

# Transformation

Solar to Energy

INVESTOR DAY NOVEMBER 16, 2021



## Safe Harbor

#### 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 our anticipated financial performance and guidance, including revenues, gross margin, operating results, expenses and costs; our business strategies, including results of investments and acquisitions, and the expected size, trends and developments in markets in which we target and operate and in those to which we plan to expand: the anticipated capabilities, performance, and market adoption of Enphase's new technologies, products and product features; the expected capacity of components and the availability of our products; our planned sustainability efforts; our performance in operations, including in logistics, product quality, cost management, and by our suppliers; our anticipated performance in customer service and that by installers of our products; and our expectations as to the impact and evolving effects of the ongoing COVID-19 pandemic. 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 forwardlooking 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 that we make with the Securities and Exchange Commission (SEC) from time to time, including our most recent reports on Form 10-K and Form 10-Q, particularly under the heading "Risk Factors." Copies of these filings are available on the Enphase website at https://investor.enphase.com/sec-filings or on the SEC website at www.sec.gov. All forwardlooking 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 margin, operating income
  (loss), adjusted EBITDA, and free cash flow.
- 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. Enphase believes that these nonGAAP 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 "GAAP to non-GAAP Reconciliation" page, 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.
- Tariff refunds. This item represents approved tariff refunds, and interest income earned on those refunds, by the U.S. Customs and Border Protection that qualify for the tariff exclusion on Chinese imported microinverter products that fit the dimensions and weight limits within a Section 301 Tariff exclusion under U.S. note 20(ss)(40) to subchapter III of chapter 99 of the Harmonized Tariff Schedule of the United States. Approved refunds relate to tariffs previously paid from September 24, 2018 to March 31, 2020 and are excluded from the non-GAAP measures as the refunds are non-recurring in nature for tariff costs incurred in the past and are not reflective of the Company's ongoing financial performance.
- Restructuring and asset impairment 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 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.
- Acquisition related expenses and amortization. This item represents expenses incurred related to the Company's business
  acquisition, 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.
- 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.
- Non-recurring debt prepayment fees and non-cash interest expense. This item consists primarily of amortization of debt issuance costs, accretion of debt discount and non-recurring debt settlement costs, because these expenses do 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.
- Loss on partial settlement of convertible notes. This item is reflected in other income (expense), net and represents (i) the difference between the carrying value and the fair value of the settled convertible notes and (ii) the inducement loss for the difference between the value of the shares issued to settle the convertible notes and the value of the shares that would have been issued under the original conversion terms with respect to the repurchased Notes due 2025, which is non-cash in nature and is not reflective of the Company's ongoing financial performance.
- Change in fair value of derivatives. This item is reflected in other income (expense), net and represents changes in fair value of the conversion option in the convertible notes due 2025, as well as the convertible note hedge and warrant transactions, which is non-cash in nature and 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.
- Adjusted EBITDA. When calculating Adjusted EBITDA, in addition to adjustments described above, the Company excludes the impact of cash interest expense, net of interest income, income tax provision (benefit) and depreciation and amortization.
- Free cash flow. This item represents net cash flows from operating activities plus deemed repayment of convertible notes attributable to accreted debt discount reported in operating activities and payments for acquisition reported in operating activities less purchases of property and equipment.

## 

## Badri Kothandaraman

Chief Executive Officer



## Agenda

Strategy	Badri Kothandaraman Chief Executive Officer
Installer Perspective	Raul Vergara Cutler Bay, Chief Executive Officer
Product Innovation	Raghu Belur Chief Product Officer
Installer Perspective	Suleman Khan Swell, Chief Executive Officer
ESG	Lisan Hung General Counsel
Financial Update	Eric Branderiz Chief Financial Officer
Q&A	Management
Lunch	
Demonstrations	Digital Platform Network Operations Center Enphase Home Portable Energy System

Product Displays



# Transformation

Solar to Energy

Great Technology

# Innovative

Products

Massive Market



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## 2021 So Far

#### What worked well



**2,095 Employees**<sup>1</sup> Globally with HQ in Fremont, California



**900+ Installers**<sup>1</sup> In our Enphase Installer Network (EIN)

Both Acquisitions Doing well and fully integrated

> **39 Million+**<sup>1</sup> Microinverters shipped, representing approx. 12 GW



**1.7 Million+ Systems**<sup>4</sup>

<sup>1</sup>As of Sept. 30, 2021

In more than 130 countries

**\$1.37 Billion Revenue**<sup>2</sup> 77% Increase from 2020

IQ Battery shipments

**40% Gross Margin**<sup>3</sup> Disciplined pricing and cost

## Challenges \_

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Shipping and supply constraints



New products



## $IQ8H^{\rm TM}$ is our highest power 1P1M microinverter with peak power of 384VA

<sup>2</sup> Total for the year assumes Q1'21 to Q3'21 actual and mid-point of Q4'21 guidance
 <sup>3</sup> Non-GAAP gross margin assumes Q1'21 to Q3'21 actual and mid-point of Q4'21 guidance.
 Refer to Appendix for reconciliation to the most comparable GAAP measure.
 <sup>4</sup> Includes Enphase systems as of Sept. 30, 2021, grossed up for non-managed and unconnected systems

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## **Our Core Competencies**



Semiconductors





#### **OUR CORE COMPETENCIES**

## Semiconductors

55nm digital ASIC enabling microgrids

Blazing fast response times

Software-defined power

Analog ASICs for more integration



The Swift ASIC in IQ8  $^{\rm TM}$  can respond quickly to changing grid conditions, 1000x faster than IQ7  $^{\rm TM}$ 

#### OUR CORE COMPETENCIES

## Software

Autonomous decision making of DERs

IQ System Controller<sup>1</sup> for on-site control

Seamlessly transfers control between grid forming and grid following resources

Enphase Cloud control for user settings

Full-fledged IoT system



Our 1.7 million+ systems in the field generate nearly 97 TB<sup>2</sup> of data per year

#### **OUR CORE COMPETENCIES**

## Ensemble<sup>™</sup>

Distributed architecture

Hierarchical control

A virtual area is a cluster of home(s)

AC marketplace

DER selection based on marginal cost





## **Customer Experience**

## Quality

Microinverter failure rate of 0.05%<sup>1</sup> is a reality Added focus on battery quality Head start with LFP and 15-year limited warranty Network Operations Centre

## Service

Target NPS > 70; 1 minute wait times 24x7 operations worldwide Outage response teams Fleet analytics



#### OPERATIONAL EXCELLENCE

## **Global Supply Chain**

3 CM Factories for microinverters; well diversified globally

Adding CMs near customers for efficiency

Capacity at 5M micros/Qtr; can be increased

Tapping feeders near our CMs for logistics

2 cell pack suppliers > 720 MWh a year

Globalization efforts on batteries underway



## OPERATIONAL EXCELLENCE

## **Gross Margin**

## Pricing

Value-based pricing discipline Microinverters: grid-forming, quality, service, power Storage: all-in-one, LFP, modular, genset integration Load control and up to 15-year limited warranty<sup>1</sup> Modest price increases to counter increase in CPI<sup>2</sup>

## Cost

Alive and well on purchasing and negotiation Microinverters: DC connectors, ASICs, semis, passives Storage: Battery management and power conversion Navigating macro supply and logistics issues today





#### **BUSINESS PRINCIPLES**

## Spending

## OPEX

Executive team and core architects in Fremont Product teams in Bangalore, Christchurch, Austin, Montreal Service and Sales teams globally New product, software and marketing investments in 2022

## CAPEX

Technology-focused spending No deviation from CM model Continue globalization of supply chain



## Our Strategy

Build best-in-class home energy systems and deliver them to homeowners through our installer and distribution partners, enabled by a comprehensive digital platform



## Revenue



<sup>1</sup> Assumes mid-point of Q4'21 guidance





## Solar

Leverage increasing global TAM

Strong performance in US; Europe 2X from 2020 to 2021

Added Italy, Brazil in 2021; Japan 2023

Ship IQ8<sup>™</sup> Dec'21 and IQ8D<sup>™</sup> Mar'22

Innovate further with IQ9<sup>™</sup> and IQ9D<sup>™</sup>





<sup>1</sup>Enphase internal data <sup>2</sup>Wood Mackenzie data with Enphase estimate and internal pricing assumptions

## Storage

IQ Battery<sup>™</sup> 3/10 (T) shipping now US, Germany, Belgium; 1,000+ certified US installers

IQ Battery 5P in 2022 worldwide 2X<sup>1</sup> power and lower cost (7.68 kW peak power for 5 kWh)

Next generation IQ Battery in 2023 Focus on energy density: big step down in cost

# Our IQ batteries 3T/10T are nearly 50% thinner in depth compared to IQ batteries 3/10

## RESIDENTIAL

2022 SAM<sup>2</sup> 2025 SAM<sup>2</sup>

\$2.3B



<sup>1</sup> Compared to IQ Battery 3/10 (T)
<sup>2</sup> Wood Mackenzie data with Enphase estimate, Enphase internal pricing assumptions and \$0.7B retrofit storage market per year

## Portable Energy System

Launching in US and India 1H'22

Energy security plus Energy-On-The-Go

High quality cloud-connected device

Roadmap: Integrate into Ensemble<sup>™</sup> platform

#### RESIDENTIAL

2022 SAM<sup>1</sup> 2025 SAM<sup>1</sup>

\$0.5B \$2.5B

<sup>1</sup>Enphase internal data



The Portable Energy System shown above has 1.3 kWh capacity with 1.6kW continuous and 3.2kW peak power

## IQ Load Controller<sup>™</sup>

Strategic-makes every install a "whole home backup"

Today: 4-circuit load control

Basic and smart control options through Enphase App

2022: Target 12-circuit control and 24-circuit monitoring





## **EV** Charger

EVs in US growing at CAGR of 40%<sup>1</sup>

Acquiring ClipperCreek: High-quality, Versatile support

1 in 7.5<sup>2</sup> non-Tesla vehicles is a ClipperCreek charger

Accretive to our installers plus DTC

Roadmap: Reduce costs; add smarts, V2X<sup>3</sup>

#### RESIDENTIAL

 $2022 \text{ SAM}^4$ 

2025 SAM<sup>4</sup>

\$0.2B \$6B

<sup>1</sup> US data for all EVs calculated from S&P Global Platts <sup>2</sup> ClipperCreek internal data <sup>3</sup> Refers to vehicle-to-grid and vehicle-to-home <sup>4</sup> Enphase and ClipperCreek internal data without TSLA, S&P Global Platts and Harrison Research



## AC Fuel Cell

Made by Upstart Power and powered by IQ8<sup>™</sup>

Resilience Adder: Turns on, tops up battery and turns off

Reliable, low maintenance and low emissions

Grid-tied capability and ITC eligible

#### RESIDENTIAL

2022 SAM<sup>2</sup> 2025 SAM<sup>2</sup> \$0.1B \$1.5B



<sup>1</sup> Compared to a standard ICE engine. Upstart internal data <sup>2</sup> Enphase internal data



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## **Generator Integration**

Enables glitch-free transition for homeowners

User-configurable options through the app

AC-coupled architecture doesn't limit output power

Compatible with the installed base of HSB generators

#### **KEY SPECIFICATIONS**





IQ<sup>™</sup> inverters can be added at the output of generators to create a clean AC waveform and make them grid-tied resources

#### Ә ENPHASE.

## **Grid Services**

Getting started: 8+ programs in pipeline<sup>1</sup>

Business models: Aggregators and utilities

Mainly on batteries today, other DERs to follow

Enrollment, opt in/out and tracking for homeowners via app

Grid services manager software for utilities to manage fleet



A homeowner in Rhode Island can make as much as \$1,536/year for each 10 kWh Battery from the ConnectedSolutions program

#### HARNESSING AI FOR CUSTOMER EXPERIENCE

## Our Data





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## Energy production per home

Irradiance, Lat/Long, Shading Efficiency, Panel-level Granularity

#### Energy consumption per home

Power, Current profile Energy independence, Savings

#### System vitals and Events

Critical parameters State changes

## Installer stats and Performance

EIN Tier, Business Vitals NPS, Cycle Times etc.



Homeowner profile

Consumption, Home Size Appliances, Tariff, Incentives



## Errors and Notifications

Faults and Returns Account settings

#### Global weather data

Storm Alerts Wildfire Alerts



Grid performance

Voltage, Frequency Outage Incidents

<sup>1</sup> Enphase internal data as of Sept. 30, 2021
 <sup>2</sup> Extrapolations till 2025 assuming 15% market growth per year, not Enphase specific

## Opportunities

8〕 Homeowners	O Installers	★ Grid Operators	û Internal Operations	New Services
Intelligent home energy management	Quick, accurate full system designs	Real-time improved grid services	Accurate models for prediction of failures	Production and consumption forecasting
Grid quality and outage prediction	Auto panel placement and SLD generation	Improving localized power quality	Automation of the returns business process	Weather service for better alerts and warnings
Panel cleaning and shading alerts	Quick site setup and fully automated permits	Load shifting to match renewable generation	Preventive maintenance alerts	Appliance signature and failure prediction
Tariff selection, efficient off-grid usage and savings	Better lead generation and qualification	Efficient and controlled recovery from outages	Learning AHJ Database for high-quality permits	Efficient O&M with scheduling and dispatching
Grid services to improve system ROI	Optimized site visits	Vehicle-To-Grid management	ROI-based system upgrade to add more resources	Transactive energy marketplace

## The Enphase Installer Platform Vision

Reduce installation soft costs

Integrate all services for installers

Focus on ease of doing business for installers





## Solargraf Pro<sup>™</sup>

Design and

Proposal

## Financing and Contract

## Permit Plan Sets



900+ installers today<sup>1</sup>

Launching Q1'22: Shading, 3D, Storage Battery sizing: modes and appliances Comprehensive tariffs and incentives Roadmap: SLDs, AHJ design rule checks



Brings Fintech partners into proposals through APIs

Provides choices for diverse consumer needs

Enables easy loan approval process at point of sale

Allows for e-signing of contracts



Covers all 50 states and AHJs Supports solar, storage, generator, EVs Target 24-hour turnaround time to installer AHJ learning database for quality 2022: Full automation and self-service

## Just The Beginning

Great Technology Innovative Products

Massive Market

Over 300 patents

Home Energy systems and digital platform

\$23 Billion SAM<sup>1</sup> by 2025

A EL



## Raul Vergara

Chief Executive Officer Cutler Bay Solar Solutions



#### CUTLER BAY SOLAR SOLUTIONS

## About Us

Founded in 2013 with 3 employees; 50 employees today

South Florida HQ; family owned and operated

Install locations in South Florida with expansion plans into Central Florida

Dedication to fantastic customer experience

Heavy involvement in rooftop solar activism and education in South Florida community

Turnkey solar solutions for homeowners



## CUTLER BAY SOLAR SOLUTIONS

## Installations

978 Solar Systems 35,719 microinverters

972 IO Batteries<sup>™</sup>3.3 MWh of storage

100% Energized By Enphase





## Thank you!







# Raghu Belur

Chief Product Officer



## $\textbf{Ensemble}^{\scriptscriptstyle{\mathsf{M}}}$



- AC architecture is simple and universal
- $IQ8^{\text{TM}}$  is a foundational element

Hierarchical control: Primary, Secondary and Tertiary control





## $\textbf{Ensemble}^{\scriptscriptstyle{\mathsf{M}}}$

## Ensemble is a generalized solution

Architecture is extensible beyond a single home



THE IQ9<sup>™</sup> FAMILY

## **Best-in-Class Power Density**

High power microinverters for 600 W single and dual modules 50% more power density compared to IQ8™

GaN allows for high power and fast switching of AC FETs Has > 1000x less resistance than silicon for given voltage

2x switching frequency reduces transformer size by 30%

New gate driver ASIC reduces part count

New features: variable frequency and  $3\phi$  microgrid forming

#### KEY SPECIFICATIONS<sup>1</sup>

**ENPHASE** 

	Max Power	Power density	Switching frequency
1Q9	500 WAC	1.5x IQ8	~200 kHz
IQ9D	960 WAC	1.5x IQ8	~200 kHz



Performance of GaN and SiC versus Silicon devices

Gallium Nitride (GaN) is a wide-bandgap device (3.2 eV) helps in making power electronics smaller, faster and energy efficient

THE IQ9<sup>™</sup> FAMILY

**IQ8**<sup>™</sup>

## **Best-in-Class Power Density**



Compared to IQ8

THE IQ9<sup>™</sup> FAMILY

## **Best-in-Class Power Density**



Compared to IQ8

## Minimizing Overhead From Cell Pack to Product

IQ Battery 3T<sup>™</sup> ~50 Wh/L



Next generation IQ Battery<sup>™</sup> ~100 Wh/L<sup>1</sup>



## Minimizing Overhead From Cell Pack to Product



Next generation IQ Battery<sup>™</sup> ~100 Wh/L<sup>1</sup>

IQ9D-BAT<sup>™</sup> with Battery Mgmt.



**ENPHASE**. <sup>1</sup> Target specifications subject to change

## Integrating Power Conversion with Battery Management

IQ9D-BAT Inverter<sup>™</sup>

Enabler for the next generation IQ Battery<sup>™</sup>

Combined battery and power management

Single board replaces seven from before

Single firmware image

## KEY SPECIFICATIONS<sup>1</sup>

Max PowerPeak Power1500 W3000 W



Just like how one solar microinverter interfaces with one panel on the roof, we have only one battery microinverter interfacing with one cell pack, optimizing cost

## Meter Collar

Microgrid Interconnect Device (MID) in the Collar

Simplifies and speeds up installs, while improving quality

Enables storage for meter-main-combo homes without rewiring

Pre-installed CTs reduces installation errors

Requires utility approval

#### **KEY SPECIFICATIONS**

Rating	Compliance	Communication
200A	UL414	CAN



This is an example of a meter collar between the meter and the meter socket which typically takes less than 30 minutes to install

## 

## **EV** Charger

EVs globally growing nearly 30% per year till 2025<sup>1</sup>

Smart charging will be a requirement (source, rate, duration)

Bi-directional V2H and V2G adds resiliency to home and grid

Ongoing debate on charging via the EV's AC or DC port

Integration into Ensemble<sup>™</sup> will enhance customer experience

#### **KEY SPECIFICATIONS**

Power	Grid Compliance	<b>Bi-Directional</b>	Integration
9.6KW	IEEE1547	AC/DC port	Ensemble





## AC Fuel Cell

Solid Oxide Fuel Cell with IQ8<sup>™</sup> power management

Resiliency Adder: Energy device tops up IQ<sup>™</sup> batteries

Easy install, modular, and scalable

Ongoing focus to optimize cost and power



#### **KEY SPECIFICATIONS**<sup>1</sup>

Power	Cycles	Fuel efficiency
1.25KW	250	2-3x

67% reduction in CO2 emissions and 99.9% reduction in CO emissions^1  $\,$ 



## **Grid Services**

60% increased demand due to EV and electrification

Intelligent and connected DERs

Distributed cloud architecture more scalable, safer, and less expensive



## We Have It All

Great Technology AC Architecture

## Innovative Products

Over 300 patents

Simple and Universal Home energy systems and digital platform



## Suleman Khan

Chief Executive Officer Swell



## SWELL

## About Us

Launched in 2015 as a Residential Energy Storage Platform

- Sales, installation & financing of ES / PV+ES systems (via DTC & Channel)
- VPP Aggregator-Operator interfacing between homeowners and utilities

100+ employees across four business units

- Customer Acquisition
- Project Fulfillment
- Project Finance
- Grid Services

Swell enables **aggregated virtual power plants ("VPPs")** that provide capacity and grid balancing services for utilities

• Swell currently has utility grid services contracts to deploy DER systems to 15,000 homes (341 MWh) across 9 VPPs in 3 states

Signed **multi-year partnership** agreement with **Enphase** to provide solar + storage solutions together with **Swell's VPP programs** 



## 

#### SWELL

A platform for the mass deployment and management of DERs providing VPP enablement services to utilities and partners powered by an end-to-end technology platform.



Swell provides a turnkey DER deployment & management platform that **optimizes utility value** while **enhancing customer experience**.



## SWELL

## **Case Studies**

#### Swell OC VPP | VPP Homes: 2,000

#### The Need

The decommissioning of the San Onofre nuclear plant led to diminished capacity for SCE in the Irvine, CA area.

#### **The Solution**

SCE has commissioned Swell to establish a 20 MWh Virtual Power Plant to restore a portion of this lost capacity.

#### Swell 805 VPP | VPP Homes: 6,000

#### The Need

The decommissioning of the Aliso Canyon gas storage facility led to diminished capacity for SCE in Ventura and Santa Barbara Counties, CA. SCE was directed by the California state senate to procure non-gas resources in order to re-establish this lost capacity.

#### **The Solution**

SCE has commissioned Swell to establish a 60 MWh Virtual Power Plant to restore a portion of this lost capacity.







SOUTHERN CALIFORNIA

#### Swell Nalu VPP VPP Homes: 6,000

#### The Need

Hawai'ian electric companies (HECO) sought to procure grid services from customer-sited renewable generation in response to orders from the Hawai'i Public Utilities Commission.

#### **The Solution**

Using residential customer-sited DERs, Swell is offering three distinct grid services: capacity reduce (discharging during peak times), capacity build (charging from excess wind energy), and frequency regulation.

Swell's Virtual Power Plants **enable utilities to benefit from customer-sited PV and Energy Storage** to address critical capacity needs and growing distribution grid challenges.





## Lisan Hung

General Counsel



## Achieving Long-Term Outperformance

# Advancing a sustainable future for all

Developing technology and products to make energy accessible and reliable

Reducing environmental impact in our operations and designing products with smaller footprint

Expanding our portfolio with products that reduce the home energy carbon footprint

## Committing to a robust approach

Continue responsible supply chain sourcing

Focus on enhancing our people and our communities

Increase transparency and accountability

## Aligning with our Investment Community

Board oversight

Established ESG taskforce

Hired Director of ESG

Identified ESG guidelines and frameworks

Published inaugural ESG report and launched ESG web page







## Eric Branderiz

Chief Financial Officer



## **Revenue and Gross Margin**



48% Revenue CAGR



Non-GAAP gross margin %<sup>1</sup>
 Non-GAAP operating income (loss) %<sup>1</sup>

#### Consistently profitable

Retaining our baseline financial model based on current macro

## EBITDA, Free Cash Flow, Cash And Debt



Free cash flow <sup>1</sup>

## Sustainable cash generation model Quick cash conversion cycle



Cash, cash equivalents, restricted cash and marketable securitiesTotal debt

#### Strong cash position

#### Access to capital markets when needed

- Best terms in history for green convertible notes issued in March 2021
- 5-year term at zero coupon and 70% conversion premium

## Simple Capital Allocation Due To Scalable Business Model

## Value Creating High Growth Stage

- Invest in Organic Growth
- Sustain growth and retain competitiveness

CapEx Lite: Invest in capacity, global supply chain diversification and cost reduction

OpEx Lite: Invest in innovation, new products and new markets. Increased operating leverage through economies of scale.

#### 2. Mergers and Acquisitions Accelerate Growth

Accretive bolt-on acquisitions such as the SunPower deal, Sofdesk, and DIN

Performance measured by ROI, IRR and payback

## Value Distributing Stable and Mature Business

## **3** Debt Repayment

Convertible notes of \$102.2M due 2025, \$632.5M due 2026 and \$575M due 2028: can be settled in cash, shares or in combination

Raise debt vs. equity for any additional capital required to optimize WACC

#### Share Buyback

• When stock is undervalued vs. intrinsic value

Executed \$200M buyback in May 2021 for 1.7 million shares at \$117/share

\$500M Share buyback authorization with execution subject to BOD approval

## 

## Increasing Our 'Share Of Wallet' Per Home



## 2021<sup>2</sup>

IQ7<sup>™</sup> family of microinverters<sup>3</sup> \$2,300

+IQ Battery<sup>™</sup> \$6,200 - \$7,200<sup>4</sup>

## 2023+

IQ8<sup>™</sup> family of microinverters<sup>3</sup> Premium for sunlight backup

+IQ Battery<sup>™</sup> \$6,200 - \$7,200

+IQ Load controller, EV Charger, Fuel Cell, Grid Services, Software

Enphase potential per home<sup>1</sup>

\$9,000

Enphase potential per home<sup>1</sup>

\$12,000

<sup>1</sup>Enphase internal data and approximate estimates <sup>2</sup> Exiting 2021 based on mid-point of Q4' 21 guidance <sup>3</sup> Refers to IQ7, IQ7+, IQ7X, IQ7A and IQ8, IQ8+, IQ8M, IQ8A, IQ8H with 20 micros per home <sup>4</sup> Assumes 10 kWh battery

## **Global Revenue Growth Framework**

	<b>- +</b> )			₽ ¢
Residential Solar	Residential Storage	Small Commercial Solar System	Portable Energy System	EV Charger
<ul> <li>Projecting to ship ~10.2Mu microinverters, ~3.5GW<sub>dc</sub> in 2021<sup>1</sup></li> <li>SAM assumed to grow at a baseline of 15% CAGR from 2021 through 2025<sup>2</sup></li> <li>Expect to grow faster than market based on product differentiation</li> <li>Microinverter capacity available at &gt; 5Mu/Q exiting 2021<sup>3</sup></li> <li>Qualify additional CMs worldwide to ease logistics for customers</li> <li>Expect modest ASP decline through 2025</li> <li>Expect improvement in supply chain and logistics constraints through the first half of 2022</li> </ul>	Projecting to ship ~245MWh in 2021 <sup>1</sup> 2021 SAM 1.5GWh <sup>2</sup> SAM at 55% CAGR from 2021 through 2025 <sup>2</sup> Battery cell pack capacity available at 180MWh/Q exiting 2021 <sup>3</sup> Sales reaching current cell pack capacity in the second half of 2022 Capacity upside with existing suppliers available as needed. Qualifying a third cell pack supplier in 2022 Expect ASP decline through 2025 IQ8™ enables smaller battery systems, accelerating market penetration	IQ8D <sup>™</sup> product launch in Q12022 to serve small commercial projects of 20KW to 500KW Minimal revenue contribution in 2022 due to new market segment SAM of \$1.7B in 2023 and \$2B in 2025 <sup>2</sup> Premium pricing with software defined platform for asset managers Post product proliferation, expect 5% per year market share capture	<ul> <li>SAM of \$1.6B in 2023 and \$2.5B in 2025<sup>3</sup></li> <li>General availability in 2H'2022</li> <li>Expect modest market share capture at launch</li> <li>Large market share capture opportunity with product differentiation: cloud connectivity, and Ensemble integration</li> <li>Direct-to-consumer product available on Enphase store in addition to stocking at our installers and distributor partners globally</li> </ul>	<ul> <li>Expect to acquire ClipperCreek at \$110M cash at close plus \$40M earn- outs in ENPH stock</li> <li>Projecting 2021 sales of ~21Ku sales in the U.S EV market<sup>4</sup></li> <li>Expect U.S EV market at 40% CAGR from 2021 through 2025<sup>4</sup></li> <li>Expect our U.S sales growth in-line with the market CAGR</li> <li>Post-close synergies include moving manufacturing to Enphase CMs, leveraging our global installer and distribution network and entering new regions</li> <li>Will add cloud connectivity through Enphase App and V2X capabilities</li> </ul>



<sup>1</sup>2021 assumes Q1'21 to Q3'21 actual and mid-point of Q4'21 guidance <sup>2</sup> Wood Mackenzie data with Enphase estimate <sup>3</sup> Enphase internal data <sup>4</sup> Enphase/ClipperCreek internal data, based on S&P Global Platts for all EVs in US

# Transformation

Full home electrification is inevitable

Great Technology

# Innovative

Products

Massive

Market



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# Appendix



#### APPENDIX

## **GAAP To Non-GAAP Reconciliation**

\$ in millions	2017	2018	2019	2020	2021 <sup>1</sup>
GAAP gross profit	\$ 56.0	\$ 94.4	\$ 221.2	\$ 346.0	\$ 545.1
Stock-based compensation	1.1	1.1	1.7	3.7	9.0
Tariff refunds	-	-	-	(38.9)	-
Non-GAAP gross profit	\$ 57.1	\$ 95.5	\$ 222.9	\$ 310.8	\$ 554.1
Non-GAAP gross margin % of revenue	20.0%	30.2%	35.7%	40.1%	40.5%
\$ in millions	2017	2018	2019	2020	2021 <sup>1</sup>
GAAP operating income (loss)	\$ (39.4)	\$ 1.6	\$ 102.7	\$ 186.4	\$ 191.6
Stock-based compensation	6.8	11.4	19.5	42.5	129.9
Tariff refunds	-	-	-	(38.9)	-
Reserve for non-recurring legal matter	-	1.8	-	-	-
Restructuring and asset impairment charges	16.9	4.1	2.6	-	-
Acquisition related expenses and amortization	-	1.6	2.2	2.5	11.3
Non-GAAP operating income (loss)	\$ (15.7)	\$ 20.5	\$ 127.0	\$ 192.5	\$ 332.8
Non-GAAP operating income (loss) % of revenue	-5.5%	6.5%	20.3%	24.9%	24.3%

**ENPHASE**. 12021 assumes Q1'21 to Q3'21 actual and mid-point of Q4'21 guidance

#### APPENDIX

## GAAP To Non-GAAP Reconciliation

\$ in millions		2017		2018		2019		2020		2021 <sup>1</sup>
GAAP net income (loss)	\$	(45.2)	\$	(11.6)	\$	161.1	\$	134.0	\$	119.2
Interest expense, net		7.9		9.6		7.2		18.8		45.5
Depreciation and amortization		9.0		9.7		14.1		18.1		26.7
Income tax provision (benefit)		0.1		1.4		(71.0)		(14.6)		(29.1)
Stock-based compensation		6.8		11.4		19.5		42.5		129.9
Tariff refunds		-		-		-		(39.6)		-
Restructuring and asset impairment charges		16.9		4.1		2.6		-		-
Acquisition-related expenses		-		0.7		-		0.3		5.5
Reserve for non-recurring legal matter		-		1.8		-		-		-
Non-recurring debt prepayment fees		-		-		6.0		-		-
Loss on partial settlement of convertible notes		-		-		-		3.0		56.4
Change in fair value of derivatives		-		-		-		44.3		-
Adjusted EBITDA	\$	(4.5)	\$	27.1	\$	139.5	\$	206.8	\$	354.1
\$ in millions		2017		2018		2019		2020		2021 <sup>1</sup>
Cash flow from operations	\$	(28.4)	\$	16.1	\$	139.1	\$	216.3	\$	326.9
Purchases of property and equipment		(4.1)		(4.1)		(14.8)		(20.5)		(59.2)
Deemed repayment of convertible notes due 2024 and notes due 2025 attributable to accreted debt										
discount		-		-		-		3.1		15.6
Payments for acquisition reported in cash flows from				10.0						
operating activities	•	-	•	10.0	•	-	•	-	•	-
Free cash flow	\$	(32.5)	\$	22.0	\$	124.3	\$	198.9	\$	283.3

#### APPENDIX

## SAM Market Data

		Residential S	olar <sup>1</sup>						Small Commerci	al Solar <sup>1</sup>			
	2021	2022	2023	2024	2025	CAGR		2021	2022	2023	2024	2025	
SAM (MW)	13,215	15,779	19,266	22,245	24,158	16%	SAM (MW)	-	1,057	9,085	10,720	11,473	
NA	4,629	5,249	5,769	6,923	7,961	15%	NA	-	852	892	877	935	
LATAM	634	886	1,256	1,509	1,766	29%	LATAM	-	205	1,567	1,839	2,017	
EUR	4,609	5,091	5,387	5,705	5,719	6%	EUR	-	-	1,615	2,764	2,798	
APAC	3,343	4,553	6,854	8,108	8,711	27%	APAC	-	-	5,011	5,240	5,723	
SAM (\$ In millions)	\$4,192	\$4,756	\$5,520	\$6,054	\$6,244	10%	SAM (\$ In millions)	-	\$204	\$1,776	\$1,994	\$2,027	
NA	\$1,451	\$1,563	\$1,632	\$1,861	\$2,033	9%	NA	-	\$162	\$161	\$150	\$152	
LATAM	\$202	\$269	\$362	\$413	\$459	23%	LATAM	-	\$43	\$309	\$344	\$359	
EUR	\$1,471	\$1,544	\$1,552	\$1,561	\$1,487	0%	EUR	-	-	\$319	\$518	\$498	
APAC	\$1,067	\$1,381	\$1,974	\$2,219	\$2,265	21%	APAC	-	-	\$988	\$982	\$1,018	
		Residential Sto	prage <sup>1,2</sup>						Portable Energy	System <sup>3</sup>			
	2021	2022	2023	2024	2025	CAGR		2021	2022	2023	2024	2025	
SAM (MWh)	1,478	2,811	5,398	6,770	8,916	57%	SAM (Mu)	-	0.26	0.98	1.25	1.64	
NA	831	1,905	2,817	2,990	3,648	45%	NA	-	0.19	0.53	0.66	0.88	
LATAM	85	178	259	387	480	54%	EUR	-	0.06	0.32	0.42	0.54	
EUR	418	552	1,012	1,622	1,948	47%	LATAM	-	0.00	0.05	0.07	0.09	
APAC	143	176	1,310	1,772	2,839	111%	APAC	-	0.01	0.08	0.11	0.14	
SAM (\$ In millions)	\$1,005	\$1,625	\$2,807	\$3,168	\$3,843	40%	SAM (\$ In millions)	-	\$452	\$1,599	\$1,948	\$2,483	
NA	\$565	\$1,101	\$1,465	\$1,399	\$1,572	29%	NA	-	\$328	\$880	\$1,046	\$1,360	
LATAM	\$58	\$103	\$135	\$181	\$207	38%	EUR	-	\$102	\$504	\$628	\$784	
EMEA	\$284	\$319	\$526	\$759	\$840	31%	LATAM	-	-	\$85	\$111	\$141	
APAC	\$97	\$102	\$681	\$829	\$1,224	88%	APAC	-	\$22	\$130	\$163	\$198	
		NON-TLSA EV C	harger <sup>4,5</sup>					EV Charger with TLSA <sup>4</sup>					
	2021	2022	2023	2024	2025	CAGR		2021	2022	2023	2024	2025	CAGR
TAM (Mu)	1.8	2.3	3.1	4.1	5.2	30%	TAM (Mu)	2.2	2.8	3.6	4.6	6.0	29%
US	0.2	0.3	0.5	0.8	1.2	63%	US	0.4	0.6	0.8	1.2	1.6	41%
EUR	1.6	2.0	2.6	3.2	4.0	25%	EUR	1.8	2.2	2.8	3.5	4.3	25%
SAM (Mu)	0.2	0.3	3.1	4.1	5.2	137%							
US	0.2	0.3	0.5	0.8	1.2	63%							
EUR	-	-	2.6	3.2	4.0								
SAM (\$ In millions)	\$149	\$245	\$2,715	\$4,254	\$5,985	152%	TAM (\$ In millions)	\$1,946	\$2,338	\$3,125	\$4,840	\$6,845	37%
US	\$149	\$245	\$476	\$880	\$1,354	74%	US	\$373	\$491	\$717	\$1,212	\$1,865	50%
EUR	-	-	\$2,239	\$3,374	\$4,631		EUR	\$1,573	\$1,847	\$2,407	\$3,628	\$4,979	33%
Storage Retrofit		\$650	\$650	\$650	\$650								
Fuel Cell		\$87	\$1,319	\$1,336	\$1,536								
TOTAL SAM	\$5.346	\$8.020	\$16.386	\$19,404	\$22.768								

<sup>1</sup>Wood Mackenzie and Enphase internal estimates and pricing assumptions

<sup>2</sup> Excludes retrofit opportunities

<sup>3</sup> Enphase internal estimates

<sup>4</sup> S&P Platts, Harrison Research and ENPH/ClipperCreek internal estimates

<sup>5</sup> Excludes estimated TLSA vehicles from Harrison Research



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