assumptions and for inputs used in the valuation methodologies in measuring fair value:

Level 1- Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets.
Level 2- Include other inputs that are directly or indirectly observable in the marketplace.
Level 3- Unobservable inputs which are supported by little or no market activity.

The fair value hierarchy also requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

aa. Stock-based compensation:

The Company uses the closing trading price of its common stock on the day before the grant date as the fair value of awards of restricted stock units ("RSUs"), and performance stock units that are based on the Company's financial performance targets ("PSUs"). The compensation expense for RSUs is recognized using a straight-line attribution method over the requisite employee service period while compensation expense for PSUs is recognized using an accelerated amortization model. The Company estimates the forfeitures at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Estimated forfeitures are based on actual historical pre-vesting forfeitures.

The Company selected the Black-Scholes-Merton option-pricing model as the most appropriate fair value method for its stock-option awards and Employee Stock Purchase Plan (“ESPP”). The option-pricing model requires a number of assumptions, of which the most significant are the fair market value of the underlying common stock, expected stock price volatility, and the expected option term. Expected volatility for stock-option awards and ESPP was calculated based upon the Company’s stock prices. The expected term of options granted is based upon historical experience and represents the period between the options’ grant date and the expected exercise or expiration date. The risk-free interest rate is based on the yield from U.S. treasury bonds with an equivalent term. The Company doesn't use dividend yield rate since the Company has not declared or paid any dividends on its common stock and does not expect to pay any dividends in the foreseeable future.

(in thousands, except per share data)

The Company measures a modified stock based award at fair value and recognizes the compensation cost at the beginning of the modification date over the employee's requisite service period of the modified award. The fair value for options granted to employees and ESPP in the years ended December 31, 2021, 2020 and 2019, are estimated at the date of grant using the following assumptions:

	Year ended December 31,		
	2021	**2020**	**2019**
Employee Stock Options			
Risk-free interest	0.43%	1.73%	2.53%
Dividend yields	0%	0%	0%
Volatility	60.74%	58.98%	56.26%
Expected option term in years	5.48	6.00	6.03
Estimated forfeiture rate	0%	0%	0%
ESPP			
Risk-free interest	0.03% - 0.10%	0.09% - 1.63%	1.63% - 2.35%
Dividend yields	0%	0%	0%
Volatility	48.39% - 76.05%	55.95% - 92.57%	46.68% - 55.95%
Expected term	6 months	6 months	6 months

ab. Earnings per share

Basic net EPS is computed by dividing the net earnings attributable to SolarEdge Technologies, Inc. by the weighted-average number of shares of common stock outstanding during the period.

Diluted net EPS is computed by giving effect to all potential shares of common stock, to the extent dilutive, including stock options, RSUs, PSUs, shares to be purchased under the Company's ESPP, and the Notes due 2025, all in accordance with ASC No. 260, "Earnings Per Share."

ac. Income taxes:

The Company and its subsidiaries account for income taxes in accordance with ASC 740, “Income Taxes”. ASC 740 prescribes the use of the liability method, whereby deferred tax asset and liability account balances are determined based on differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates that will be in effect when the differences are expected to reverse.

Deferred income tax balances reflect the effects of temporary differences between the carrying amounts of assets and liabilities and their tax bases and are stated at enacted tax rates expected to be in effect when taxes are actually paid or recovered. Deferred tax assets are evaluated for future realization and reduced by a valuation allowance to the extent the Company believes they will not be realized.

The Company accounts for uncertain tax positions in accordance with ASC 740-10 two-step approach to recognizing and measuring uncertain tax positions. The first step is to evaluate the tax position taken or expected to be taken in a tax return by determining if the weight of available evidence indicates that it is more likely than not that, on an evaluation of the technical merits, the tax position will be sustained on audit, including resolution of any related appeals or litigation processes. The second step is to measure the tax benefit as the largest amount that is more than 50% (cumulative probability) likely to be realized upon ultimate settlement.

ad. New accounting pronouncements not yet effective:

In October 2021, the FASB issued ASU No. 2021-08, Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers (ASU 2021-08), which clarifies that an acquirer of a business should recognize and measure contract assets and contract liabilities in a business combination in accordance with Accounting Standards Codification (ASC) Topic 606, Revenue from Contracts with Customers (Topic 606). This guidance is effective for fiscal years beginning after 15 December 2022 and interim periods within those fiscal years. Early adoption is permitted. The Company is currently evaluating the impact of the new guidance on its consolidated financial statements

In November 2021, the FASB issued ASU No. 2021-10, Government Assistance (Topic 832): Disclosure by Business Entities about Government Assistance (ASU 2021-10), which improves the transparency of government assistance received by most business entities by requiring the disclosure of: (1) the types of government assistance received; (2) the accounting for such assistance; and (3) the effect of the assistance on a business entity's financial statements. This guidance is effective for financial statements issued for annual periods beginning after 15 December 2021. Early adoption is permitted. The impact of this ASU on the Company’s consolidated financial statements is expected to be immaterial.

ae. Recently issued and adopted pronouncements:

In January 2020, the FASB issued ASU 2020-01, Investments-Equity Securities (Topic 321), Investments-Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815), which clarifies the interaction between the accounting for equity securities in Topic 321, the accounting for equity method investments in Topic 323, and the accounting for certain forward contracts and purchased options in Topic 815. The guidance is effective for interim and annual periods beginning after December 15, 2020. Effective January 1, 2021, the Company adopted this standard on a prospective basis. The impact of adoption of this standard on the Company’s consolidated financial statements was immaterial.

In August 2020, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update No. 2020-06, Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity (ASU 2020-06), which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts on an entity’s own equity. This guidance also eliminates the treasury stock method to calculate diluted earnings per share for convertible instruments and requires the use of the if-converted method. ASU 2020-06 is effective for fiscal years beginning after December 15, 2021, with early adoption permitted. Effective January 1, 2021, the Company early adopted ASU 2020-06 using the modified retrospective approach. Adoption of the new standard resulted in an increase of retained earnings in an amount of $2,884, a decrease of an additional paid-in capital in an amount of $36,336, an increase of convertible senior notes, net, in an amount of $45,282 and a decrease of deferred tax liabilities, net, in an amount of $11,830. Interest expense recognized in future periods will be reduced as a result of accounting for the convertible debt instrument as a single liability measured at its amortized cost. The impact of adoption of this standard on the Company’s earnings per share was immaterial.

The consolidated financial statements for the year ended December 31, 2021 are presented under the new standards, while comparative periods presented are not adjusted and continue to be reported in accordance with the Company’s historical accounting policy.

af. Certain prior period amounts have been reclassified to conform to the current period presentation.

(in thousands, except per share data)

NOTE 3: MARKETABLE SECURITIES

The following is a summary of available-for-sale marketable securities at December 31, 2021:

	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale – matures within one year:				
Corporate bonds	$ 160,462	$ 23	$ (320)	$ 160,165
Governmental bonds	7,576	-	(13)	7,563
	168,038	23	(333)	167,728
Available for-sale – matures after one year:				
Corporate bonds	474,412	9	(5,580)	468,841
Governmental bonds	13,506	-	(119)	13,387
	487,918	9	(5,699)	482,228
Total	$ 655,956	$ 32	$ (6,032)	$ 649,956

The following is a summary of available-for-sale marketable securities at December 31, 2020:

	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale – matures within one year:				
Corporate bonds	$ 141,824	$ 509	$ (57)	$ 142,276
Governmental bonds	1,400	11	-	1,411
	143,224	520	(57)	143,687
Available for-sale – matures after one year:				
Corporate bonds	142,701	65	(214)	142,552
Governmental bonds	4,895	-	(13)	4,882
	147,596	65	(227)	147,434
Total	$ 290,820	$ 585	$ (284)	$ 291,121

Proceeds from maturity of available-for-sale marketable securities during the years ended December 31, 2021, 2020 and 2019, were $187,375, $141,839 and $120,834, respectively.

Proceeds from sales of available-for-sale marketable securities during the year ended December 31, 2021 were $14,813, which led to realized losses of $16.

The Company had no proceeds from sales of available-for sale, marketable securities during the year ended December 31, 2020, therefore no realized gains or losses from the sale of available-for-sale marketable securities were recognized.

Proceeds from sales of available-for-sale marketable securities during the year ended December 31, 2019 were $21,910, which led to realized losses of $91.

(in thousands, except per share data)

NOTE 4: INVENTORIES, NET

	As of December 31, 2021	As of December 31, 2020
Raw materials	$ 247,386	$ 128,363
Work in process	13,863	25,461
Finished goods	118,894	177,872
	$ 380,143	$ 331,696

The Company recorded inventory write-downs of $7,142, $8,864 and $4,528 for the years ended December 31, 2021, 2020 and 2019, respectively.

NOTE 5: PREPAID EXPENSES AND OTHER CURRENT ASSETS

	As of December 31, 2021	As of December 31, 2020
Vendor non-trade receivables (*)	$ 71,041	$ 56,617
Government authorities	63,440	50,041
Bank deposits	-	60,096
Prepaid expenses and other	42,511	31,352
	$ 176,992	$ 198,106

(*) Vendor non-trade receivables derived from the sale of components to manufacturing vendors who manufacture products for the Company. The Company purchases these components directly from other suppliers. The Company does not reflect the sale of these components to the contract manufacturers in its revenues (see also Note 18b).

NOTE 6: PROPERTY, PLANT AND EQUIPMENT, NET

	As of December 31, 2021	As of December 31, 2020
Cost:		
Land	$ 13,829	$ 17,935
Buildings and plants	62,519	49,855
Computers and peripheral equipment	44,960	37,354
Office furniture and equipment	10,772	8,639
Laboratory and testing equipment	41,365	29,733
Machinery and equipment	201,406	183,512
Leasehold improvements	73,991	48,610
Assets under construction and payments on account	112,037	48,344
Gross property, plant and equipment	560,879	423,982
Less - accumulated depreciation	150,500	120,574
Total property, plant and equipment, net	$ 410,379	$ 303,408

Depreciation expenses for the years ended December 31, 2021, 2020 and 2019, were $29,359, $22,355 and $17,261, respectively.

(in thousands, except per share data)

NOTE 7: LEASES

The following table summarizes the Company's lease-related assets and liabilities recorded on the consolidated balance sheets:

Description	Classification on the consolidated Balance Sheet	2021	2020
Assets:			
Operating lease assets, net of lease incentive obligation	Operating lease right-of use assets, net	$ 47,137	$ 41,600
Finance lease assets	Property, plant and equipment, net	41,758	28,551
Total lease assets		$ 88,895	$ 70,151
Liabilities:			
Operating leases short term	Accrued expenses and other current liabilities	$ 12,728	$ 10,994
Finance leases short term	Accrued expenses and other current liabilities	1,875	1,686
Operating leases long term	Operating lease liabilities	38,912	35,194
Finance leases long term	Finance lease liabilities	40,508	26,173
Total lease liabilities		$ 94,023	$ 74,047

The following table presents certain information related to the operating and finance leases:

	Year ended December 31,	
	2021	2020
Finance leases:		
Finance lease cost	$ 2,065	$ 198
Weighted average remaining lease term in years	16.43	16.75
Weighted average annual discount rate	1.93%	1.49%
Operating leases:		
Operating lease cost	$ 14,890	$ 12,741
Weighted average remaining lease term in years	10.25	9.94
Weighted average annual discount rate	1.68%	1.68%

The following table presents supplemental cash flows information related to the lease costs for operating and finance leases:

	Year ended December 31,	
	2021	2020
Cash paid for amounts included in measurement of lease liabilities:		
Operating cash flows for operating leases	$ 14,890	$ 12,741
Operating cash flows for finance leases	$ 523	$ 72
Financing cash flows for finance leases	$ 1,293	$ 234

(in thousands, except per share data)

The following table reconciles the undiscounted cash flows for each of the first five years and the total of the remaining years of the operating and finance lease liabilities recorded on the consolidated balance sheets:

	Operating Leases	Finance Leases
2022	$ 13,332	$ 2,749
2023	11,495	2,749
2024	6,512	2,798
2025	3,671	2,945
2026	2,416	2,945
Thereafter	19,968	36,509
Total lease payments	$ 57,394	$ 50,695
Less amount of lease payments representing interest	(5,754)	(8,312)
Present value of future lease payments	$ 51,640	$ 42,383
Less current lease liabilities	(12,728)	(1,875)
Long-term lease liabilities	$ 38,912	$ 40,508

(in thousands, except per share data)

NOTE 8: INTANGIBLE ASSETS AND GOODWILL, NET

a. Intangible assets:

Acquired intangible assets consisted of the following as of December 31, 2021, and 2020:

	As of December 31,	
	2021	**2020**
Intangible assets with finite lives:		
Current Technology	$ 74,976	$ 78,375
Customer relationships	3,946	4,227
Trade names	3,929	4,280
Assembled workforce	3,575	-
Patents	1,400	1,400
Gross intangible assets	87,826	88,282
Less - accumulated amortization	(28,965)	(20,464)
Total intangible assets, net	$ 58,861	$ 67,818

Amortization expenses for the years ended December 31, 2021, 2020 and 2019, were $10,176, $9,479 and $9,634, respectively.

Expected future amortization expenses of intangible assets as of December 31, 2021 are as follows:

2022	10,755
2023	10,741
2024	10,176
2025	9,142
2026	8,356
2027 and thereafter	9,691
	58,861

b. Goodwill:

The following summarizes the goodwill activity for the year ended December 31, 2021, and 2020:

	Solar	**All other**	**Total**
Goodwill at December 31, 2019	$ 31,265	$ 98,389	$ 129,654
Changes during the year:			
Foreign currency adjustments	1,990	8,835	10,825
Goodwill at December 31, 2020	33,255	107,224	140,479
Changes during the year:			
Foreign currency adjustments	(2,750)	(8,100)	(10,850)
Goodwill at December 31, 2021	$ 30,505	$ 99,124	$ 129,629

NOTE 9: INVESTMENT IN PRIVATELY-HELD COMPANY

On January 31, 2021, the Company completed an investment of $11,643 in the preferred stock of AutoGrid Systems, Inc. ("AutoGrid"), a privately held company without readily determinable fair values.

On February 1, 2021, the Company signed on a preferred stock purchase agreement for an additional investment of $5,000 in AutoGrid's preferred stock (the "second investment"). On April 28, 2021, the Company completed the second investment.

The Company accounted for the AutoGrid investment as an equity investment that does not have readily determinable fair values. As such, the Company’s non-marketable equity securities had a carrying value of $16,643 as of December 31, 2021.

Investments in privately-held companies are included within other long-term assets on the consolidated balance sheets.

No impairment or other adjustments related to observable price changes in orderly transactions for identical or similar investments were identified for the year ended December 31, 2021.

NOTE 10: DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

As of December 31, 2021, the Company entered into forward contracts to sell U.S. dollars for NIS in the amount of $64,997.

As of December 31, 2021, the Company entered into forward contracts to sell Australian dollars (“AUD”) for U.S. dollars in the amount of AUD 18 million.

As of December 31, 2021, the Company entered into forward contracts and put and call options to buy and sell Euro for U.S. dollars in the amount of €24.5 million and €9 million, respectively.

As of December 31, 2021, the Company entered into forward contracts to sell U.S. dollars for South Korean Won in the amount of $40,000.

The fair value of derivative assets as of December 31, 2021, and 2020 was $4,009 and $3,786, which were recorded in prepaid expenses and other current assets in the Consolidated Balance Sheets, respectively.

The fair value of derivative liabilities as of December 31, 2021, and 2020 was $169 and $5,819, which was recorded in accrued expenses and other current liabilities in the Consolidated Balance Sheets, respectively.

For the years ended December 31, 2021 and 2020 Company recorded a gain and a loss in the amount of $9,417 and $4,013, respectively, in financial (expense) income, net, related to the derivative instruments not designated as cash flow hedges (see Note 23).

For the years ended December 31, 2021 and 2020, the Company recorded an unrealized gain in the amount of $3,289 and $966 net of tax effect, respectively, in “accumulated other comprehensive gain (loss)” related to the derivative assets designated as hedging instruments.

As of December 31, 2019 and for the year then ended, the Company had no derivative instruments.

(in thousands, except per share data)

NOTE 11: FAIR VALUE MEASUREMENTS

In accordance with ASC 820, the Company measures its cash equivalents and marketable securities, at fair value using the market approach valuation technique. Cash equivalents and marketable securities are classified within Level 1 and Level 2, respectively, because these assets are valued using quoted market prices or alternative pricing sources and models utilizing market observable inputs. Foreign currency derivative contracts are classified within the Level 2 value hierarchy, as the valuation inputs are based on quoted prices and market observable data of similar instruments.

The following table sets forth the Company's assets that were measured at fair value as of December 31, 2021 and 2020 by level within the fair value hierarchy:

Description	Fair Value Hierarchy	Fair value measurements as of December 31, 2021	Fair value measurements as of December 31, 2020
Assets:			
Cash equivalents:			
Money market mutual funds	Level 1	$ 21,680	$ 480,673
Derivative instruments asset:			
Forward contracts designated as hedging instruments	Level 2	$ 992	$ -
Options and forward contracts not designated as hedging instruments	Level 2	$ 3,017	$ 3,786
Short-term marketable securities:			
Corporate bonds	Level 2	$ 160,165	$ 142,276
Governmental bonds	Level 2	$ 7,563	$ 1,411
Long-term marketable securities:			
Corporate bonds	Level 2	$ 468,841	$ 142,552
Governmental bonds	Level 2	$ 13,387	$ 4,882
Liabilities			
Derivative instruments liability:			
Options and forward contracts not designated as hedging instruments	Level 2	$ (169)	$ (5,819)

(in thousands, except per share data)

NOTE 12: WARRANTY OBLIGATIONS

Changes in the Company's product warranty obligations for the years ended December 31, 2021 and 2020, were as follows:

	December 31,	
	2021	2020
Balance, at the beginning of the period	$ 204,994	$ 172,563
Additions and adjustments to cost of revenues	150,684	102,832
Usage and current warranty expenses	(90,518)	(70,401)
Balance, at end of the period	265,160	204,994
Less current portion	(71,480)	(62,614)
Long term portion	$ 193,680	$ 142,380

NOTE 13: DEFERRED REVENUES

Deferred revenues consist of deferred cloud-based monitoring services, communication services, warranty extension services and advance payments received from customers for the Company's products. Deferred revenues are classified as short-term and long-term deferred revenues based on the period in which revenues are expected to be recognized.

Significant changes in the balances of deferred revenues during the period are as follows:

	December 31,	
	2021	2020
Balance, at the beginning of the period	$ 140,020	$ 160,797
Revenue recognized	(26,765)	(72,870)
Increase in deferred revenues and customer advances	56,089	52,093
Balance, at the end of the period	169,344	140,020
Less current portion	(17,788)	(24,648)
Long term portion	$ 151,556	$ 115,372

The following table includes estimated revenues expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied) as of December 31, 2021:

2022	$ 17,788
2023	12,742
2024	7,609
2025	6,355
2026	5,595
Thereafter	119,255
Total deferred revenues	$ 169,344

(in thousands, except per share data)

NOTE 14: ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

	As of December 31,	
	2021	2020
Accrued expenses	$ 51,014	$ 47,757
Government authorities	22,631	26,218
Operating lease liabilities	12,728	10,994
Provision for legal claims	11,622	5,866
Loans and borrowings	148	16,894
Other	11,236	15,319
	$ 109,379	$ 123,048

NOTE 15: CONVERTIBLE SENIOR NOTES

On September 25, 2020, the Company sold $632,500 aggregate principal amount of its 0.00% convertible senior notes due 2025 (the “Notes”). The Notes were sold pursuant to an indenture, dated September 25, 2020 (the “Indenture”), between the Company and U.S. Bank National Association, as trustee (the “Trustee”). The Notes do not bear regular interest and mature on September 15, 2025, unless earlier repurchased or converted in accordance with their terms. The Notes are general senior unsecured obligations of the Company.

Holders may convert their Notes prior to the close of business on the business day immediately preceding June 15, 2025 in multiples of $1,000 principal amount, only under the following circumstances: (1) during any calendar quarter commencing after the calendar quarter ending on December 31, 2020 (and only during such calendar quarter), if the last reported sale price of the common stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day; (2) during the five-business-day period after any five consecutive trading day period in which the trading price per $1,000 principal amount of the Notes for each trading day of that five consecutive trading day period was less than 98% of the product of the last reported sale price of the common stock and the conversion rate on each such trading day; or (3) upon the occurrence of specified corporate events as described in the Indenture. In addition, holders may convert their Notes, in multiples of $1,000 principal amount, at their option at any time beginning on or after June 15, 2025, and prior to the close of business on the second scheduled trading day immediately preceding the stated maturity date of the Notes, without regard to the foregoing circumstances. The initial conversion rate for the Notes was 3.5997 shares of common stock per $1,000 principal amount of Notes, which is equivalent to an initial conversion price of approximately $277.80 per share of common stock, subject to adjustment upon the occurrence of certain specified events as set forth in the Indenture.

Upon conversion, the Company may choose to pay or deliver, as the case may be, cash, shares of common stock or a combination of cash and shares of common stock.

In addition, upon the occurrence of a fundamental change (as defined in the Indenture), holders of the Notes may require the Company to repurchase all or a portion of their Notes, in multiples of $1,000 principal amount, at a repurchase price of 100% of the principal amount of the Notes, plus any accrued and unpaid special interest, if any, to, but excluding, the repurchase date. If certain fundamental changes referred to as make-whole fundamental changes occur, the conversion rate for the Notes may be increased.

(in thousands, except per share data)

The Convertible Senior Notes consisted of the following as of December 31, 2021 and 2020:

	As of December 31,	
	2021	2020
Liability:		
Principal	$ 632,500	$ 632,500
Unamortized debt discount	-	(46,353)
Unamortized issuance costs	(10,965)	(12,797)
Net carrying amount	$ 621,535	$ 573,350
Equity component:		
Amount allocated to conversion option	$ -	$ 48,834
Deferred taxes liability, net	-	(11,368)
Allocated issuance costs	-	(1,130)
Equity component, net	$ -	$ 36,336

Effective January 1, 2021, the Company early adopted ASU 2020-06 using the modified retrospective approach (see Note 2v.)

As of December 31, 2021, the issuance costs of the Notes will be amortized over the remaining term of approximately 3.7 years.

The annual effective interest rate of the liability component following the adoption of ASU 2020-06 is 0.47%.

The following table presents the total amount of interest expenses recognized related to the Notes for the years ended December 31, 2021 and 2020:

	Year ended December 31,	
	2021	2020
Amortization of debt discount	$ -	$ 2,480
Amortization of debt issuance costs	2,903	705
Total interest expenses	$ 2,903	$ 3,185

As of December 31, 2021, the estimated fair value of the Notes, which the Company has classified as Level 2 financial instruments, is $811,327. The estimated fair value was determined based on the quoted bid price of the Notes in an over-the-counter market on the last trading day of the reporting period.

As of December 31, 2021, the if-converted value of the Notes exceeded the principal amount by $178,827.

NOTE 16: OTHER LONG TERM LIABILITIES

	As of December 31,	
	2021	2020
Tax liabilities	$ 5,105	$ 5,062
Accrued severance pay	1,739	1,561
Deferred tax liability	156	8,593
Other	3,649	7,568
	$ 10,649	$ 22,784

NOTE 17: STOCK CAPITAL

a. Common stock rights:

Common stock confers upon its holders the right to receive notice of, and to participate in, all general meetings of the Company, where each share of common stock shall have one vote for all purposes; to share equally, on a per share basis, in bonuses, profits, or distributions out of fund legally available therefor; and to participate in the distribution of the surplus assets of the Company in the event of liquidation of the Company.

b. Equity Incentive Plans:

The Company’s 2007 Global Incentive Plan (the “2007 Plan”) was adopted by the board of directors on August 30, 2007. The 2007 Plan terminated upon the Company’s IPO on March 31, 2015 and no further awards may be granted thereunder. All outstanding awards will continue to be governed by their existing terms and 379,358 available options for future grant were transferred to the Company’s 2015 Global Incentive Plan (the “2015 Plan”) and are reserved for future issuances under the 2015 plan. The 2015 Plan became effective upon the consummation of the IPO. The 2015 Plan provides for the grant of options, RSUs, PSUs,and other share-based awards to directors, employees, officers and non-employees of the Company and its subsidiaries. As of December 31, 2021, a total of 15,406,316 shares of common stock were reserved for issuance pursuant to stock awards under the 2015 Plan (the “Share Reserve”).

The Share Reserve will automatically increase on January 1st of each year during the term of the 2015 Plan, commencing on January 1st of the year following the year in which the 2015 Plan becomes effective, in an amount equal to 5% of the total number of shares of capital stock outstanding on December 31st of the preceding calendar year; provided, however, that the Company’s board of directors may determine that there will not be a January 1st increase in the Share Reserve in a given year or that the increase will be less than 5% of the shares of capital stock outstanding on the preceding December 31st.

The aggregate maximum number of shares of common stock that may be issued on the exercise of incentive stock options is 10,000,000. As of December 31, 2021, an aggregate of 8,617,974 options are still available for future grant under the 2015 Plan.

The Company has also granted non-plan awards, which have been authorized by the Company's board of directors and granted as PSUs.

(in thousands, except per share data)

A summary of the activity in the stock options granted to employees and members of the board of directors for the year ended December 31, 2021 and related information are as follows:

	Number of options	Weighted average exercise price	Weighted average remaining contractual term in years	Aggregate intrinsic Value
Outstanding as of December 31, 2020	691,732	$ 31.86	5.07	$ 198,709
Granted	19,489	311.35		
Exercised	(231,008)	28.02		
Forfeited or expired	(10,432)	44.24		
Outstanding as of December 31, 2021	469,781	$ 45.07	5.25	$ 111,236
Vested and expected to vest as of December 31, 2021	441,238	$ 40.48	5.53	$ 106,377
Exercisable as of December 31, 2021	373,664	$ 29.58	5.16	$ 93,897

The aggregate intrinsic value in the tables above represents the total intrinsic value (the difference between the fair value of the Company's common stock as of the last day of each period and the exercise price, multiplied by the number of in-the-money options) that would have been received by the option holders had all option holders exercised their options on the last day of each period.

The total intrinsic value of options exercised during the years ended December 31, 2021, 2020 and 2019 was $65,668, $251,564, and $37,509, respectively.

The weighted average grant date fair value of options granted to employees and directors during the years ended December 31, 2021, 2020, and 2019, was $168.71, $62.11 and $19.83, respectively.

A summary of the activity in the RSUs and PSUs granted to employees and directors for the year ended December 31, 2021, is as follows:

	Number of RSUs and PSUs	Weighted average grant date fair value
Unvested, at beginning of the period	2,216,841	$ 103.79
Granted (1)	703,039	278.03
Vested	(955,125)	81.76
Forfeited	(125,804)	136.71
Unvested, at end of the period	1,838,951	$ 178.64

The number of PSUs granted to employees was 132,673 with a weighted average grant date fair value of $294.04.

The weighted-average grant-date fair value of RSUs and PSUs granted during the years ended December 31, 2021, 2020 and 2019, was $278.03, $71.46 and $41.45, respectively.

c. Employee Stock Purchase Plan:

The Company adopted an ESPP effective upon the consummation of the IPO. As of December 31, 2021, total of 3,175,094 shares were reserved for issuance under this plan. The number of shares of common stock reserved for issuance under the ESPP will increase automatically on January 1st of each year, for ten years, by the lesser of 1% of the total number of shares of the Company's common stock outstanding on December 31st of the preceding calendar year or 487,643 shares. However, the Company's board of directors may reduce the amount of the increase in any particular year at their discretion, including a reduction to zero.

(in thousands, except per share data)

The ESPP is implemented through an offering every six months. According to the ESPP, eligible employees may use up to 15% of their salaries to purchase common stock up to an aggregate limit of $15 per participant for every six months plan. The price of an ordinary share purchased under the ESPP is equal to 85% of the lower of the fair market value of the ordinary share on the subscription date of each offering period or on the purchase date.

As of December 31, 2021, 661,827 shares of common stock had been purchased under the ESPP.

As of December 31, 2021, 2,513,267 shares of common stock were available for future issuance under the ESPP.

In accordance with ASC No. 718, the ESPP is compensatory and, as such, results in recognition of compensation cost.

d. Stock-based compensation expenses for employees and non-employees:

The Company recognized stock-based compensation expenses related to stock options, RSUs and PSUs granted to employees and non-employees and the ESPP in the consolidated statement of income for the years ended December 31, 2021, 2020 and 2019, as follows:

	Year ended December 31,		
	2021	**2020**	**2019**
Cost of revenues	$ 18,743	$ 11,082	$ 6,964
Research and development	45,424	27,048	16,872
Selling and marketing	22,834	19,413	11,062
General and administrative	15,592	9,766	6,991
Other operating expenses	-	-	18,464
Total stock-based compensation expenses	$ 102,593	$ 67,309	$ 60,353

As of December 31, 2021, there were total unrecognized compensation expenses in the amount of $309,177 related to non-vested equity-based compensation arrangements granted under the Company’s Plans and non-plan awards. These expenses are expected to be recognized during the period from January 1, 2022 through May 31, 2026.

NOTE 18: COMMITMENTS AND CONTINGENT LIABILITIES

a. Guarantees:

As of December 31, 2021, contingent liabilities exist regarding guarantees in the amounts of $4,938 and $2,250 in respect of office rent lease agreements and other transactions, respectively.

b. Contractual purchase obligations:

The Company has contractual obligations to purchase goods and raw materials. These contractual purchase obligations relate to inventories and other purchase orders , which cannot be canceled without penalty. In addition, the Company acquires raw materials or other goods and services, including product components, by issuing authorizations to its suppliers to purchase materials based on its projected demand and manufacturing needs.

As of December 31, 2021, the Company had non-cancelable purchase obligations totaling approximately $1,428,766, out of which the Company recorded a provision for loss in the amount of $4,071.

As of December 31, 2021, the Company had contractual obligations for capital expenditures totaling approximately $168,528. These commitments reflect purchases of automated assembly lines and other machinery related to the Company’s manufacturing process as well as capital expenditures associated with the construction of Sella 2, the Company’s planned second lithium-ion cell and battery factory in Korea.

c. Legal claims:

From time to time, the Company may be involved in various claims and legal proceedings. The Company reviews the status of each matter and assesses its potential financial exposure. If the potential loss from any claim or legal proceeding is considered probable and the amount can be reasonably estimated, the Company accrues a liability for the estimated loss. These accruals are reviewed at least quarterly and adjusted to reflect the impact of negotiations, settlements, rulings, advice of legal counsel and other information and events pertaining to a particular matter.

In September 2018, the Company’s German subsidiary, SolarEdge Technologies GmbH received a complaint filed by competitor SMA Solar Technology AG (“SMA”). The complaint, filed in the District Court Düsseldorf, Germany, alleges that SolarEdge's 12.5kW - 27.6kW inverters infringe two of the plaintiff’s patents. SMA asserted a value in dispute of EUR 5.5 million (approximately $6,225) for both patents. The Company challenged the validity of both patents. With respect to one of the claims, in October 2020, the German Patent Court rendered the SMA patent invalid and this invalidity has been appealed by SMA. With respect to the other claim, in November 2019, the first instance court stayed the infringement proceedings since it considered it to be highly likely that the second SMA patent would also be rendered invalid. The Company believes that it has meritorious defenses to the claims asserted and intends to vigorously defend against the remaining lawsuit.

In May 2019, the Company’s two Chinese subsidiaries and its equipment manufacturer in China were served with three lawsuits by Huawei Technologies Co., Ltd., a Chinese entity (“Huawei”). The lawsuits, filed in the Guangzhou intellectual property court, alleged infringement of three patents and asked for an injunction of manufacture, use, sale and offer for sale, and damage awards. A first-instance judgment was issued on August 7, 2020 ordering the three defendants to collectively pay damages in the amount of approximately Chinese Yuan (“CNY”) 10.5 million (approximately $1,647), including court fees. The Company has filed an appeal with the Supreme People’s Court of China. The Company's appeal to the Supreme People's Court was denied in December of 2021, rendering a payment by us to Huawei in an amount of $1,647. The judgement is not enforceable until the end of February 2022. In addition, in January 2021, Huawei filed a motion to increase its claimed monetary damages to CNY 50.5 million (approximately $7,923) with respect to the second lawsuit. In February 2021, a preliminary injunction was rendered by the Guangzhou intellectual property court with respect to such second lawsuit and applying to seven inverter models. In line with the court’s mandate, the Company took immediate action to make software changes to meet the court order. In addition, in February 22, 2021 a first-instance judgment was issued ordering payment of damages in the amount of CNY 50.5 million (approximately $7,923), including court fees, with respect to the second patent. The Company appealed this judgement with the Supreme People’s Court which case is still pending. The first instance court’s judgement is not effective or enforceable pending the appeal. In October 2021, a first-instance judgment was issued ordering to pay damages in the amount of approximately CNY 10.5 million (approximately $1,647), including court fees, with respect to the third lawsuit. The Company has filed an appeal with the Supreme People’s Court of China which also is still pending. The first instance court’s judgement is not effective or enforceable pending the appeal. The Company believes that it has meritorious defenses to the claims asserted by Huawei.

In December 2019, the Company received a lawsuit filed by a former consultant of the Company and its Israeli subsidiary in the amount of NIS 25.5 million (approximately $8,199) claiming damages caused relating to a terminated consulting agreement and stock options therein. The Company believes it has meritorious defenses to the claims asserted and intends to vigorously defend against this lawsuit.

As of December 31, 2021, accrued amounts for legal claims of $11,622 were recorded in accrued expenses and other current liabilities.

(in thousands, except per share data)

NOTE 19: ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The following table summarizes the changes in accumulated balances of other comprehensive income (loss), net of taxes, for the year ended December 31, 2021:

	Unrealized gains (losses) on available-for-sale marketable securities	Unrealized gains on cash flow hedges	Foreign currency translation adjustments on intra-entity transactions that are of a long-term investment in nature	Unrealized gains (losses) on foreign currency translation	Total
Beginning balance	$ 240	$ -	$ -	$ 3,617	$ 3,857
Revaluation	(6,283)	3,735	(17,420)	(9,681)	(29,649)
Tax on revaluation	1,346	(446)	-	-	900
Other comprehensive income (loss) before reclassifications	(4,937)	3,289	(17,420)	(9,681)	(28,749)
Reclassification	(16)	(2,742)	-	-	(2,758)
Tax on reclassification	4	327	-	-	331
Losses reclassified from accumulated other comprehensive income	(12)	(2,415)	-	-	(2,427)
Net current period other comprehensive income (loss)	(4,949)	874	(17,420)	(9,681)	(31,176)
Ending balance	$ (4,709)	$ 874	$ (17,420)	$ (6,064)	$ (27,319)

(in thousands, except per share data)

The following table summarizes the changes in accumulated balances of other comprehensive loss (loss), net of taxes, for the year ended December 31, 2020:

	Unrealized gains (losses) on available-for-sale marketable securities	Unrealized gains on cash flow hedges	Foreign currency translation adjustments on intra-entity transactions that are of a long-term investment in nature	Unrealized gains (losses) on foreign currency translation	Total
Beginning balance	$ 264	$ -	$ -	$ (2,073)	$ (1,809)
Revaluation	45	1,101	-	5,690	6,836
Tax on revaluation	(69)	(135)		-	(204)
Other comprehensive income (loss) before reclassifications	(24)	966	-	5,690	6,632
Reclassification	-	(1,101)	-	-	(1,101)
Tax on reclassification	-	135	-	-	135
Losses reclassified from accumulated other comprehensive income	-	(966)	-	-	(966)
Net current period other comprehensive income (loss)	(24)	-	-	5,690	5,666
Ending balance	$ 240	$ -	$ -	$ 3,617	$ 3,857

(in thousands, except per share data)

The following table summarizes the changes in accumulated balances of other comprehensive income (loss), net of taxes, for the year ended December 31, 2019:

	Unrealized gains (losses) on available-for-sale marketable securities	Unrealized gains on cash flow hedges	Foreign currency translation adjustments on intra-entity transactions that are of a long-term investment in nature	Unrealized gains (losses) on foreign currency translation	Total
Beginning balance	$ (656)	$ -	$ -	$ 132	$ (524)
Revaluation	1,034	-	-	(2,205)	(1,171)
Tax on revaluation	(205)	-	-	-	(205)
Other comprehensive income (loss) before reclassifications	829	-	-	(2,205)	(1,376)
Reclassification	91	-	-	-	91
Tax on reclassification	-	-	-	-	-
Losses reclassified from accumulated other comprehensive income	91	-	-	-	91
Net current period other comprehensive income (loss)	920	-	-	(2,205)	(1,285)
Ending balance	$ 264	$ -	$ -	$ (2,073)	$ (1,809)

(in thousands, except per share data)

The following table provides details about reclassifications out of accumulated other comprehensive income (loss) for the years ended December 31, 2021, 2020 and 2019:

Details about Accumulated Other Comprehensive Income (Loss) Components	Amount Reclassified from Accumulated Other Comprehensive Income (Loss)			Affected Line Item in the Statement of Income
	2021	2020	2019	
Unrealized gains on available-for-sale marketable securities				
	$ 16	$ -	$ (91)	Financial income (expenses), net
	(4)	-	-	Income taxes
	$ 12	-	$ (91)	Total, net of income taxes
Unrealized gains on cash flow hedges, net				
	333	189	-	Cost of revenues
	1,645	623	-	Research and development
	334	136	-	Sales and marketing
	430	153	-	General and administrative
	$ 2,742	$ 1,101	$ -	Total, before income taxes
	(327)	(135)	-	Income taxes
	2,415	966	-	
Total reclassifications for the period	$ 2,427	$ 966	$ (91)	

(in thousands, except per share data)

NOTE 20: EARNINGS PER SHARE

The following table presents the computation of basic and diluted EPS attributable to SolarEdge Technologies Inc.:

	Year ended December 31,		
	2021	**2020**	**2019**
Basic EPS:			
Numerator:			
Net income	$ 169,170	$ 140,322	$ 144,957
Net loss attributable to Non-controlling interests	-	-	1,592
	169,170	140,322	146,549
Denominator:			
Shares used in computing net earnings per share of common stock, basic	52,202,182	50,217,330	47,918,938
Diluted EPS:			
Numerator:			
Net income attributable to common stock, basic	$ 169,170	$ 140,322	$ 144,957
Net loss attributable to Non-controlling interests	-	-	1,592
Undistributed earnings reallocated to non-vested stockholders	-	-	(906)
Notes due 2025	2,134	-	-
Net income attributable to common stock, diluted	$ 171,304	$ 140,322	$ 145,643
Denominator:			
Shares used in computing net earnings per share of common stock, basic	52,202,182	50,217,330	47,918,938
Non-vested PSUs	-	-	(312,128)
Notes due 2025	2,276,818	-	-
Effect of stock-based awards	1,492,030	2,578,146	2,588,851
Shares used in computing net earnings per share of common stock, diluted	55,971,030	52,795,475	50,195,661

No shares were excluded from the calculation for the year ended December 31, 2021.

2,276,818 and 312,128 shares of common stock were excluded from the calculation of diluted net EPS due to their anti-dilutive effect for the years ended December 31, 2020 and 2019, respectively.

(in thousands, except per share data)

NOTE 21: OTHER OPERATING EXPENSES (INCOME), NET

	Year ended December 31,		
	2021	2020	2019
Kokam purchase escrow (1)(2)	$ (859)	$ (4,900)	$ 4,900
Write-off of long-lived assets	2,209	1,471	-
Compensation package related to the passing of the former Founder, CEO and Chairman(3)	-	-	8,305
Termination of SolarEdge Automation Machines's former executive(4)	-	-	12,222
Sale of SolarEdge Automation Machines's subsidiary(5)	-	-	5,269
Total other operating expenses (income)	$ 1,350	$ (3,429)	$ 30,696

1. In the year ended December 31, 2021, the Company received a payment of $859 out of the Kokam Co., Ltd. ("Kokam") acquisition escrow ("the escrow"), with regards to a working capital adjustment.
2. In the year ended December 31, 2020, the Company was indemnified for an amount of $4,900 out of the escrow, with regards to a legal claim of Kokam that was settled in arbitration.
3. On August 25, 2019, the Company announced the untimely death of Mr. Guy Sella, Founder, who had served as CEO and Chairman of the Board of Directors until shortly before his passing. The amount is related to payroll, bonus and acceleration of stock-based compensation award.
4. As part of SolarEdge Automation Machines acquisition, the Company issued to a shareholder who had served as an executive of SolarEdge Automation Machines 334,095 PSUs, which were subject to certain performance goals and a vesting period. In December 2019, in connection with a separation agreement between the parties, the Company and the shareholder amended the original agreement, which resulted in a modification to the terms of 150,000 of the original PSUs, such as, the fair value of the PSU, the service period and the performance goals. The Company exercised a call option with respect to the remaining 183,395 PSUs, for a price per share equal to €0.01.
5. On December 31, 2019, the Company completed the sale of a SolarEdge Automation Machines subsidiary.

NOTE 22: INCOME TAXES

a. Tax rates in the U.S:

The Company is subject to U.S. federal tax at the rate of 21%.

On December 22, 2017, the Tax Cuts and Jobs Act (the "Tax Act") was signed into law making significant changes to U.S. income tax law. These changes include, but are not limited to, a corporate tax rate decrease from 35% to 21% effective for tax years 2018 onwards and created new taxes on certain foreign-sourced earnings and certain related-party payments.

The Tax Act required the Company to pay U.S. income taxes on accumulated foreign subsidiaries earnings not previously subject to U.S. income tax at a rate of 15.5% to the extent of foreign cash and certain other net current assets and 8% on the remaining earnings. The total tax liability was calculated to approximately $8,500, which will be paid over the eight-year period provided in the Tax Act (ending 2024).

b. Corporate tax in Israel:

The taxable income of Israeli companies is subject to corporate tax at the rate of 23%. The Israeli subsidiary is also eligible for tax benefits as further described in note 22i.

c. Carryforward tax losses:

As of December 31, 2021, the foreign subsidiaries have carryforward tax losses of $83,916 which does not have an expiration date.

d. Deferred taxes:

Deferred taxes reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

(in thousands, except per share data)

Significant components of the Company's deferred tax liabilities and assets are as follows:

	December 31,		
	2021	2020	2019
Deferred tax assets, net:			
Research and Development carryforward expenses	$ 2,479	$ 1,843	$ 4,994
Carryforward tax losses(1)	19,635	20,468	6,318
Stock based compensation expenses	12,140	6,400	4,898
Deferred revenue	8,078	5,609	3,621
Inventory Impairment	1,326	1,977	2,442
Allowance and other reserves	10,911	4,372	7,305
Total Gross deferred tax assets, net	$ 54,569	$ 40,669	$ 29,578
Less, Valuation Allowance	(14,648)	(9,634)	(2,317)
Total deferred tax assets, net	$ 39,921	$ 31,035	$ 27,261
Deferred tax liabilities, net:			
Intercompany transactions	$ (6,099)	$ -	$ -
Convertible Note	-	(11,830)	-
Purchase price allocation	(6,406)	(16,122)	(15,424)
Total deferred tax liabilities, net	$ (12,505)	$ (27,952)	$ (15,424)
Recorded as:			
Deferred tax assets, net	$ 27,572	$ 11,676	$ 16,298
Deferred tax liabilities, net	(156)	(8,593)	(4,461)
Net deferred tax assets	$ 27,416	$ 3,083	$ 11,837

(1) Related to deferred tax assets that would only be realizable upon the generation of net income in certain foreign jurisdictions.

The Company's Israeli subsidiary's tax-exempt profit from Benefited Enterprises (as defined in note 22.i) is permanently reinvested, Therefore, deferred taxes have not been provided for such tax-exempt income.

The Company may incur additional tax liability in the event of intercompany dividend distributions by some of its subsidiaries. Such additional tax liability in respect of these subsidiaries has not been provided for in the Financial Statements as the Company's management and the Board of Directors has determined that the Company intends to reinvest earnings of its subsidiaries indefinitely.

(in thousands, except per share data)

e. Uncertain tax positions:

	December 31,		
	2021	2020	2019
Balance, at the beginning of the period	$ 10,564	$ 9,532	$ 8,499
Increases related to current year tax positions	635	757	651
Increase for tax positions related to prior years	-	275	382
Decreases related to prior year tax positions	(9,007)	-	-
Balance, at end of the period	$ 2,192	$ 10,564	$ 9,532

The total amount of gross unrecognized tax benefits was $2,192, $10,564 and $9,532 as of December 31, 2021, 2020 and 2019, respectively, and if recognized, would affect our effective tax rate.

The Company accrues interest and penalties related to unrecognized tax benefits in its provision for income taxes. The total amount of penalties and interest were not material as of December 31, 2021,2020 and 2019.

It is reasonably possible that the Company's gross unrecognized tax benefits will decrease by up to $57 in the next 12 months, primarily due to the lapse of the statute of limitations. These adjustments, if recognized, would positively impact the Company's effective tax rate, and would be recognized as additional tax benefits.

f. Income before income taxes are comprised as follows:

	Year ended December 31,		
	2021	2020	2019
Domestic	$ 13,659	$ 33,909	$ 6,029
Foreign	173,565	129,757	172,574
Income before income taxes	$ 187,224	$ 163,666	$ 178,603

g. Income taxes (tax benefit) are comprised as follows:

	Year ended December 31,		
	2021	2020	2019
Current taxes:			
U.S. Federal and State	$ (7,872)	$ 1,842	$ 10,093
Foreign	37,564	24,936	29,590
Total current taxes	29,692	26,778	39,683
Deferred taxes:			
U.S. Federal and State	(3,682)	2,794	(3,414)
Foreign	(7,956)	(6,228)	(2,623)
Total deferred taxes	(11,638)	(3,434)	(6,037)
Income taxes, net	$ 18,054	$ 23,344	$ 33,646

(in thousands, except per share data)

h. Reconciliation of theoretical tax expense to actual tax expense:

The differences between the statutory tax rate of the Company and the effective tax rate are result of a variety of factors, including different effective tax rates applicable to non-US subsidiaries that have tax rates different than the Company tax rate, tax benefits relating to stock-based compensation and adjustments to valuation allowances on deferred tax assets on such subsidiaries.

A reconciliation between the theoretical tax expense and the actual tax expense (benefit) as reported in the consolidated statements of income is as follows:

	Year ended December 31,		
	2021	**2020**	**2019**
Statutory tax rate	21%	21%	21%
Effect of:			
Income tax at rate other than the U.S. statutory tax rate	(7.4)%	(6.9)%	(5.0)%
Losses and timing differences for which valuation allowance was provided	-	4.4%	1.3%
Prior year tax Income/(Expenses)	(4.4)%	(0.4)%	0.1%
Tax Cuts and Jobs Act of 2017	0.1%	-%	(0.7)%
Disallowable and allowable deductions	2.0%	(2.6)%	2.3%
Other individually immaterial income tax items, net	(1.7)%	(1.3)%	(0.2)%
Effective tax rate	9.6%	14.2%	18.8%

i. Tax assessments:

The Israeli tax authorities issued a tax assessments for tax years 2016 and 2018 against the Company’s Israeli subsidiary challenging the subsidiary's positions on several issues. The Israeli subsidiary has appealed the tax assessments.

The Company believes it has adequately provided for these items, however adverse results could have a material impact on the Company’s financial statements.

As of December 31, 2021, the Company and certain of its subsidiaries filed U.S. federal and various state and foreign income tax returns. The statute of limitations relating to the consolidated U.S. federal income tax return is closed for all tax years up to and including 2017.

The statute of limitations related to tax returns of the Company’s Israeli subsidiary for all tax years up to and including 2015 has lapsed.

The statute of limitations related to tax returns of the Company’s other subsidiaries has lapsed for part of the tax years, which differs between the different subsidiaries.

j. Tax benefits for Israeli companies under the Law for the Encouragement of Capital Investments, 1959 (the “Investments Law”):

The Israeli subsidiary elected tax year 2012 as a "Year of Election" for “Benefited Enterprise” status under the Investments Law. According to the Investments Law, the Israeli subsidiary elected to participate in the alternative benefits program which provides certain benefits, including tax exemptions and reduced tax rates (which depend on, inter alia, the geographic location in Israel). Income not eligible for Benefited Enterprise benefits is taxed at a regular corporate tax rate.

Upon meeting the requirements under the Investments Law, undistributed income derived from Benefited Enterprise from productive activity will be exempt from tax for two years from the year in which the Israeli subsidiary first has taxable income ("exempt period"), provided that 12 years have not passed from the beginning of the year of election.

On October 24, 2018, the Company's Israeli subsidiary received an approval from the Israeli Tax Authorities confirming the applicability of the two-year tax exemption as provided in the Investments Law until December 31, 2018. As of December 31, 2018, approximately $289,900 was derived from tax exempt profits earned by the Israeli subsidiary "Benefited Enterprises" in the two tax years exempt period, tax years 2017 - 2018. The Company has determined that such tax-exempt income will not be distributed as dividends and intends to reinvest the amount of its tax-exempt income earned by the Israeli subsidiary. Accordingly, no provision for deferred income taxes has been provided on income attributable to the Israeli subsidiary "Benefited Enterprises" as such income is essentially permanently reinvested.

If the Israeli subsidiary's retained tax-exempt income is distributed, the income would be taxed at the applicable corporate tax rate which depends on the foreign ownership in each tax year.

Through December 31, 2021, the Israeli subsidiary had generated income under the provision of the Investments Law.

Pursuant to amendment 73 to the Investments Law (the "2017 Amendment"), a preferred enterprise located in development area A will be subject to a tax rate of 7.5% instead of 9% effective from January 1, 2017 and thereafter (the tax rate applicable to preferred enterprises located in other areas remains at 16%).

The 2017 Amendment also prescribes special tax tracks for preferred technological enterprises ("PTE"), which are subject to rules that were issued by the Ministry of Finance.

On June 14, 2017, the Encouragement of Capital Investments Regulations (Preferred Technological Income and Capital Gain for Technological Enterprise), 2017 (the "Regulations") were published.

The Regulations describe, inter alia, the mechanism used to determine the calculation of the benefits under the PTE regime. According to these regulations, a company that complies with the terms under the PTE regime may be entitled to certain tax benefits with respect to income generated during the company's regular course of business and derived from the preferred intangible asset, excluding income derived from intangible assets used for marketing and income attributed to production activity.

A PTE, which is located in the center of Israel will be subject to tax at a rate of 12% on profits deriving from intellectual property (in development Zone A - a tax rate of 7.5%). The Israeli subsidiary's PTE facilities in Israel are not located in Development Zone A. The Israeli subsidiary has developed its own solar products manufacturing facilities in Israel, located in a Development Zone A.

The Israeli subsidiary notified the ITA of its election to implement the PTE with effect from January 1, 2019.

Tax Benefits for Research and Development:

Israeli tax law (section 20A to the Israeli Tax Ordinance (New Version), 1961) allows, a tax deduction for research and development expenses, including capital expenses, for the year in which they are paid. Such expenses must relate to scientific research in industry, agriculture, transportation or energy, and must be approved by the relevant Israeli government ministry, determined by the field of research. As for expenses incurred in scientific research that is not approved by the relevant Israeli government ministry, they will be deductible over a three-year period starting from the tax year in which they are paid. The Company's Israeli subsidiary intends to submit a formal request to the relevant Israeli government ministry in order to obtain such approval for 2019 - 2021.

k. Tax benefits under the Law for the Encouragement of Industry (Taxes), 1969:

The Company's Israeli subsidiary claims currently to be qualified as 'industrial company' as defined by this law and as such, is entitled to certain tax benefits, consisting mainly of accelerated depreciation and amortization of patents and certain other intangible property

(in thousands, except per share data)

NOTE 23: FINANCIAL INCOME (EXPENSE), NET

	Year ended December 31,		
	2021	**2020**	**2019**
Exchange rate (loss) gain, net	$ (22,493)	$ 33,065	$ (10,342)
Marketable securities	2,973	3,750	4,712
Convertible note	(2,903)	(3,185)	-
Hedging	9,417	(4,013)	-
Interest expenses	(6,376)	(5,330)	(4,805)
Bank charges	(1,991)	(2,048)	(1,021)
Other financial income (expenses), net	1,458	(1,134)	113
	$ (19,915)	$ 21,105	$ (11,343)

NOTE 24: SEGMENT, GEOGRAPHIC AND PRODUCT INFORMATION

a. Segment Information:

The Company operates in five different operating segments: Solar, Energy Storage, e-Mobility, Critical Power and Automation Machines.

The Company's Chief Executive Officer, who is the chief operating decision maker ("CODM"), makes resource allocation decisions and assesses performance based on financial information presented on a consolidated basis, accompanied by disaggregated information about revenues and contributed profit by the operating segments.

The Company does not allocate to its operating segments revenue recognized due to advance payments received for performance obligations that extend for a period greater than one year ("financing component"), related to Accounting Standard Codification 606, "Revenue from Contracts with Customers" (ASC 606).

Segment profit is comprised of gross profit for the segment less operating expenses that do not include amortization of purchased intangible assets, stock based compensation expenses and certain other items.

The Company manages its assets on a group basis, not by segments, as many of its assets are shared or co-mingled. The Company's CODM does not regularly review asset information by segments and, therefore, the Company does not report asset information by segment.

The Company identified one operating segment as reportable – the Solar segment. The other operating segments are insignificant individually and therefore their results are presented together under "All other".

The Solar segment includes the design, development, manufacturing, and sales of an intelligent inverter solution designed to maximize power generation at the individual PV module level and a residential storage solution, compatible with the Company's energy hub inverter, intended to store and supply power for back-up and to maximize self-consumption. The Solar segment solution consists mainly of the Company's power optimizers, inverters, batteries and cloud-based monitoring platform.

The "All other" category includes the design, development, manufacturing and sales of energy storage products, e-Mobility products, UPS products and automated machines.

(in thousands, except per share data)

The following table presents information on reportable segments profit (loss) for the period presented:

	Year ended December 31,					
	2021		2020		2019	
	Solar	All other	Solar	All other	Solar	All other
Revenues	$ 1,787,280	$ 176,167	$ 1,357,261	$ 102,804	$ 1,336,618	$ 89,042
Cost of revenues	1,136,896	169,582	882,420	95,280	852,330	75,702
Gross profit	650,384	6,585	474,841	7,524	484,288	13,340
Research and development	143,173	30,506	110,567	25,417	91,868	12,520
Sales and marketing	85,309	9,930	66,823	8,562	67,275	8,433
General and administrative	53,156	13,536	41,723	10,389	31,201	9,561
Segments profit (loss)	$ 368,746	$ (47,387)	$ 255,728	$ (36,844)	$ 293,944	$ (17,174)

The following table presents information on reportable segments reconciliation to consolidated revenues for the periods presented:

	Year ended December 31,		
	2021	2020	2019
Solar segment revenues	$ 1,787,280	$ 1,357,261	$ 1,336,618
All other segment revenues	176,167	102,804	89,042
Revenues from financing component	418	-	-
Inter-segment revenues	-	(794)	-
Consolidated revenues	$ 1,963,865	$ 1,459,271	$ 1,425,660

The following table presents information on reportable segments reconciliation to consolidated operating income for the periods presented:

	Year ended December 31,		
	2021	2020	2019
Solar segment profit	$ 368,746	$ 255,728	$ 293,944
All other segment loss	(47,387)	(36,844)	(17,174)
Segments operating profit	321,359	218,884	276,770
Amounts not allocated to segments:			
Stock based compensation expenses	(102,593)	(67,309)	(60,353)
Amortization related to business combinations	(10,812)	(9,336)	(9,470)
Sale of SolarEdge Automation Machines' subsidiary	-	-	(5,269)
Legal settlement	763	4,900	(4,900)
Other unallocated expenses	(1,578)	(4,450)	(6,832)
Adjustments:			
Inter-segment profit	-	(128)	-
Consolidated operating income	$ 207,139	$ 142,561	$ 189,946

(in thousands, except per share data)

b. Revenues by geographic, based on Customers' location:

	Year ended December 31,		
	2021	2020	2019
United States	$ 786,019	$ 613,090	$ 678,565
Europe(*)	670,394	426,531	345,685
Netherlands	222,103	199,498	199,526
Rest of the world	285,349	220,152	201,884
Total revenues	$ 1,963,865	$ 1,459,271	$ 1,425,660

(*) Except for Netherlands

c. Revenues by product:

	Year ended December 31,		
	2021	2020	2019
Inverters	$ 828,101	$ 641,799	$ 626,445
Optimizers	828,542	625,465	634,007
Others	307,222	192,007	165,208
Total revenues	$ 1,963,865	$ 1,459,271	$ 1,425,660

d. Long-lived assets by geographic location:

	As of December 31,	
	2021	2020
Israel	$ 271,700	$ 216,095
Korea	118,209	62,570
China	30,412	32,655
Europe	21,547	24,233
Other	15,649	9,455
Total long-lived assets (*)	$ 457,517	$ 345,008

(*) Long-lived assets are comprised of property and equipment, net and Operating lease right-of-use assets, net.

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures.

Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), as of December 31, 2021. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Based on that evaluation, our chief executive officer and chief financial officer concluded that our disclosure controls and procedures were effective and operating to provide reasonable assurance 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 SEC rules and forms, and to provide reasonable assurance that such information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of consolidated financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

Management assessed our internal control over financial reporting as of December 31, 2021. Management based its assessment on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Management’s assessment included evaluation of elements such as the design and operating effectiveness of key financial reporting controls, process documentation, accounting policies, and our overall control environment.

Based on this assessment, management has concluded that our internal control over financial reporting was effective as of the end of the year to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external reporting purposes in accordance with U.S. generally accepted accounting principles. We reviewed the results of management’s assessment with the Audit Committee of our Board of Directors.

Our independent registered public accounting firm, Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global, independently assessed the effectiveness of the company’s internal control over financial reporting, as stated in Part II, Item 8 of this Form 10-K.

Our management, including our chief executive officer and chief financial officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well-designed and operated, can provide only reasonable, not absolute, assurance that the control system’s objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of the effectiveness of controls to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) that occurred during the fourth fiscal quarter of 2021 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. Other Information

Not applicable.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

PART III

ITEM 10. Directors, Executive Officers and Corporate Governance.

The information required by Item 10 will be included under the captions “Directors and Corporate Governance”, “The Board’s Role in Risk Oversight”, “Board Committees”, “Director Compensation”, “Compensation Committee Report”, and “Section 16(a) Beneficial Ownership Reporting Compliance” in our definitive Proxy Statement for the 2022 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the year ending December 31, 2021 (the "2021 Proxy Statement") and is incorporated herein by reference.

ITEM 11. Executive Compensation

The information required by Item 11 will be included under the captions “Executive Compensation” in our 2022 Proxy Statement and is incorporated herein by reference.

ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by Item 12 will be included under the captions “Security Ownership of Certain Beneficial Owners and Management” in our 2022 Proxy Statement and is incorporated herein by reference.

Compensation Plan Information

The information required regarding securities authorized for issuance under our equity compensation plans is incorporated by reference from the information contained in the section entitled “Executive Compensation” in our 2022 Proxy Statement.

ITEM 13. Certain Relationships and Related Transactions, and Director Independence

The information required by Item 13 will be included under the captions “Transactions with Related Persons” in our 2022 Proxy Statement and is incorporated herein by reference.

ITEM 14. Principal Accountant Fees and Services

The information required by Item 13 will be included under the captions “Transactions with Related Persons” in our 2022 Proxy Statement and is incorporated herein by reference.

ITEM 15. Exhibits, Financial Statement Schedules

Our Consolidated Financial Statements and Notes thereto are included in Item 8 of this Annual Report on Form 10-K. See Index to Item 8 for more detail.

All financial schedules have been omitted either because they are not applicable or because the required information is provided in our Consolidated Financial Statements and Notes thereto, included in Item 8 of this Annual Report on Form 10-K.

Index to Exhibits

Exhibit No.	Description	Incorporation by Reference
3.1	Amended and Restated Certificate of Incorporation	Incorporated by reference to Exhibit 4.1 to Form S-8 (Registration No. 333-203193) filed with the SEC on April 2, 2015
3.2	Amended and Restated By-Laws	Incorporated by reference to Exhibit 4.2 to Form S-8 (Registration No. 333-203193) filed with the SEC on April 2, 2015
3.3	Description of Common Stock	Incorporated by reference to Exhibit 3.3 to Form 10-K/A filed with the SEC on February 19, 2021
4.1	Specimen Common Stock Certificate of the Registrant	Incorporated by reference to Exhibit 4.1 of Amendment No. 1 to Form S-1 (Registration No. 333-202159) filed with the SEC on March 11, 2015
4.2	Indenture, dated September 25, 2020, between the Company and U.S. Bank National Association, as trustee	Incorporated by reference to Exhibit 4.1 to Form 8-K filed with the SEC on September 25, 2020
4.3	Form of 0.000% Convertible Senior Note due 2025 (included in Exhibit 4.2)	Incorporated by reference to Exhibit 4.2 to Form 8-K filed with the SEC on September 25, 2020
10.1†	Employment Agreement, dated August 20, 2019 between SolarEdge Technologies Ltd. and Uri Bechor	Incorporated by reference to Exhibit 10.1 to Form 8-K filed with the SEC on August 21, 2019
10.2†	Employment Agreement, dated December 1, 2010, between SolarEdge Technologies, Inc. and Ronen Faier	Incorporated by reference to Exhibit 10.3 of Amendment No. 1 to Form S-1 (Registration No. 333-202159) filed with the SEC on March 11, 2015
10.3†	Employment Agreement, dated May 17, 2009, between SolarEdge Technologies, Inc. and Zvi Lando	Incorporated by reference to Exhibit 10.3 of Amendment No. 1 to Form S-1 (Registration No. 333-202159) filed with the SEC on March 11, 2015
10.4†	SolarEdge Technologies, Inc. 2007 Global Incentive Plan.	Incorporated by reference to Exhibit 99.3 to Form S-8 (Registration No. 333-203193) filed with the SEC on April 2, 2015
10.5†	SolarEdge Technologies, Inc. 2015 Global Incentive Plan	Incorporated by reference to Exhibit 99.1 to Form S-8 (Registration No. 333-203193) filed with the SEC on April 2, 2015
10.6†	SolarEdge Technologies, Inc. 2015 Employee Stock Purchase Plan	Incorporated by reference to Exhibit 99.2 to Form S-8 (Registration No. 333-203193) filed with the SEC on April 2, 2015
10.7 †	Form of Non-Employee Director RSU Award Agreement	Incorporated by reference to Exhibit 10.11 to Form 10-K filed with the SEC on August 20, 2015
10.8 †	Form of Non-Employee Director Stock Option Award Agreement	Incorporated by reference to Exhibit 10.12 to Form 10-K filed with the SEC on August 20, 2015

10.9 †	Form of Employee RSU Award Agreement	Incorporated by reference to Exhibit 10.13 to Form 10-K filed with the SEC on August 20, 2015
10.10 †	Form of Employee Stock Option Award Agreement	Incorporated by reference to Exhibit 10.14 to Form 10-K filed with the SEC on August 20, 2015
21.1	List of Subsidiaries of the Registrant	Filed with this report.
23.1	Consent of Kost Forer Gabbay & Kasierer, independent registered public accounting firm	Filed with this report.
24.1	Power of Attorney (included in signature page)	Filed with this report.
31.1	Certification of Chief Executive Officer Pursuant to Rules 13a-14(a) and15d-14(a) of the Securities Exchange Act of 1934, as amended	Filed with this report.
31.2	Certification of Chief Financial Officer Pursuant to Rules 13a-14(a) and15d-14(a) of the Securities Exchange Act of 1934, as amended	Filed with this report.
32.1	Certification of Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	Filed with this report.
32.2	Certification of Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	Filed with this report.
101.INS	XBRL Instance Document - - embedded within the Inline XBRL document	Filed with this report.
101.SCH	XBRL Taxonomy Extension Schema Document	Filed with this report.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	Filed with this report.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	Filed with this report.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	Filed with this report.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	Filed with this report.
104	Cover Page Interactive Data File - the cover page XBRL tags are embedded within the Inline XBRL document.	Filed with this report.

† Management contract or compensatory plan or arrangement.

ITEM 16. Form 10–K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

By: /s/ Zvi Lando
Name: Zvi Lando
Title: Chief Executive Officer
Date: February 22, 2022

POWER OF ATTORNEY

Know all persons by these presents, that each person whose signature appears below constitutes and appoints Zvi Lando, Ronen Faier, and Rachel Prishkolnik, or any of them, as such person's true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for such person and in such person's name, place, and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or any of them or their or such person's substitute or substitutes, may lawfully do or cause to be done by virtue thereof.

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

Signature	**Title**	**Date**
/s/ Zvi Lando	Chief Executive Officer and Director (*Principal Executive Officer*)	February 22, 2022
/s/Ronen Faier	Chief Financial Officer (*Principal Financial and Accounting Officer*)	February 22, 2022
/s/Nadav Zafrir	Chairman of the Board	February 22, 2022
/s/Yoni Cheifetz	Director	February 22, 2022
/s/Marcel Gani	Director	February 22, 2022
/s/Doron Inbar	Director	February 22, 2022
/s/Avery More	Director	February 22, 2022
/s/Tal Payne	Director	February 22, 2022
/s/ Betsy Atkins	Director	February 22, 2022

EXHIBIT 21.1

LIST OF SUBSIDIARIES OF THE REGISTRANT

Name	Jurisdiction of organization
SolarEdge Technologies Ltd.	Israel
SolarEdge Manufacturing Ltd.	Israel
SolarEdge Technologies GmbH	Germany
SOLAREDGE TECHNOLOGIES (CHINA) CO., LTD	China
SolarEdge Technologies (Australia) PTY LTD	Australia
SolarEdge Technologies (Canada) Ltd.	Canada
SolarEdge Technologies (Holland) B.V.	The Netherlands
SolarEdge Technologies (Japan) Co., Ltd.	Japan
SolarEdge Technologies (France) SARL.	France
SolarEdge Technologies (UK) Ltd.	United Kingdom
SOLAREDGE TECHNOLOGIES ITALY S.R.L.	Italy
SolarEdge Automation Machines s.p.a.	Italy
SolarEdge e-Mobility s.p.a	Italy
SolarEdge Investment srl	Italy
SolarEdge Technologies (Bulgaria) Ltd.	Bulgaria
Guangzhou SolarEdge Machinery Technical Consulting Co.Ltd	China
SOLAREDGE TEKNOLOJİ A.Ş.	Turkey
SolarEdge Technologies (Belgium) SPRL	Belgium
SolarEdge Technologies SRL.	Romania
SOLAREDGE TECHNOLOGIES (INDIA) PRIVATE LIMITED	India
SolarEdge Technologies (Sweden) AB	Sweden
SolarEdge Technologies Taiwan Co., Ltd.	Taiwan
SolarEdge Technologies Korea Co., Ltd.	South Korea
Kokam Limited Company	South Korea
SolarEdge Critical Power U.K. Limited	United Kingdom
SOLAREDGE DO BRASIL SERVIÇOS DE MARKETING E APOIO AO CLIENTE LTDA.	Brazil
SolarEdge Technologies (Vietnam) Company Limited	Vietnam
SolarEdge Technologies (Hungary) Kft.	Hungary
SolarEdge Technologies (Poland) Sp. z o.o	Poland
SolarEdge E-Mobility Germany GmbH & Co. KG	Germany
SolarGik, Ltd.	Israel
SolarEdge Technologies Mexico S.DE R.L. DE C.V.	Mexico

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8) (File No. 333-203193) pertaining to the 2015 Global Incentive Plan, 2007 Global Incentive Plan and 2015 Employee Stock Purchase Plan of SolarEdge Technologies, Inc. and the Registration Statement (Form S-3 (File No. 333-229618) of SolarEdge Technologies, Inc. in the related Prospectus of our reports dated February 22, 2022, with respect to the consolidated financial statements of SolarEdge Technologies, Inc. and the effectiveness of internal control over financial reporting of SolarEdge Technologies, Inc. included in this Annual Report (Form 10-K) for the year ended December 31, 2021.

/s/ KOST FORER GABBAY & KASIERER
Kost Forer Gabbay & Kasierer
A Member of Ernst & Young Global

Tel-Aviv, Israel
February 22, 2022

EXHIBIT 31.1

I, Zvi Lando, certify that:

1. I have reviewed this Annual Report on Form 10-K of SolarEdge Technologies, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 22, 2022

/s/Zvi Lando
Chief Executive Officer
(*Principal Executive Officer*)

EXHIBIT 31.2

I, Ronen Faier, certify that:

1. I have reviewed this Annual Report on Form 10-K of SolarEdge Technologies, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 22, 2022

/s/ Ronen Faier
Ronen Faier
Chief Financial Officer
(*Principal Financial Officer*)

EXHIBIT 32.1

Certification of the Chief Executive Officer

Pursuant to 18 U.S.C. §1350

Solely for the purposes of complying with 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, I, the undersigned Chief Executive Officer of SolarEdge Technologies, Inc. (the “Company”), hereby certify, based on my knowledge, that the Annual Report on Form 10-K of the Company for the year ended December 31, 2021 (the “Report”) fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended, and that information contained in the Report fairly presents, in all material respects, the financial condition, and results of operations of the Company.

Date: February 22, 2022

/s/Zvi Lando
Zvi Lando
Chief Executive Officer
(*Principal Executive Officer*)

EXHIBIT 32.2

Certification of the Chief Executive Officer

Pursuant to 18 U.S.C. §1350

Solely for the purposes of complying with 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, I, the undersigned Chief Executive Officer of SolarEdge Technologies, Inc. (the "Company"), hereby certify, based on my knowledge, that the Annual Report on Form 10-K of the Company for the year ended December 31, 2021 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended, and that information contained in the Report fairly presents, in all material respects, the financial condition, and results of operations of the Company.

Date: February 22, 2022

/s/Ronen Faier
Ronen Faier
Chief Financial Officer
(*Principal Financial Officer*)