



# CEO Letter to Shareholders 2019





### Use of Forward-Looking Statements

This presentation contains forward-looking statements made pursuant to the Safe Harbor provisions of the Private Securities Litigation Reform Act of 1995, including but not limited to statements concerning future financial performance; the capabilities and performance of our current and future technology and products; our business strategies, including anticipated trends, growth, and developments in markets in which we target, and our entry into digital commerce; the anticipated market adoption of our current and future products; the value of our products, including reduction in logistic costs for our partners; and our performance in operations, including component supply management, product quality, and customer service. These forward-looking statements are based upon current expectations that involve risks and uncertainties. Any statements that are not of historical fact, may be forward-looking statements. Words used such as “anticipates,” “believes,” “continues,” “designed,” “estimates,” “expects,” “goal,” “intends,” “likely,” “may,” “ongoing,” “plans,” “projects,” “pursuing,” “seeks,” “should,” “will,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these words. All forward-looking statements are based on our current assumptions, expectations and beliefs, and involve substantial risks and uncertainties that may cause results, performance or achievement to materially differ from those expressed or implied by these forward-looking statements. Therefore, you should not place undue reliance on our forward-looking statements. A detailed discussion of risk factors that affect our business is included in the filings we make with the Securities and Exchange Commission (SEC) from time to time, including our most recent report on Form 10-K, particularly under the heading “Risk Factors.” Copies of these filings are available on the Enphase website at <http://investor.enphase.com/sec.cfm>, or on the SEC website at [www.sec.gov](http://www.sec.gov). All forward-looking statements in this presentation are based on information currently available to us, and we assume no obligation to update these forward-looking statements in light of new information or future events.

### Industry Information

Information regarding market and industry statistics in this presentation is based on information available to us that we believe is accurate. It is generally based

on publications that are not produced for purposes of economic analysis.

### Non-GAAP Financial Metrics

- The Company has presented certain non-GAAP financial measures in this presentation. Generally, a non-GAAP financial measure is a numerical measure of a company's performance, financial position, or cash flows that either excludes or includes amounts that are not normally excluded or included in the most directly comparable measure calculated and presented in accordance with generally accepted accounting principles in the United States of America, or GAAP. Reconciliation of each non-GAAP financial measure to the most directly comparable GAAP financial measure can be found in the Appendix to this presentation. Non-GAAP financial measures presented by the Company include non-GAAP gross profit, gross margin, operating expenses, income from operations, net income (loss) and net income (loss) per share.

- These non-GAAP financial measures do not reflect a comprehensive system of accounting, differ from GAAP measures with the same captions and may differ from non-GAAP financial measures with the same or similar captions that are used by other companies. In addition, these non-GAAP measures have limitations in that they do not reflect all of the amounts associated with the Company's results of operations as determined in accordance with GAAP. As such, these non-GAAP measures should be considered as a supplement to, and not as a substitute for, or superior to, financial measures calculated in accordance with GAAP. The Company uses these non-GAAP financial measures to analyze its operating performance and future prospects, develop internal budgets and financial goals, and to facilitate period-to-period comparisons. The Company believes that these non-GAAP financial measures reflect an additional way of viewing aspects of its operations that, when viewed with its GAAP results, provide a more complete understanding of factors and trends affecting its business.

- As presented in the “Reconciliation of Non-GAAP Financial Measures” table in the Appendix to this presentation, each of the non-GAAP financial measures excludes one or more of the following items for purposes of calculating non-GAAP financial measures to facilitate an evaluation of the Company's current operating performance and a comparison to its past operating performance:

- Stock-based compensation expense. The Company excludes stock-based compensation expense from its non-GAAP measures primarily because they are non-cash in nature. Moreover, the impact of this expense is significantly affected by the Company's stock price at the time of an award over which management has limited to no control.

- Restructuring charges. The Company excludes restructuring charges due to the nature of the expenses being unplanned and arising outside the ordinary course of continuing operations. These costs primarily consist of fees paid for restructuring-related management consulting services, cash-based severance costs and modification of stock-based compensation related to workforce reduction actions, asset write-downs of property and equipment and lease loss reserves, and other contract termination costs resulting from restructuring initiatives.

- Reserve for non-recurring legal matter. This item represents a charge taken for the potential settlement cost related to a dispute with a vendor. This item is excluded as it relates to a specific matter and is not reflective of the Company's ongoing financial performance.

- Acquisition related expenses and amortization. This item represents expenses incurred related to the Company's acquisition of SunPower's microinverter business, which are non-recurring in nature, and amortization of acquired intangible assets, which is a non-cash expense. Acquisition related expenses and amortization of acquired intangible assets are not reflective of the Company's ongoing financial performance.

- Non-recurring debt prepayment fees and non-cash interest. This item consists primarily of amortization of debt issuance costs, accretion of debt discount and non-recurring debt settlement costs, because these expenses does not represent a cash outflow for the Company except in the period the financing was secured or when the financing was settled, and such amortization expense or settlement of debt costs is not reflective of the Company's ongoing financial performance.

- Non-GAAP income tax adjustment. This item represents the amount adjusted to the Company's GAAP tax provision or benefit to present the non-GAAP tax amount based on cash tax expense and reserves.



Encharge 3 battery system

Enpower smart switch

Encharge 10 battery system

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**Badri Kothandaraman**  
President and CEO

"COVID-19 is redefining how we work and how we interact with each other."

## Dear fellow shareholders,

### What a beginning to the year!

The whole world has been turned upside down in just three months. COVID-19 is redefining how we work and how we interact with each other. The details of the Coronavirus are still emerging – how it originates, how it spreads and who it affects. Until we have effective prevention and control mechanisms in place, it seems that social distancing and working from home will continue to be the new norm for a period of time. Travel has come to a standstill and commerce is significantly impacted.

Although the picture today is gloomy, we hope our collective strength in the face of adversity will give rise to new findings in medicine and new ways of doing business. At this point, we can all build resilience by having a positive mindset, staying healthy, connecting socially while practicing physical distancing, and figuring out unconventional ways for work to continue. In this spirit and backdrop, this letter highlights our 2019 accomplishments and 2020 priorities.

### The personal side

First, a brief history about me and the circumstances under which I joined Enphase Energy. I was born and raised in Chennai, India from 1971 to 1993. Education was a high priority for my parents, and despite being a middle-class family, they ensured that my sister and I attended the best schools. After completing my bachelor's degree from the Indian Institute of Technology, Chennai, I boarded my first airplane flight in 1993 to attend graduate school in the U.S.

In 1995, after completing my master's degree in materials science from U.C. Berkeley, I began working at Cypress Semiconductor as a sustaining engineer in the Fab. During the course of a 21-year career at Cypress, I worked in process technology and chip design, eventually landing in general management where I managed multiple memory, USB and IoT businesses. I have always been a strong analytical thinker and am very detail oriented, but perhaps the biggest skill I acquired in my 21 years at Cypress was building scalable business processes.

In late 2016, I decided to leave Cypress and try something new. I was enjoying my new-found freedom and dabbling with a startup until March 2017, when I had the opportunity to meet with Enphase.

### The context leading to 2019

During my initial meeting at Enphase, it became obvious that Enphase was special. I was shown the IQ 6™ microinverter, which I viewed as an engineering marvel of a microinverter that produced 300W of AC power with a form factor just a little larger than the iPhone plus. This sleek device not only had incredible power density but was capable of working on the roof in the harshest of conditions for 25 years!

I decided to join the talented Enphase team in April 2017, and the hard work ahead was cut out for us. The company was not doing well financially, despite its strong technology and products. The main problem was the lack of operational discipline; we had to stop the bleeding.

We stopped accepting unprofitable business, started pricing products based on value, worked on reducing costs, and became laser-focused on conserving cash. We were fortunate to have an amazingly loyal customer base that absolutely loved our products. We worked hard, began turning the corner and in Q4'17, we were break-even on a non-GAAP basis. We also increased our focus on customer experience and top line growth.

In Q1'18, we introduced the IQ 7™ microinverter to customers in the U.S. By Q3'18, we were increasingly profitable and gross margin had climbed to more than 30%. A majority of our worldwide shipments was IQ 7 microinverters, and we started seeing a huge uptick in product demand. As a result, we started facing supply constraints in meeting this demand due to component shortages. We ended Q4'18 with GAAP profitability for the first time in the Company's history, and the stage was set for us to fix our supply problems and ramp up business in 2019.

"By Q3'18, we were increasingly profitable and gross margin had climbed to more than 30%."



IQ microinverters in a rooftop installation



## 2019 Performance

### 2019 exceeded my wildest imagination!

“Our revenue nearly doubled in 2019 to \$624.3 million and 2019 was the first full year of GAAP profitability in Enphase's history.”

Our revenue nearly doubled in 2019 to \$624.3 million, from \$316.2 million in 2018. We shipped 6.2 million microinverters in 2019, compared to 2.8 million microinverters in 2018, representing more than a 100% increase. Our non-GAAP gross margin in 2019 was more than 35%<sup>1</sup>, compared to 30.2%<sup>1</sup> in 2018, primarily due to great pricing and cost management.

Most of the revenue growth came from North America, where we built a strong sales team focusing on small- and medium-sized installers. I often wonder what caused such explosive growth in such a short time period. I go back to our core differentiation – semiconductor core, software enabled, and Ensemble™ technology – all built on a distributed architecture, which in turn delivers high quality, scalable and easy to support solutions for our installers and homeowners.



Enphase headquarters, Fremont, CA

### Distributed architecture is the norm

Our co-founders, Raghu Belur and Martin Fornage, built their careers in the telecommunications industry and strongly believed in the concept of a “distributed” architecture. In network parlance, intelligence gets pushed deeper and deeper into the network with end points making autonomous decisions. This has been shown to be true not only in telecommunications but in other areas too; for example, we have witnessed the move from main frames to PCs and from monolithic computing systems to blade servers in the datacenter, and others.

<sup>1</sup> See Appendix for reconciliation to comparable GAAP Measures

“Enphase microinverters are based on a high-speed digital semiconductor architecture with bi-directional communication, along with gateway and cloud software, forming a true Internet of Things (IoT) system.”



IQ 8 microinverter ASIC

The common threads running through these examples are semiconductors and software. Extending a similar approach to solar power conversion could help us build the most flexible, efficient, reliable, and cost-effective power system available. This is the reason why Enphase has designed its microinverters based on a high-speed digital semiconductor architecture with bi-directional communication, along with gateway and cloud software, forming a true Internet of Things (IoT) system.

We have now applied the same distributed architecture to energy storage as well. Both our solar microinverters and battery systems are intelligent end points and make autonomous decisions. Our IP portfolio now includes more than 300 issued patents, and many additional pending, worldwide – a testament to our product innovation.

### Our semiconductor architecture digitizes power conversion and integrates more functions

Enphase employs a single-stage resonant converter for its microinverters. This means that power from the DC solar panels is converted directly into AC in a single stage, as opposed to two-stage converters which split the isolation and inversion functions. Physically, the topology consists of a DC-side “Full-Bridge” and an AC-side 4-Quadrant “Half-Bridge” coupled with a high frequency transformer.

By carefully controlling the frequency and relative phase angles of the two bridges, we excite a resonant current that transfers energy between the DC and AC sides of the converter. The direct conversion in a single stage translates to fewer losses and fewer components. The power stage uses just eight transistors (four per bridge) and a single highly optimized high frequency magnetic component; fewer components represent higher reliability and lower costs. The single-stage resonant inverter has many advantages over the conventional two-stage design but is notoriously difficult to control in a direct DC-to-AC inverter application.

Enphase uses a 100% predictive control technique for power conversion. A custom application-specific integrated circuit (ASIC) is used specifically for implementing a fully digital version of this control technique. The ASIC includes a specially designed analog-to-digital converter to measure the resonant tank current with less than 200 nanoseconds of latency while consuming very little power.

Once these critical signals are digitized, the remaining processing can be done real-time using dedicated digital signal processing (DSP) blocks in the ASIC. We have been able to derive a single optimal trajectory by imposing constraints requiring all switching transitions to occur with zero-voltage across the switch (i.e. “zero-voltage-switching”) and maintaining the circulating resonant current as small as possible to achieve the desired power conversion at the lowest possible frequency.

This pursuit of the ASIC approach has paid Enphase big dividends, as it is efficient, scalable and cost effective for our microinverters. In every microinverter generation, we have reduced the component count by incorporating more functionality into the ASIC.

IQ 7 has 300+ components as compared to our older 5th generation microinverter with 400+ components. The IQ 8™ microinverter, with its grid-agnostic capability, is about 1,000 times faster in response time as compared to IQ 7. The ASIC incorporated in IQ 8 has substantially more functionality than in IQ 7, including an embedded Arm® processor.

Our first generation microinverter produced 175W of power at approximately 94% efficiency with minimal functionality other than power conversion. In stark comparison, the IQ 7 microinverter operates as high as 366W of power at approximately 97% efficiency with additional analog and digital integration; the IQ 8 microinverter is expected to do even more. This is the true power of a semiconductor-based architecture.

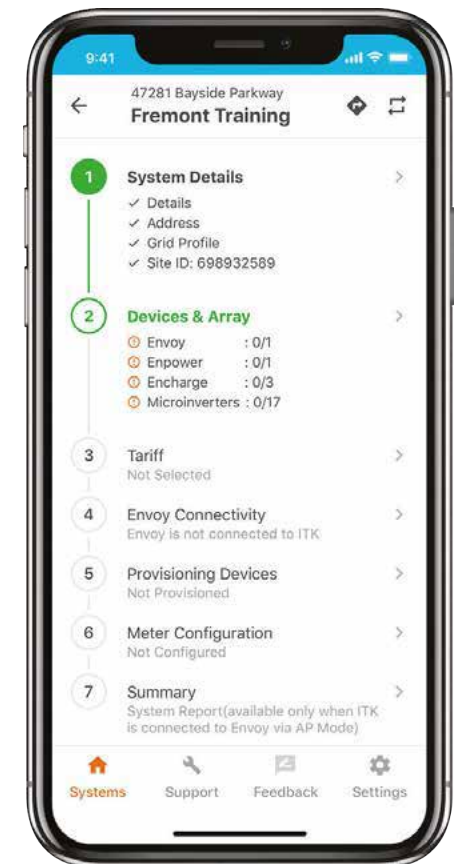
“Our software defined architecture enables us to build a single hardware platform and adapt the operation of the microinverter to the grid requirements.”

## Software helps with ultimate flexibility and quality

Every component in our microinverter system is defined by software. It begins with firmware stored in the flash memory of our microinverter that defines the basic operation and safe operating zones for abnormal grid events. Our software defined architecture enables us to build a single hardware platform and adapt the operation of the microinverter to the grid requirements of each geography, utility and even to each home.

For example, regardless of whether the microinverter operates in the U.S. at 240V-60Hz, Line-Line, or in Europe at 230V-50Hz, Line-Neutral, we use the same hardware. Furthermore, the unique grid requirements, such as in California or Hawaii, are accomplished by an operating profile that is also configured by software.

We have applied similar thinking as we move into our energy storage systems. For example, beginning with our sixth generation microinverter, power conversion has been bi-directional. This means that we can have power flow from DC to AC to act like an inverter, or control power flow from AC to DC to act like a charge controller for our storage systems – all accomplished with the same hardware platform and a minor modification in software. This gives us incredible flexibility to manage our supply chain.



Enphase Installer Toolkit is used to easily setup, manage and monitor all aspects of solar and storage systems

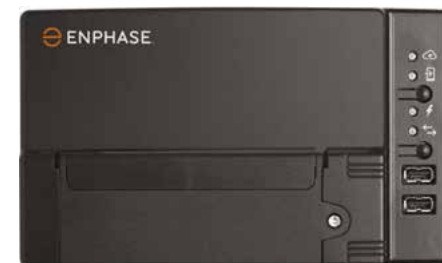
“This pursuit of the ASIC approach has paid Enphase big dividends, as it is efficient, scalable and cost effective for our microinverters.”



"Today, Enphase microinverters are deployed in more than one million installations which send real-time data back to the Enlighten cloud system."

The Envoy™ is our gateway, a device that controls and communicates with the microinverters and batteries. The Envoy also communicates real-time with our proprietary Enlighten™ cloud platform. The communication between the Envoy and microinverters is achieved over the AC powerline through power line communication, or PLC, without the need for additional wires.

The communication to the cloud is accomplished either over the homeowner's broadband network or an independent cellular network. In addition to communication, the Envoy provides metering capability to measure both energy production and consumption in a home. The Enlighten cloud monitors the critical parameters of the solar system.



IQ Envoy communication gateway

Today, Enphase microinverters are deployed in more than one million installations which send real-time data back to the Enlighten cloud system. In the past few years, we have enabled customers to monitor their own consumption through the Enlighten mobile app. Enlighten collects as much as 3GB to 4GB of data per day, which is invaluable to our customer service team to monitor and determine the health of the microinverters should issues arise. The ability to analyze microinverter data under various operating conditions in great detail can also be used by our engineering teams to improve the quality of microinverters from one generation to the next.

Finally, the communication between the microinverter system and the cloud is bi-directional. This means that not only can the microinverters send data to the cloud, but the cloud can also send data to the microinverters. This allows us to future-proof our systems by enabling the remote upgrading of our microinverters - a feature called over-the-air software upgrade. Solar systems today are designed to last over 25 years. It is unrealistic to think that operating conditions will not change over that time.

For example, electrical grid, weather, load, regulations, and tariffs are all subject to change. A combination of software-defined hardware and over-the-air software upgrade capabilities make the systems in the field remotely upgradeable without requiring our installer partners to do in-person site visits, helping to greatly improve operational efficiency.

## All the power In the palm of your hand





# The only all-in-one smart energy system.

For the first time ever, you can easily generate, store and control energy in a single system – designed completely by Enphase.





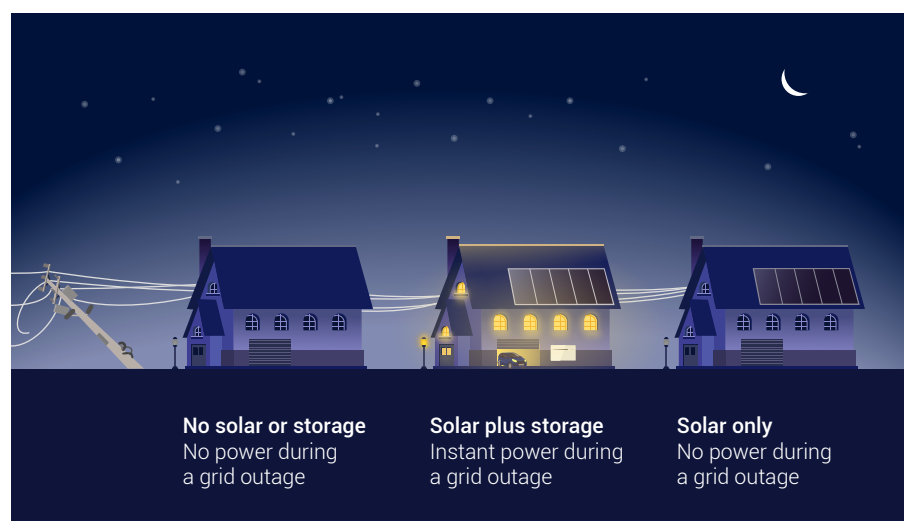
"We invented Ensemble, an energy management technology that is completely grid agnostic, enabling solar systems to operate even in the absence of a grid."

## Ensemble is a game changer

One of Solar's biggest challenges is that it is "grid-tied." This means that for solar systems today, if the grid fails or is off-line, there will be no production out of the solar system, even if the sun is still shining. To address this limitation, we invented Ensemble technology, an energy management technology that is completely grid agnostic.

In the event of a grid failure, the solar system with Ensemble technology will form its own microgrid for the home. The Ensemble system uses a three-tiered hierarchical control architecture, similar to that of the conventional utility grid. The three tiers work together to create a robust flexible power system that is designed to respond quickly to fluctuating demands while coordinating power flow to minimize cost of operation.

The first tier in this system, "primary control", is accomplished with the embedded digital signal processor (DSP) within our ASIC in the microinverter. It is an autonomous tier that uses local voltage and frequency to balance instantaneous generation and load via a governing response, and does not rely on communication, making it fast and reliable. In addition, a high-speed brownout capability is integrated into the primary control system. When a microinverter determines that it is operating at its limit, it augments the primary response in order to keep operating within its designed envelope. This system is useful to manage load inrush from motors and heaters. When grid-tied, microinverters operate exactly how they do today, with the voltage and frequency controlled by the utility.



Enphase Always-On systems keep the power on, even when the grid is down

While the primary controller provides a proportional response to changes in load which create deviations in voltage and frequency, these deviations are removed using "secondary control". The Ensemble secondary controller resides in the Envoy and broadcasts PLC and ZigBee™ messages which are received by the microinverter fleet. These messages contain biases to the primary control equations in order to maintain a certain quality of service.

When operating off-grid, this objective is to maintain a specific voltage and frequency target. For example, when a load turns on, the voltage and frequency drops until enough primary control response is triggered to meet the new demand. This is often referred to as the "governing response" of the system. The Envoy gateway observes the reduced voltage and frequency and broadcasts new bias terms to the microinverter fleet in order to restore the target system voltage and frequency.

"Tertiary control" is the third tier with the objective of "economic optimization", which means optimizing the energy flow among resources such that the load is serviced at the lowest cost. This occurs when the "marginal cost of energy delivered" is equalized among all resources. This controller, which resides in our cloud system Enlighten, collects telemetry data in order to calculate marginal cost curves for all resources within its jurisdiction. It then calculates the required tertiary biases that will equalize the marginal costs among all the resources and multi-casts these tertiary biases to each resource.

## Quality is the bedrock of the Enphase design

"Quality is at the heart of everything we do."

Quality is at the heart of everything we do. We are passionate about building products that people can count on for 25 years and in the harshest of climate conditions. As previously noted, our single stage architecture results in a reduced number of components with higher efficiency, leading to lesser power dissipation. The fewer number of components, the higher the intrinsic quality of the microinverter. Our target is to achieve less than 500 defective parts per million (DPPM), which translates to a failure rate of less than 0.05%, shipped on an annualized basis. This requires constant fleet monitoring to detect problems, assembling a cross-functional task force to review quality on a regular basis, and using the 8D method of problem solving.





Enlighten monitoring platform

For example, we recently had an issue where homes in a particular region with a unique weather pattern stopped producing solar power. Our Always-On strategy ensures that Enphase-based systems are connected to the Enlighten cloud and can be monitored 24-7. Therefore, our fleet monitoring team was able to isolate the exact conditions under which this problem occurred. This enabled us to quickly replicate the problem in our R&D lab and the root cause pointed to a defective component. With our multi-sourcing approach, we were able to initiate the switch to a different component supplier immediately.

As for the fleet, we were able to come up with a software fix which runs in the background and prevents these power downs. In addition, we were able to incorporate the unique failure mechanism in our reliability suite of tests. This example demonstrates the power of our software-defined architecture and cross-functional problem-solving capabilities. Due to such excellent collaboration within our teams, we were able to drop the IQ 7 DPPM by nearly a third during 2019, enabling us to get closer to our 500 DPPM target.

### Customer service is our strength

"When a customer calls, you jump." This has been our mantra for the past few years since I have built our leadership team. Our installed base is steadily growing and is now more than one million installations. While we welcome calls from homeowners and installers, we strive to provide a superior customer experience so that calls are not necessary in the first place. The name of the game is how to make it "bone simple" for the customer. We strive to get progressively better through the use of technology and self-service options, such as our upcoming online community and other features.

We are proud that our customer contact centers in Idaho, Australia, France, and India have ramped up well to achieve high levels of customer satisfaction. Our worldwide Net Promoter Score (NPS) increased from 37% in 2018 to 52% in 2019. We drove down our mean call wait time to approximately 1.3 minutes by Q4'19. Our goal is to be under one minute, and we have initiatives in 2020 to help us achieve that. Our installed base represents many potential service opportunities, including solar and storage upgrades. We are scratching the surface on understanding the homeowner experience through our legacy product upgrade program, with

"Our worldwide Net Promoter Score (NPS) increased from 37% in 2018 to 52% in 2019."

"Our microinverter shipments increased every quarter in 2019, accelerating from approximately 820,000 units in Q4'18 to 2.1 million units in Q4'19."



IQ 7XS™ microinverters integrated into SunPower® X-Series solar modules

more than 7,200 homeowners having participated in the program by the end of 2019. We also introduced the Enphase e-commerce store in the U.S. based on feedback from customers who want a quick access to products that are hard to find through traditional channels.

### Our operations team did an outstanding job in 2019

In prior sections of this letter, I highlighted our technological core differentiation as well as our customer experience focus. It would be remiss on my part to not recognize our operational excellence. Our microinverter shipments increased every quarter in 2019, accelerating from approximately 820,000 units in Q4'18 to 2.1 million units in Q4'19. We had a big challenge to meet customer demand, particularly in the first half of 2019. We used a multi-sourcing approach along with our efficient OpEx-Lite and CapEx-Lite model. We forged strong power transistor partnerships, which helped us immensely to secure power transistor capacity in Q4'18 and increase it further throughout 2019. We worked with our contract manufacturer to add microinverter capacity in Mexico as mitigation to the Section 301 Tariffs, which increased to 25% in 2019. We were able to increase our total microinverter manufacturing capacity to 2.5 million units in Q4'19, with 500,000 units coming from Mexico, and all with modest increases to our capital expenditures and operating expenses. In addition, we scaled our supply chain business processes and organization to improve on-time delivery to approximately 99% by the end of Q4'19.

### Our new product performance was okay, not stellar

New products are our life blood. If it had not been for the IQ product family, Enphase would be in a different place today. Fortunately, the best is yet to come! We have a compelling differentiation with Ensemble energy management technology and a multi-year product roadmap that is laid out clearly in front of us. Our engineering teams in India, New Zealand and the U.S. spent the bulk of 2019 getting up to speed on Ensemble technology and battery storage products. If there is one thing we could do better, it is getting new products out faster.



IQ 7A microinverter

“Our Encharge storage system represents a transformative opportunity to increase our revenue potential per home from approximately \$2,000 to \$10,000.”

Let’s look at what we did in 2019. The IQ 7 family of microinverters are our smallest, lightest and most powerful microinverters, and were instrumental in improving our non-GAAP gross margin to 35.7% in 2019. Approximately 98% of our total shipments are in 3 flavors of the IQ 7 – IQ 7, IQ 7+™ and IQ 7X™. We released our highest power microinverter, IQ 7A™ for 450W DC modules during the latter part of 2019. Solar installers can pair the IQ 7A microinverter with mono-facial or bifacial solar modules, up to 450W. We are working on further reducing our cost per watt by leveraging our semiconductor integration, power expertise and economies of scale. We continue to work closely with our AC module (ACM) partners, most notably SunPower, to develop ACMs which help create value through reduced logistics costs and faster installation times.

A critical driver for our profitable top line growth is storage. Our Encharge™ storage system based on Ensemble technology represents a transformative opportunity to increase our revenue potential per home from approximately \$2,000 to \$10,000. Encharge storage systems have usable capacities of 3.4 kWh and 10.1 kWh, helping to keep homes powered when the grid goes down, and saving money when the grid is up. These systems are compatible with both new and existing Enphase IQ™ solar systems with IQ 6 or IQ 7 microinverters, providing a simple upgrade path for existing customers. We expect to ramp up our Encharge 3™ and Encharge 10™ storage systems for North American customers in 2020.

35-15-20 is our new financial model

We surpassed our original 30-20-10 target financial model handily for most of 2019; 30-20-10 stands for 30% gross margin, 20% operating expenses, and 10% operating income, all as a percentage of revenue on a non-GAAP basis. At our [Analyst Day](#) in December 2019, we introduced a new baseline financial model of 35-15-20. This baseline model represents the minimum financial performance we expect to achieve over the next 24 months, while demonstrating profitable topline growth. Our 2019 GAAP net income was \$161.1 million, resulting in diluted earnings per share of \$1.23. It should be noted that 2019 was the first full year of GAAP profitability in Enphase's history. Our non-GAAP net income was \$124.2 million, resulting in non-GAAP diluted earnings per share of \$0.95.<sup>1</sup>

<sup>1</sup> See Appendix for reconciliation to comparable GAAP Measures

“The potent combination of the IQ 7 family of products along with great customer experience was the biggest reason for our financial success in 2019.”

We executed on all the priorities I highlighted in my letter a year ago

In conclusion, we had a great 2019 on many fronts. We improved leaps and bounds on customer experience, instituted many business processes in operations and new product development, and executed well on our growth vectors. If I were to summarize it in one sentence, the potent combination of the IQ 7 family of products along with great customer experience was the biggest reason for our financial success in 2019. We had 577 full-time employees at the end of 2019, and I am proud of all their hard work and dedication.

Performance metrics

Below is a recap of our financial performance in 2019 as compared with 2018. Dollars are represented in thousands, except per-share data and percentages:

	GAAP			
	2019		2018	
Revenue	\$	624,333	\$	316,159
Gross margin		35.4 %		29.9 %
Operating expense		19.0 %		29.4 %
Operating income	\$	102,729	\$	1,596
Net income (loss)	\$	161,148	\$	(11,627)
Basic EPS	\$	1.38	\$	(0.12)
Diluted EPS	\$	1.23	\$	(0.12)
	Non-GAAP <sup>1</sup>			
	2019		2018	
Revenue	\$	624,333	\$	316,159
Gross margin		35.7 %		30.2 %
Operating expense		15.4 %		23.7 %
Operating income	\$	126,592	\$	20,535
Net income	\$	124,205	\$	10,013
Basic EPS	\$	1.06	\$	0.10
Diluted EPS	\$	0.95	\$	0.10

<sup>1</sup> See Appendix for reconciliation to comparable GAAP measures



"We will continue with our mission to deliver technology solutions that make clean energy affordable, reliable and accessible to all."

## Our 2020 priorities

Our solid execution in 2019 has positioned us well with a solid financial foundation. As we move into 2020, our focus is on the following priorities that will help us to further service homeowners and fuel profitable growth.

### Reinforce remarkable customer experiences

Quality and customer service constitute customer experience. This has been a priority at Enphase for the past three years. We believe that great companies have a level of consistency that goes beyond goals and have quality and service ingrained into their culture. "Customer First" is Enphase's first core value. Our goals are to partner with installers and distributors so that we can provide exceptional service to homeowners and business owners. We are doing well in the U.S.; we are intensifying our focus on the international regions like Europe and Australia. We significantly increased our headcount in these regions going into 2020. We are convinced that continued reinforcement of customer experience will be a huge competitive advantage.

### Introduce new products and expand our market

After the market release of the Encharge storage system, we expect to release the grid-agnostic IQ 8 photovoltaic (PV) product for residential solar applications followed by the IQ 8D™ microinverter product for the small commercial solar market and the Ensemble-in-a-Box™ product for the India off-grid market. We believe this will increase our serviceable available market (SAM) from \$3.3 billion in 2020 to \$12.5 billion in 2022, providing an opportunity for meaningful topline growth and profitability. Every one of these products leverages our core differentiation of semiconductors, software and Ensemble.

### Leverage digital transformation

Today, we are engaged digitally with our installed base of more than one million sites through the Enlighten mobile and desktop applications, putting us in a unique position to understand their energy needs. Similarly, we work very closely with a few thousand installers every year. By developing a comprehensive digital platform on which the homeowner, installer and Enphase can interact, we can significantly enhance the experience for all parties. This is a multi-year activity for which we expect to make significant progress in 2020.



IQ 8D microinverter for the small commercial market



## Final thoughts

We are looking forward with a clear focus on growth fueled by continuing innovation. We have a very strong balance sheet that enables us to weather adverse situations as well as capitalize on future opportunities. We are rapidly transitioning from being a solar microinverter systems company to an energy management systems company. We believe we can have the biggest impact on the planet by pursuing our mission to bring solar and storage solutions mainstream.

As I write this letter, the world continues to be impacted by the Coronavirus pandemic. Our topmost priority is to ensure the health and safety of our employees, customers and partners. We are doing everything possible to ensure uninterrupted supply and support of our high-quality products to customers and partners.

I would like to thank our employees for their hard work, and our customers, partners and shareholders for their strong support. You have my word that we will continue with our mission to deliver technology solutions that make clean energy affordable, reliable and accessible to all.

To be continued,

Badri Kothandaraman  
President and CEO



# Appendix

## Enphase Energy, Inc. reconciliation of Non-GAAP financial measures

In thousands, except per share data and percentages. (Unaudited)

	Year Ended	
	December 31, 2019	December 31, 2018
<b>Gross profit (GAAP)</b>	\$ 221,245	\$ 94,445
Stock-based compensation	1,650	1,071
<b>Gross profit (Non-GAAP)</b>	<b>\$ 222,895</b>	<b>\$ 95,516</b>
<b>Gross margin (GAAP)</b>	35.4 %	29.9 %
Stock-based compensation	0.3 %	0.3 %
<b>Gross margin (Non-GAAP)</b>	<b>35.7 %</b>	<b>30.2 %</b>
<b>Operating expenses (GAAP)</b>	\$ 118,516	\$ 92,849
Stock-based compensation	(17,791)	(10,361)
Restructuring and asset impairment charges	(2,599)	(4,128)
Reserve for non-recurring legal matter	—	(1,765)
Acquisition related expenses and amortization	(2,183)	(1,614)
<b>Operating expenses (Non-GAAP)</b>	<b>\$ 95,943</b>	<b>\$ 74,981</b>
Operating expense % of revenue	15.4 %	23.7 %
<b>Income from operations (GAAP)</b>	\$ 102,729	\$ 1,596
Stock-based compensation	19,441	11,432
Restructuring and asset impairment charges	2,599	4,128
Reserve for non-recurring legal matter	—	1,765
Acquisition related expenses and amortization	2,183	1,614
<b>Income from operations (Non-GAAP)</b>	<b>\$ 126,952</b>	<b>\$ 20,535</b>
<b>Net income (loss) (GAAP)</b>	\$ 161,148	\$ (11,627)
Stock-based compensation	19,441	11,432
Restructuring and asset impairment charges	2,599	4,128
Reserve for non-recurring legal matter	—	1,765
Acquisition related expenses and amortization	2,183	1,614
Non-recurring debt prepayment fees and non-cash interest	13,205	2,701
Non-GAAP income tax adjustment	(74,371)	—
<b>Net income (Non-GAAP)</b>	<b>\$ 124,205</b>	<b>\$ 10,013</b>
<b>Net income (loss) per share, basic (GAAP)</b>	\$ 1.38	\$ (0.12)
Stock-based compensation	0.17	0.11
Restructuring and asset impairment charges	0.02	0.04
Reserve for non-recurring legal matter	—	0.02
Acquisition related expenses and amortization	0.02	0.02
Non-recurring debt prepayment fees and non-cash interest	0.11	0.03
Non-GAAP income tax adjustment	(0.64)	—
<b>Net income per share, basic (Non-GAAP)</b>	<b>\$ 1.06</b>	<b>\$ 0.10</b>
Shares used in basic per share calculation GAAP and Non-GAAP	116,713	99,619
<b>Net income (loss) per share, diluted (GAAP)</b>	\$ 1.23	\$ (0.12)
Stock-based compensation	0.15	0.11
Restructuring and asset impairment charges	0.02	0.04
Reserve for non-recurring legal matter	—	0.02
Acquisition related expenses and amortization	0.02	0.02
Non-recurring debt prepayment fees and non-cash interest	0.10	0.03
Non-GAAP income tax adjustment	(0.57)	—
<b>Net income per share, diluted (Non-GAAP) <sup>1</sup></b>	<b>\$ 0.95</b>	<b>\$ 0.10</b>
Shares used in diluted per share calculation GAAP	131,644	99,619
Shares used in diluted per share calculation Non-GAAP <sup>2</sup>	131,193	111,696



<sup>1</sup> Calculation of non-GAAP diluted net income per share for the twelve months ended December 31, 2019 and December 31, 2018 excludes convertible notes due 2023 interest expense, net of tax of \$0.9 million and \$0.7 million, respectively, from non-GAAP net income.

<sup>2</sup> Effect of dilutive in-the-money portion of convertible senior notes and warrants are included in the GAAP weighted-average diluted shares in periods where we have GAAP net income. We excluded the in-the-money portion of convertible notes due 2024 totaling 1288 thousand shares for the twelve months ended December 31, 2019, for non-GAAP weighted-average diluted shares as the Company entered into convertible note hedge transactions that reduce potential dilution to the Company's common stock upon any conversion of the Notes due 2024.





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### Independent registered public accounting firm

Deloitte & Touche LLP

### Stock exchange listing

Enphase Energy, Inc. common stock trades on the NASDAQ Global Market under the symbol ENPH  
Financial and investor information is available on the company's investor relations website at [investor.enphase.com](http://investor.enphase.com)