



# Analyst Day

Profitable Growth

December 12, 2019



# 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 financial performance and guidance, including revenues, gross margin, operating results, expenses and costs; our business strategies, including our operations and anticipated trends and developments in markets in which we operate and in the markets in which we plan to expand; the anticipated market adoption of Enphase's energy management system; the capabilities and performance of our technology and products, including product scalability, the ability to operate without a grid, the ability to optimize and customize products, load disaggregation, monitoring, and management, and reduction in installation, logistics and supply chain times; the capacity and availability of our products; our performance in operations, including product quality, safety, reliability, cost management, and customer service 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 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 <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 margin, operating expenses, income (loss) from operations, net loss and adjusted 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 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 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 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.
  - Adjusted free cash flow. This item represents cash flows from operating activities excluding payments for the acquisition reported in operating activities less purchases of property and equipment. The Company believes the adjusted free cash flow is the best measure of how much cash the business generates after accounting for capital expenditures.

This presentation is being made exclusively to qualified institutional buyers ("QIBs") as defined in Rule 144A ("Rule 144A") under the U.S. Securities Act of 1933, as amended (the "Securities Act"). The securities described herein have not been and will not be registered under the Securities Act and may not be offered or sold in the United States except to QIBs in reliance on Rule 144A or pursuant to another exemption from, or transaction not subject to, the registration requirements of the Securities Act. This document does not constitute an offer to sell, or a solicitation of an offer to purchase, any securities in any jurisdiction where such offer or sale is not permitted. Any purchaser of such securities will be deemed to have made certain representations and acknowledgments, including, without limitation, that the purchaser is a "qualified institutional buyer" as defined in Rule 144A under the Securities Act.



# Agenda

## Badri Kothandaraman

Chief Executive Officer

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## Raghu Belur

Chief Product Officer

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## Arthur Souritzidis | Marc Jones

CEO - Momentum Solar

CEO - Sunpro Solar

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## Eric Branderiz

Chief Financial Officer

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## Q & A

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## Product Demos

Fremont HQ

**Badri  
Kothandaraman**  
Chief Executive Officer



# 2019 Financial Performance

**\$619M<sup>1</sup>**  
Revenue

**\$122M<sup>2</sup>**  
Operating Income

**+96%**  
YoY

**+495%**  
YoY

<sup>1</sup> Assumes midpoint of Q4'19 guidance

<sup>2</sup> All numbers are Non-GAAP. Refer to appendix for GAAP reconciliation

# A Look Back At 2019

We did a few things well and need to make other things better



Exceeded **financial target** of 30-20-10



Introduced **new generation** IQ™ products



Further **improved** quality and customer service



**Forecasting 500Ku** Microinverters from Flex Mexico in Q4'19<sup>1</sup>



Fixed **supply chain** issues



Strong **growth** in North America



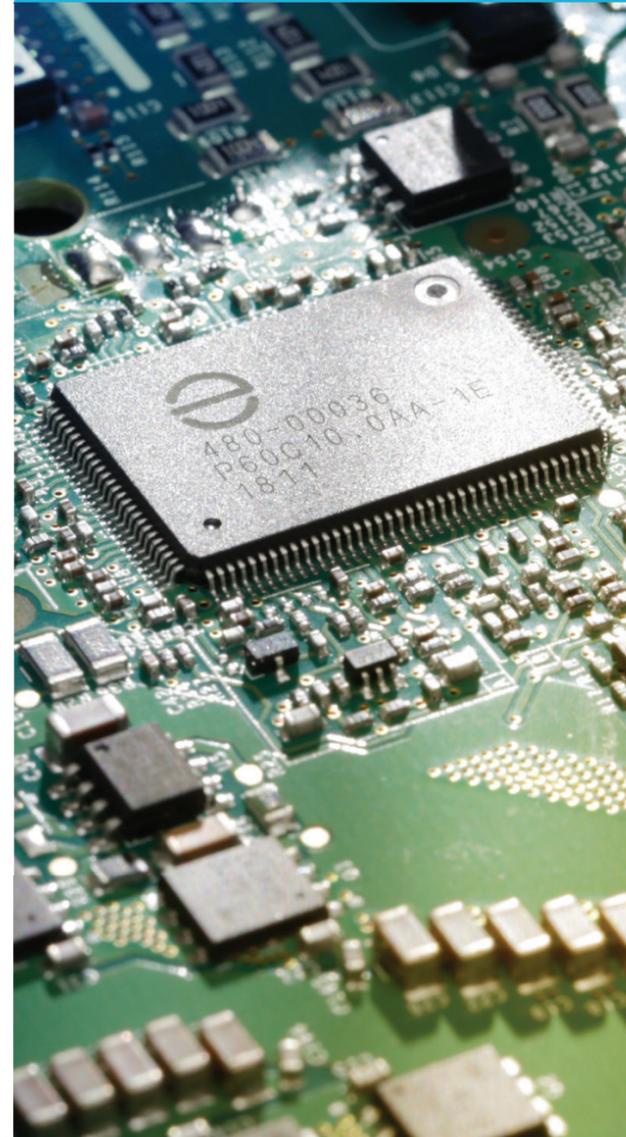
Growth in International

<sup>1</sup> Assumes midpoint of Q4'19 guidance



# Our Core Differentiation

## Semiconductor



**Predictive Control**

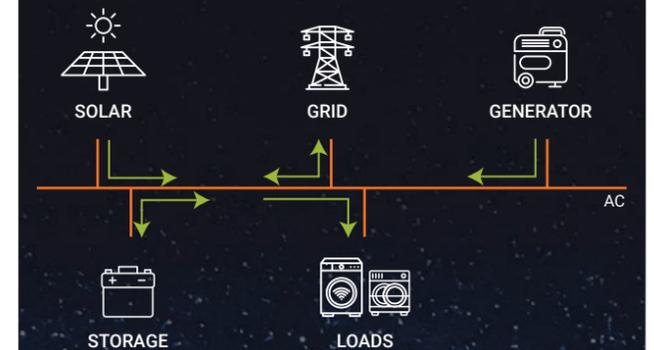
## Software



**Software-Defined Architecture**

## Ensemble™

Energy Management Technology



**Home Energy Management**



# Operational Excellence

Customer Experience

## Quality

**5X<sup>1</sup>**

Better than  
M Series

**500 dppm**

Reliability  
Target

## Customer Service

**54%<sup>1</sup>**

Worldwide  
NPS

**30 sec**

Wait Time  
Target

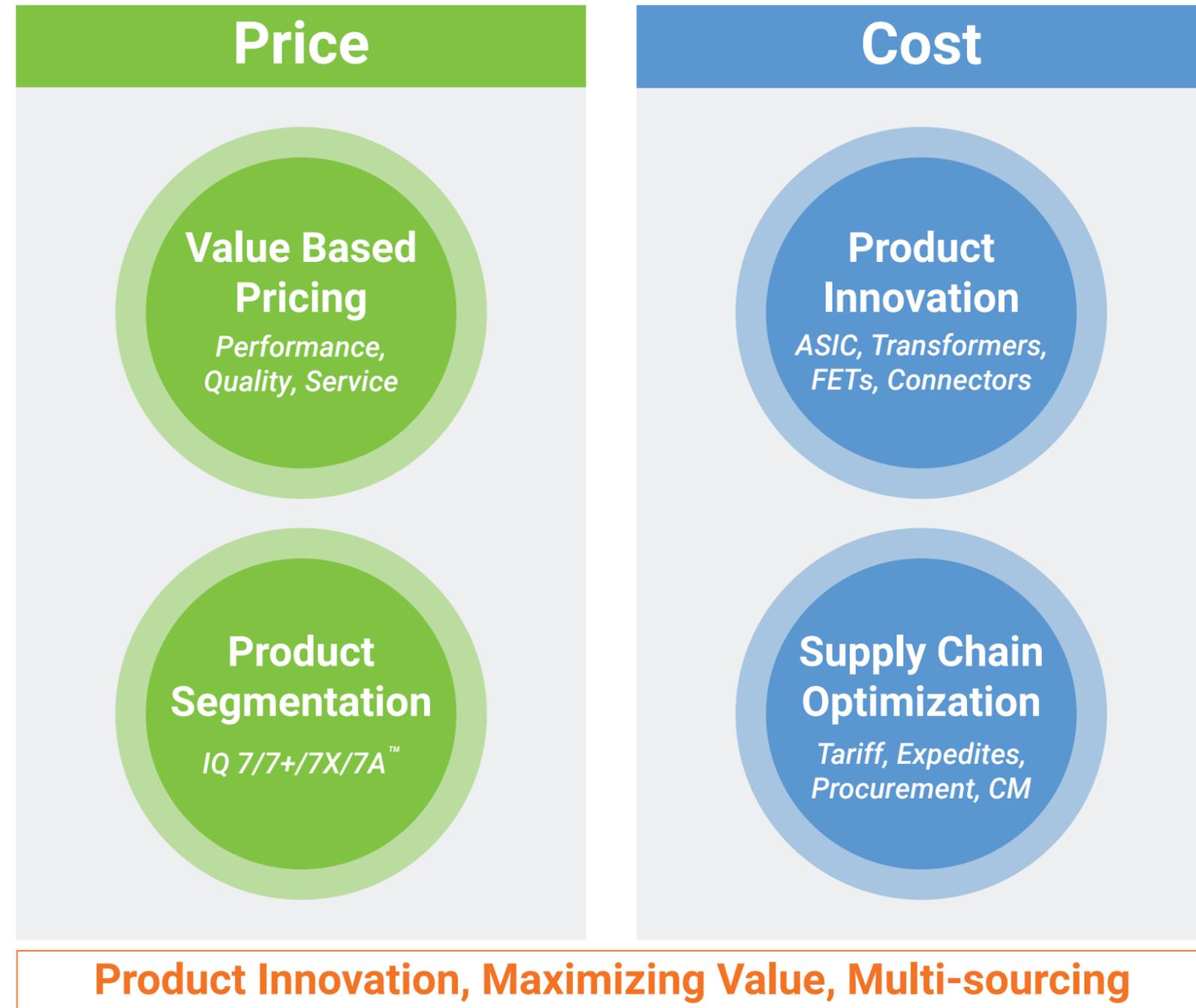
**Laser Focus on Quality and Customer Service**

<sup>1</sup>5X refers to actual results of IQ 7™ Microinverters as of Q3'19, NPS refers to Net Promoter Score as of Q3'19



# Operational Excellence

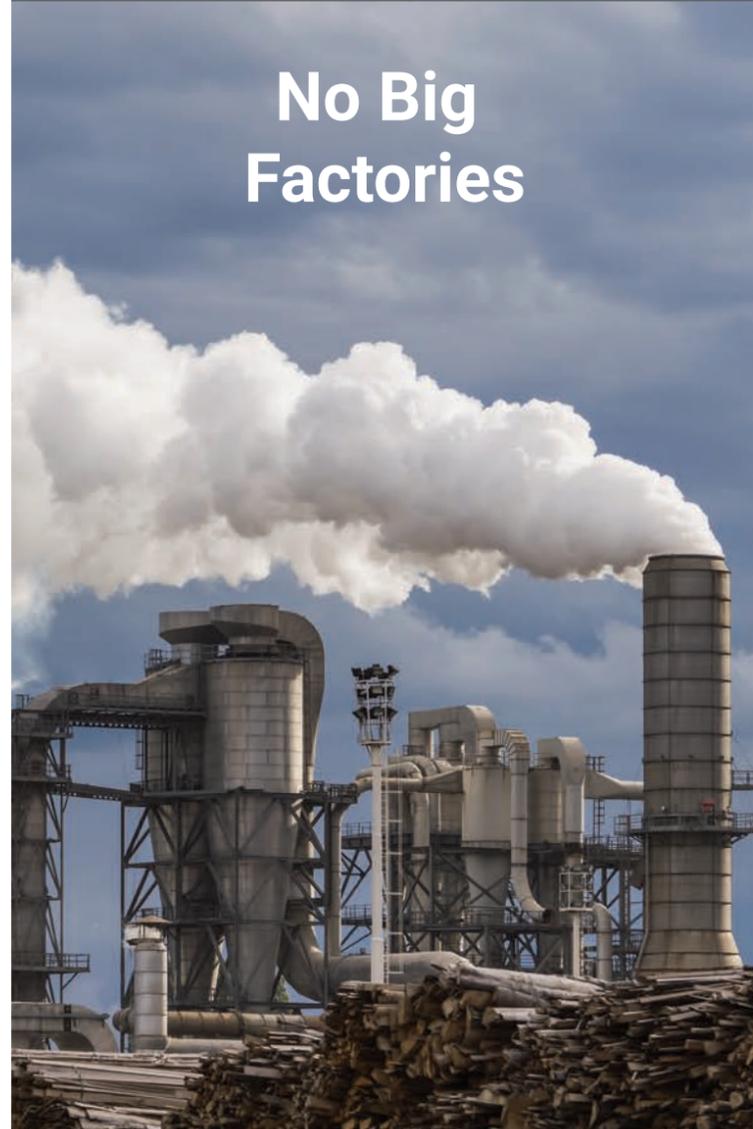
Gross Margin Management



# Scalable Business Model

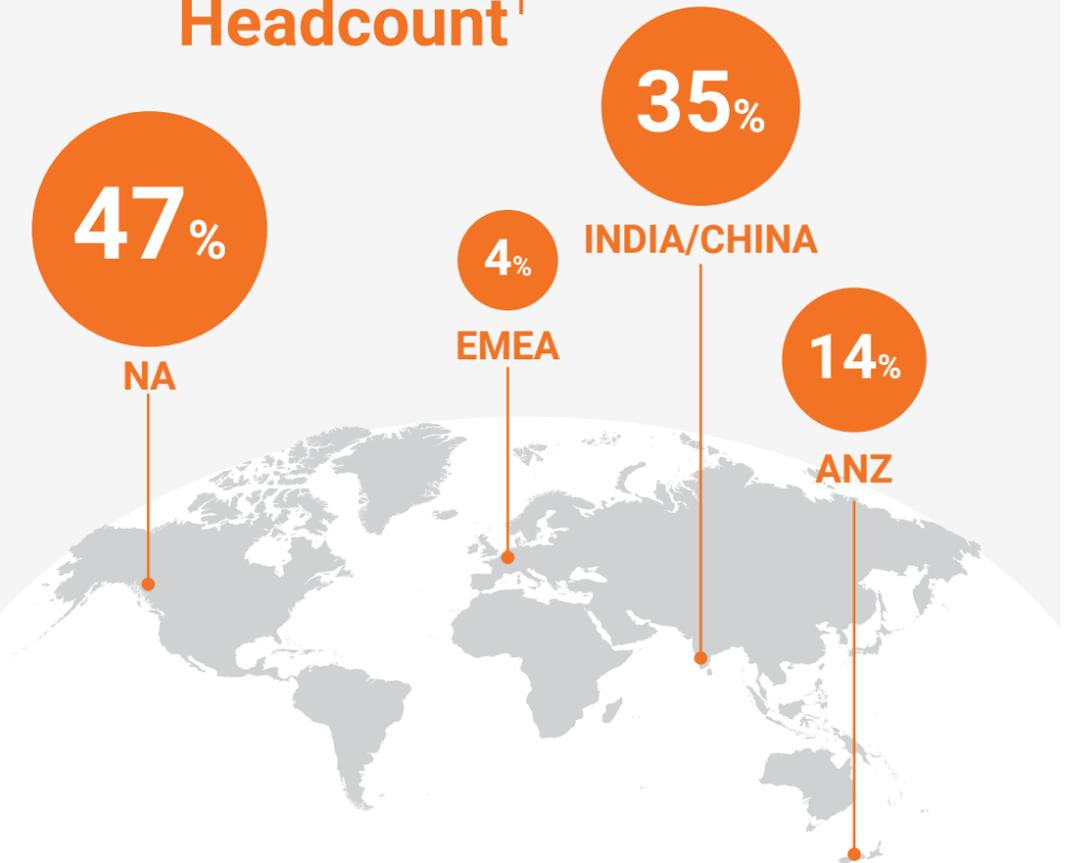
## CAPEX Lite

No Big Factories



## OPEX Efficient

Headcount<sup>1</sup>



**Capacity<sup>2</sup> of 3.5M Microinverters<sup>3</sup> and 120MWh Storage Per Quarter in Q4'20**

<sup>1</sup> Percentage of worldwide headcount as of Q3'19

<sup>2</sup> Estimated CAPEX spending \$25M for 2020 doubles capacity

<sup>3</sup> Ramping Flex-Mexico capacity from 500K to 1M Microinverters per quarter from Q4'19 to Q4'20

# Ensemble™



Great technology  
and intellectual  
property



Great products  
enabling new vectors  
of profitable growth



Laying the  
financial foundation  
for the next decade



# Residential Solar



**\$2.5B**  
2019 SAM<sup>1</sup>

**\$4B**  
2022 SAM<sup>1</sup>

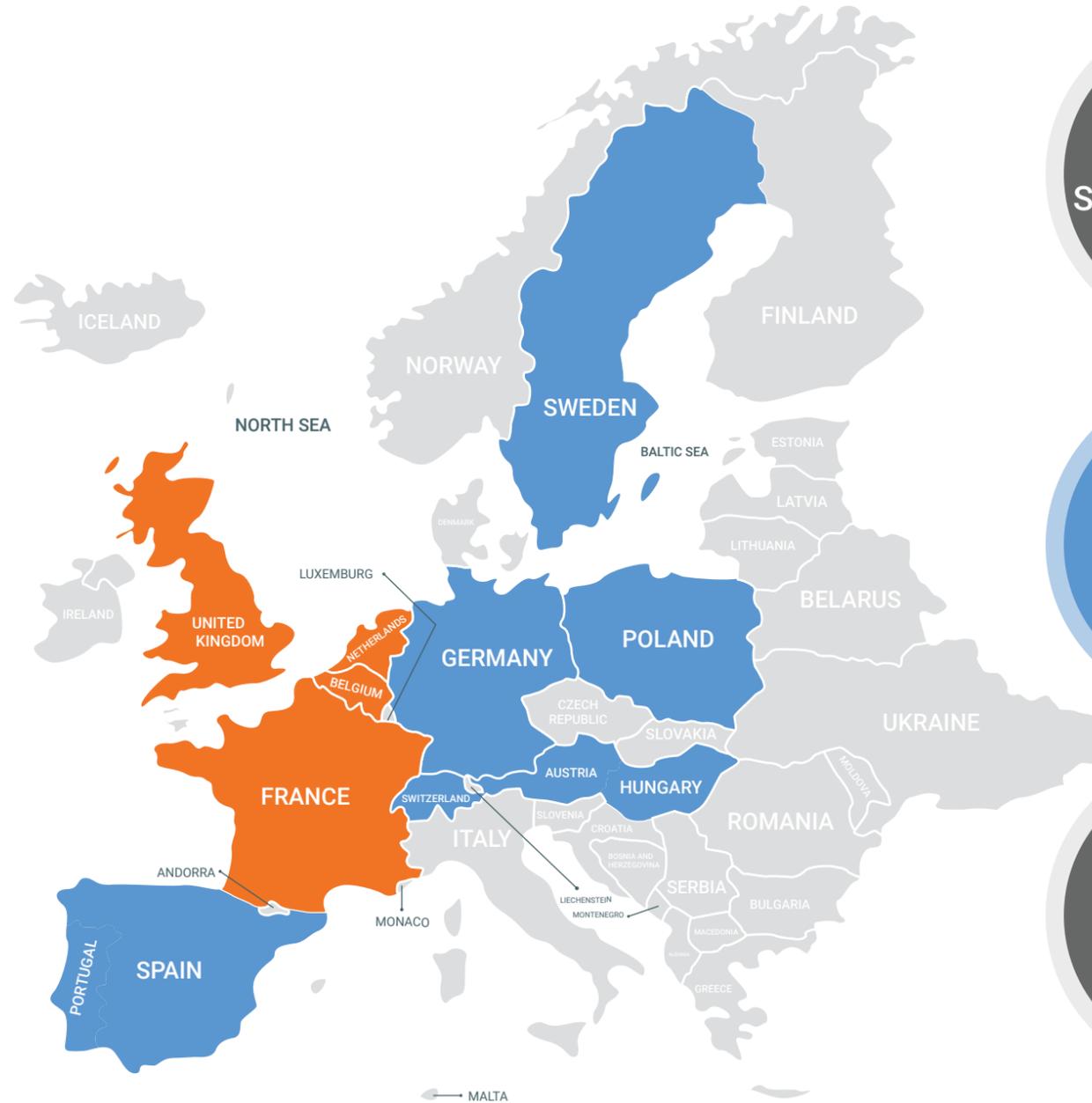
**Introduce Ensemble™, Enter New Regions, Focus on Tier 3/4 Installers**

<sup>1</sup>Source: GTM/Wood Mackenzie Research (US PV Market Forecast) 2019, IHS Research (IHS EMEA Report 2019), SunWiz Research 2019, ENPH Estimates 2022 SAM of 16GW: NA/LATAM 4.4GW, EMEA 4GW, Japan 3GW, APAC 4.6GW



# Europe Growth Plan

Target To Grow Revenue 2X By 2020



**Double**  
Sales Headcount  
in 6 Months

**Transfer**  
Top Talent to  
Europe

**Enter**  
8 Countries  
in 2020

**Focus**  
Small Systems  
Social Housing  
Roofing

**Grow**  
Small and  
Medium  
Installer Base

**Market**  
To Homeowners  
and Increase  
Awareness

**Great Product-Market Fit, Time To Execute**



# New Vectors of Profitable Growth

Increasing SAM from \$3.3B in 2019 to \$12.5B in 2022



Residential  
Solar



Residential  
Storage



Small Commercial  
Solar



Offgrid  
Solar & Storage



# Residential Storage

**\$500M**  
2019 SAM<sup>1</sup>

New Installs  
**\$2B**  
2022 SAM<sup>1</sup>

Enphase Installed Base  
**\$1B**  
2022 SAM<sup>2</sup>

**One-stop-shop, Reliable, Scalable, Simple, Safe**

<sup>1</sup> Source: GTM/Wood Mackenzie Research (Global Energy Storage Outlook 2019), IHS Research (IHS EMEA Report 2019), ENPH Estimates  
2022 SAM of 3.6GWh: NA/LATAM 1.6GWh, EMEA 1GWh, APAC 900MWh

<sup>2</sup> ENPH assumption: Retrofit opportunity of ~ 1.5M Enphase homes over 10 years



# Small Commercial Solar

**\$1.5B**  
2022 SAM<sup>1</sup>

**\$300M**  
2019 SAM<sup>1</sup>

**Reliable, Rapid Shutdown Compliant, World Class Cost**

Source:<sup>1</sup>GTM/Wood Mackenzie Research (US State DG Market Prospector) 2019, IHS Research (IHS EMEA Report 2019), ENPH Estimates  
2022 SAM of 11GW: NA/LATAM 4.2GW, EMEA 3GW, APAC 3.8GW



# Offgrid Solar and Storage

Focus on Indian Market



Providing Farmers  
Reliable Source of Energy

Reducing  
Energy Poverty

Mitigating  
Extreme Heat

Solar Water Pump

**\$2B**

2022 SAM<sup>1</sup>

Standalone System

**\$1.5B**

2022 SAM<sup>2</sup>

Air Cooler

**\$0.5B**

2022 SAM<sup>3</sup>

Source: MNRE, Govt. of India; CEEW India; India Census Data 2011; Symphony Annual Report 2019; ENPH Estimates

<sup>1</sup> Installed base of ~30M pumps in 2022. ENPH assumption: Convert 10% of installed base to solar per year for 0.5 - 3HP pumps

<sup>2</sup> Total number of homes per 2011 census data is ~123M. ENPH assumption: Convert 3% of installed base to solar and storage every year

<sup>3</sup> Installed base of ~20M air coolers in 2022. ENPH assumption: Convert 10% of installed base to solar every year





# Recap

Increasing SAM from \$3.3B in 2019 to \$12.5B in 2022



Residential Solar

\$4B<sup>1</sup>



Residential Storage

\$3B<sup>1</sup>



Small Commercial Solar

\$1.5B<sup>1</sup>



Offgrid Solar & Storage

\$4B<sup>1</sup>

<sup>1</sup>All the numbers refer to 2022 SAM

# Conclusion



Three Pillars of Differentiation: Semiconductor, Software and Ensemble™



Relentless Focus on Customer Experience and GM Management with a Scalable Business Model



Ensemble™ Enables New Vectors for Profitable Growth



SAM Expanding from \$3.3B in 2019 to \$12.5B in 2022

**Raghu Belur**

Chief Product Officer



# The Power of Semiconductors, Software and Ensemble™



## High Quality

Higher Efficiency, Fewer Components  
IoT System, Over-the-air Upgrades

## Safety

No High Voltage DC  
Lithium Iron Phosphate Chemistry

## Flexibility

Modular Design  
AC Market Place

## Exceptional Value

Grid Independence  
AC Module

## Supply Chain Efficiency

One Hardware Platform  
Configurable SKUs

## Low Cost

Resonant Architecture, Power Scaling  
Semiconductor Integration

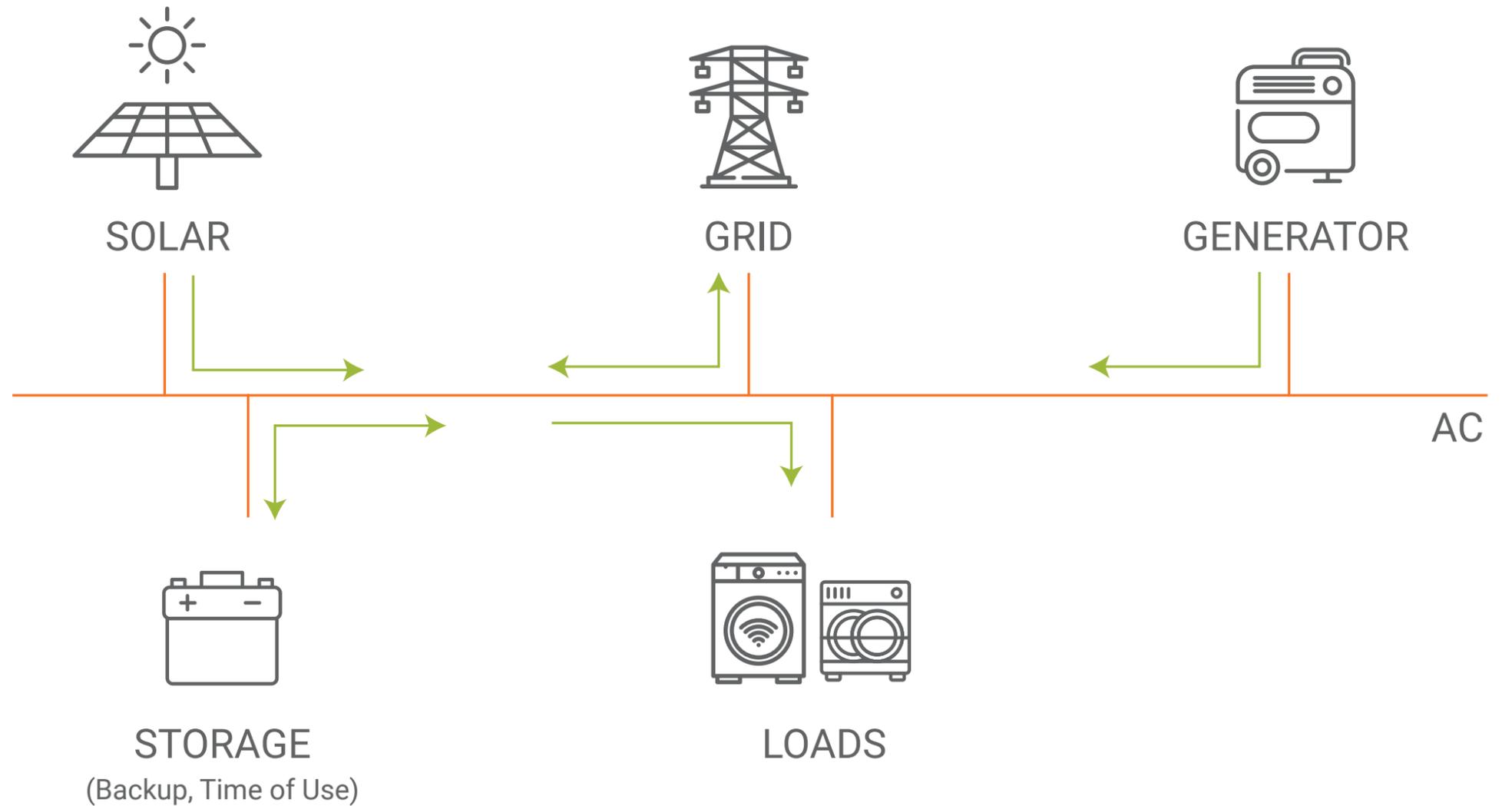
## Great Customer Experience

One-stop-shop

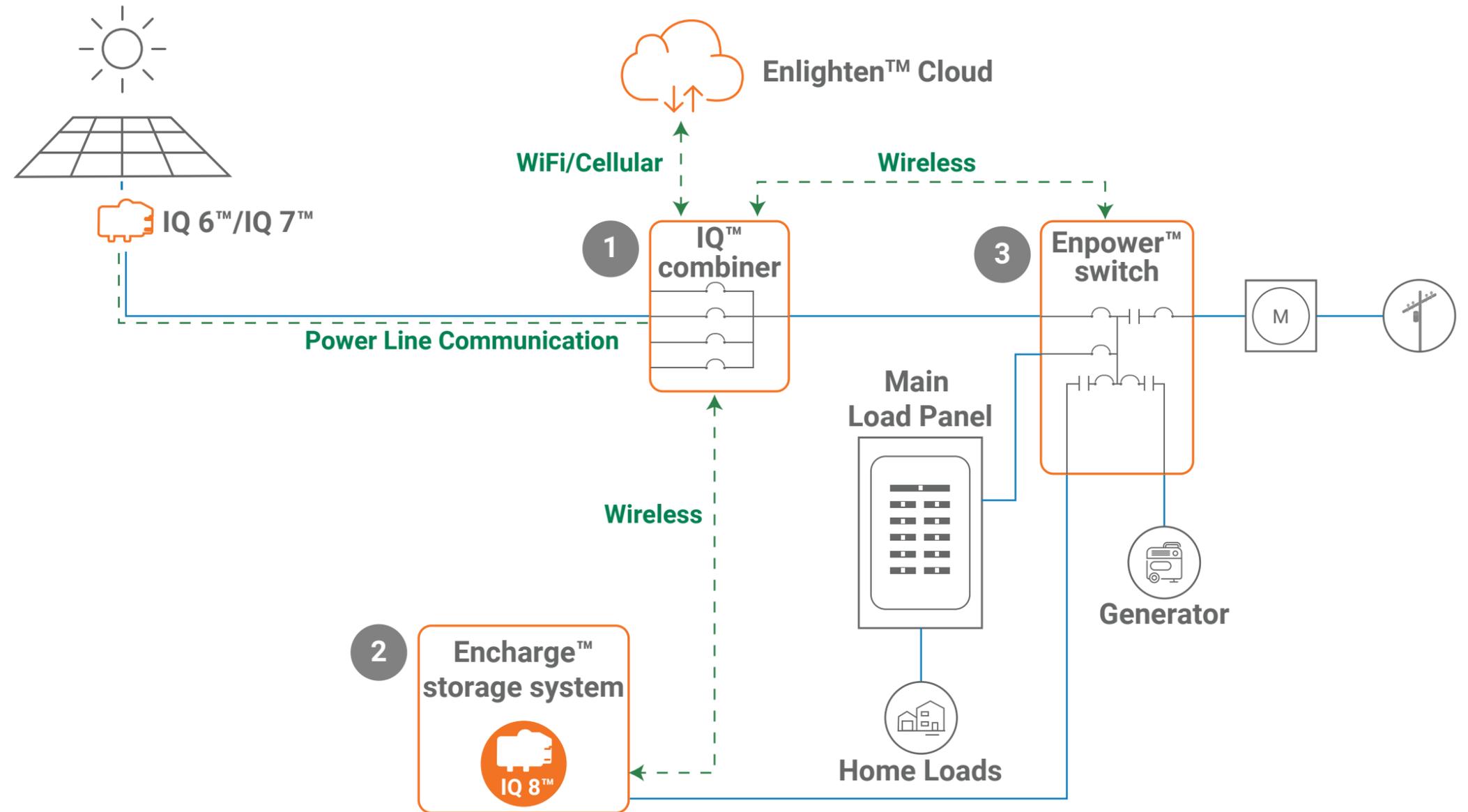


# Ensemble™ Energy Management Technology

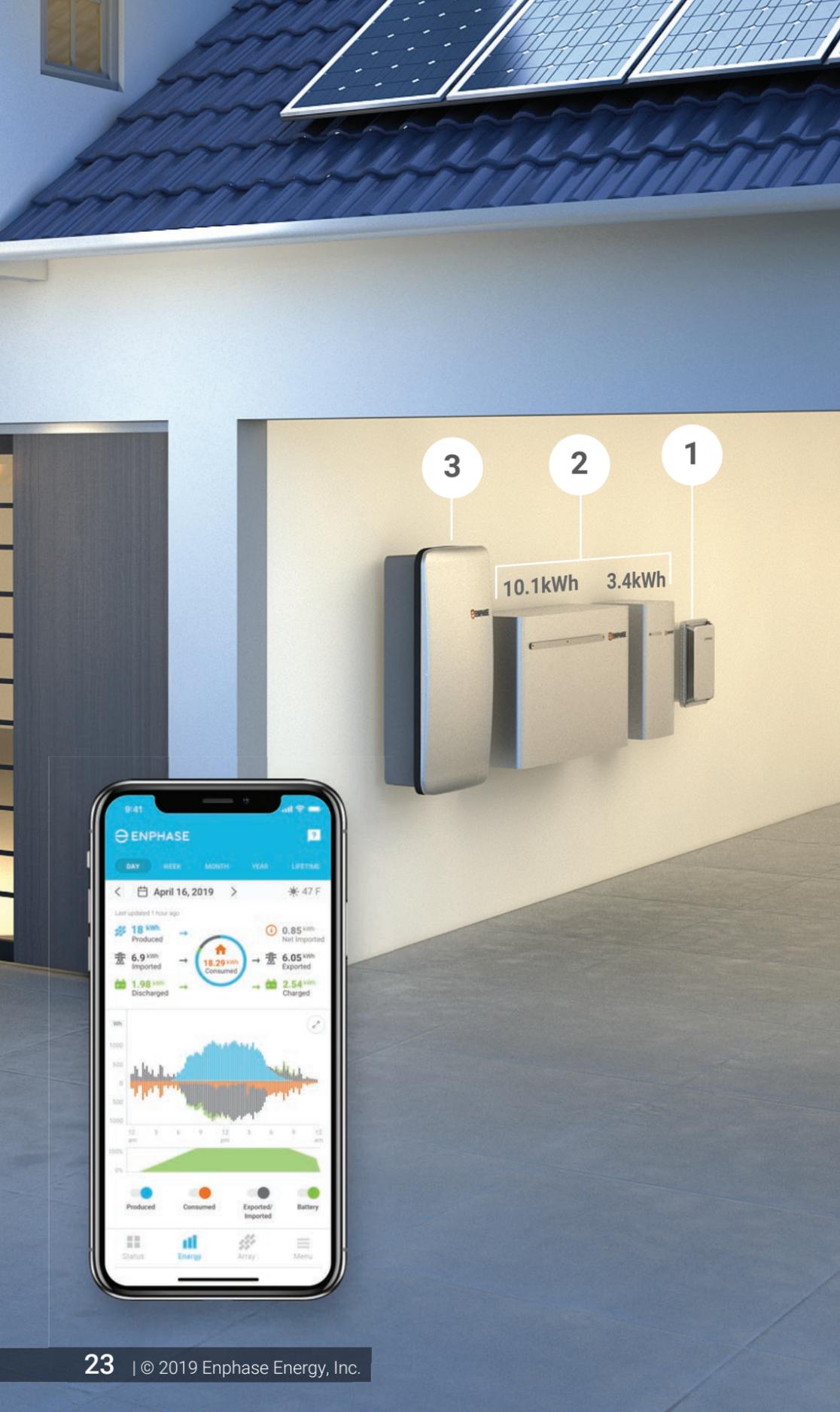
Automatically manages energy resources in your home such as solar, storage, grid, loads and generator



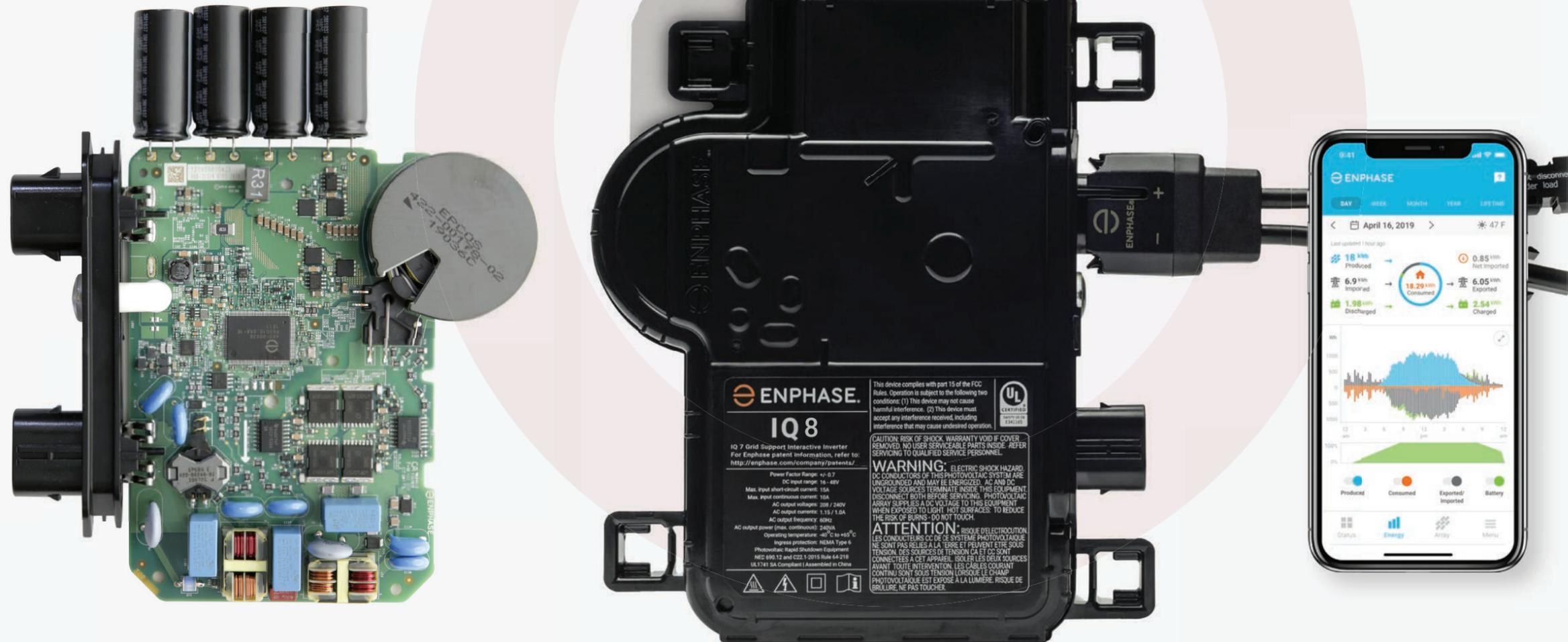
# On the Cusp of Ensemble™ 1.0



**Encharge™ Storage System Makes The System Always-On™**



# IQ 8™ Residential Microinverter



World's First Grid Forming Microinverter System

# Encharge™ Storage System

Available In Two Configurations



10.1kWh

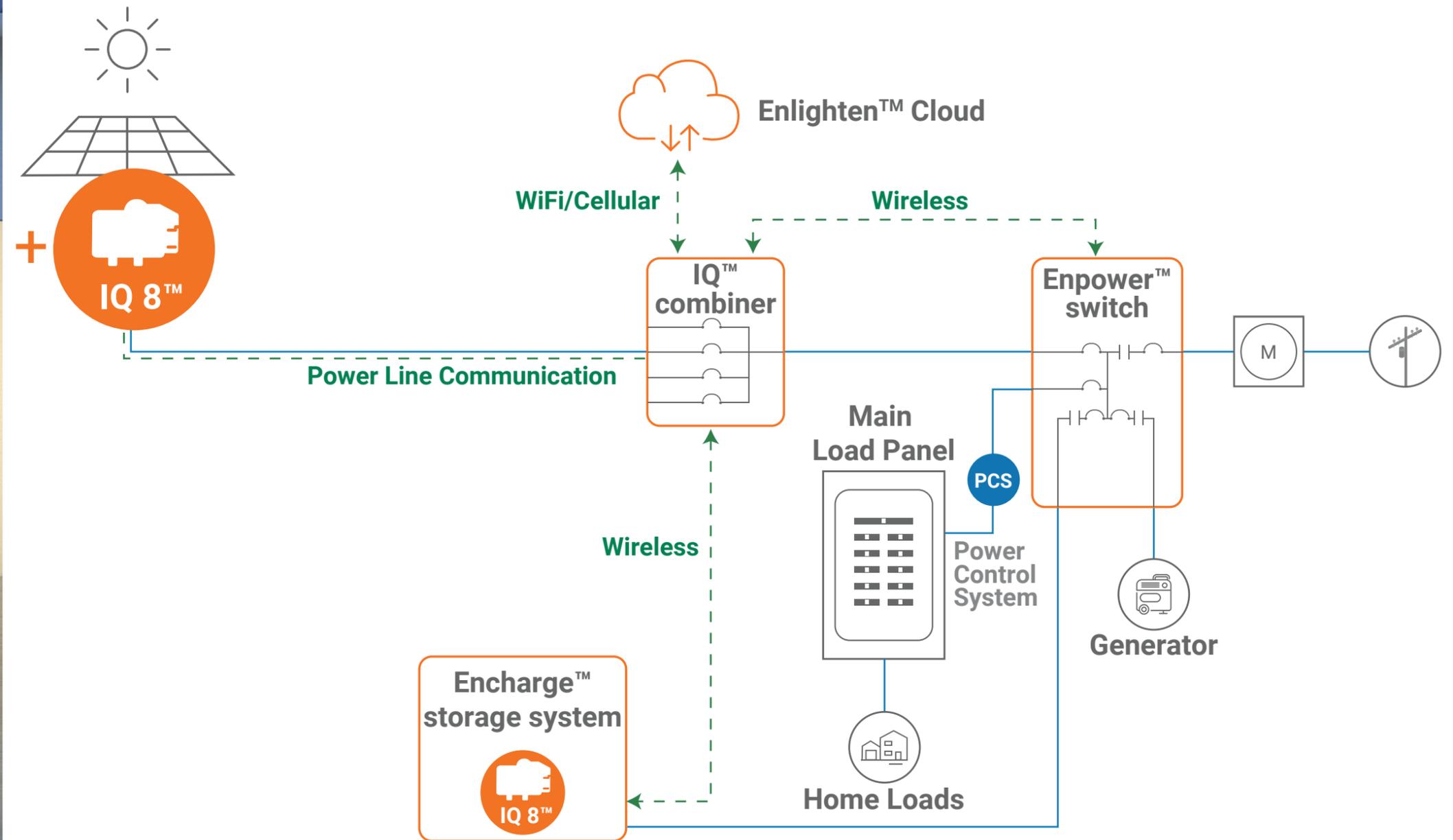


3.4kWh



**One-stop-shop, Reliable, Scalable, Simple, Safe**

# Gearing up for Ensemble™ 2.0



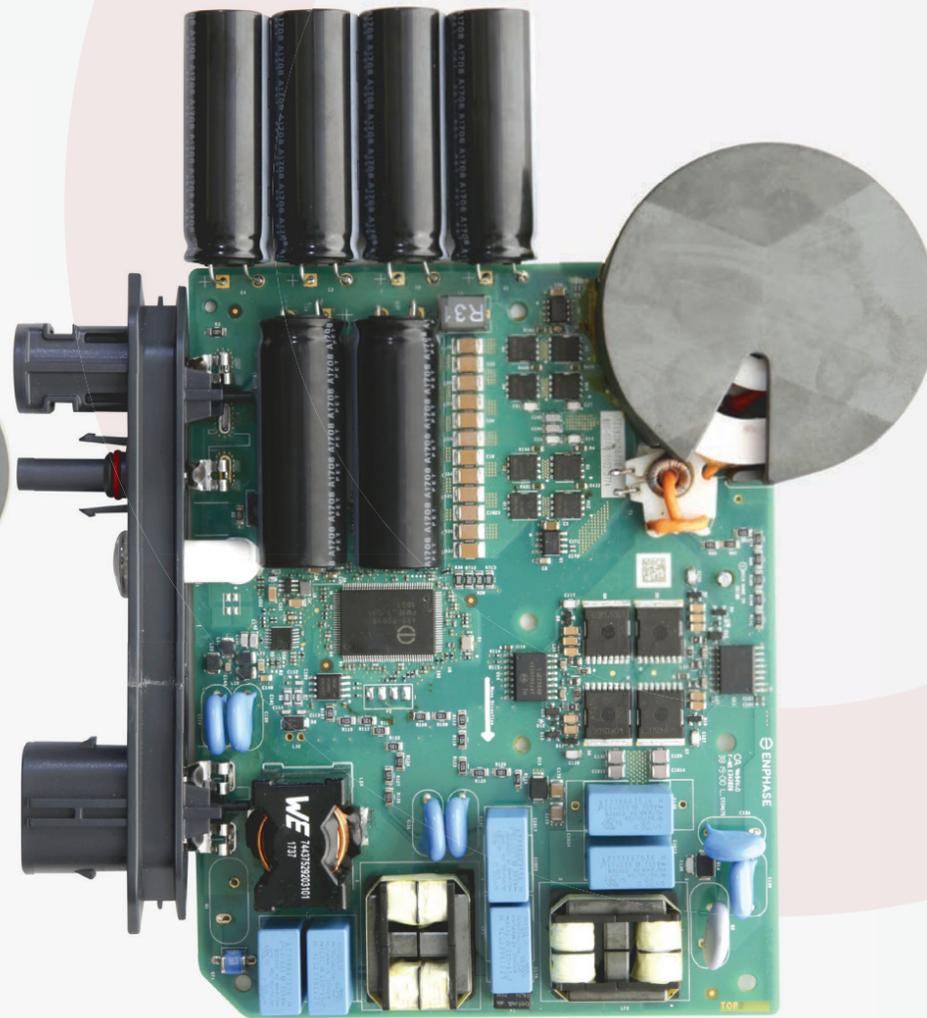
**Addition of IQ 8™ Grid-Independent Solar Significantly Improves Performance**

# IQ 8D™ Commercial Microinverter

One 640W<sub>AC</sub> Microinverter Supports Two 400W<sub>DC</sub> Panels



IQ 8™



IQ 8D™



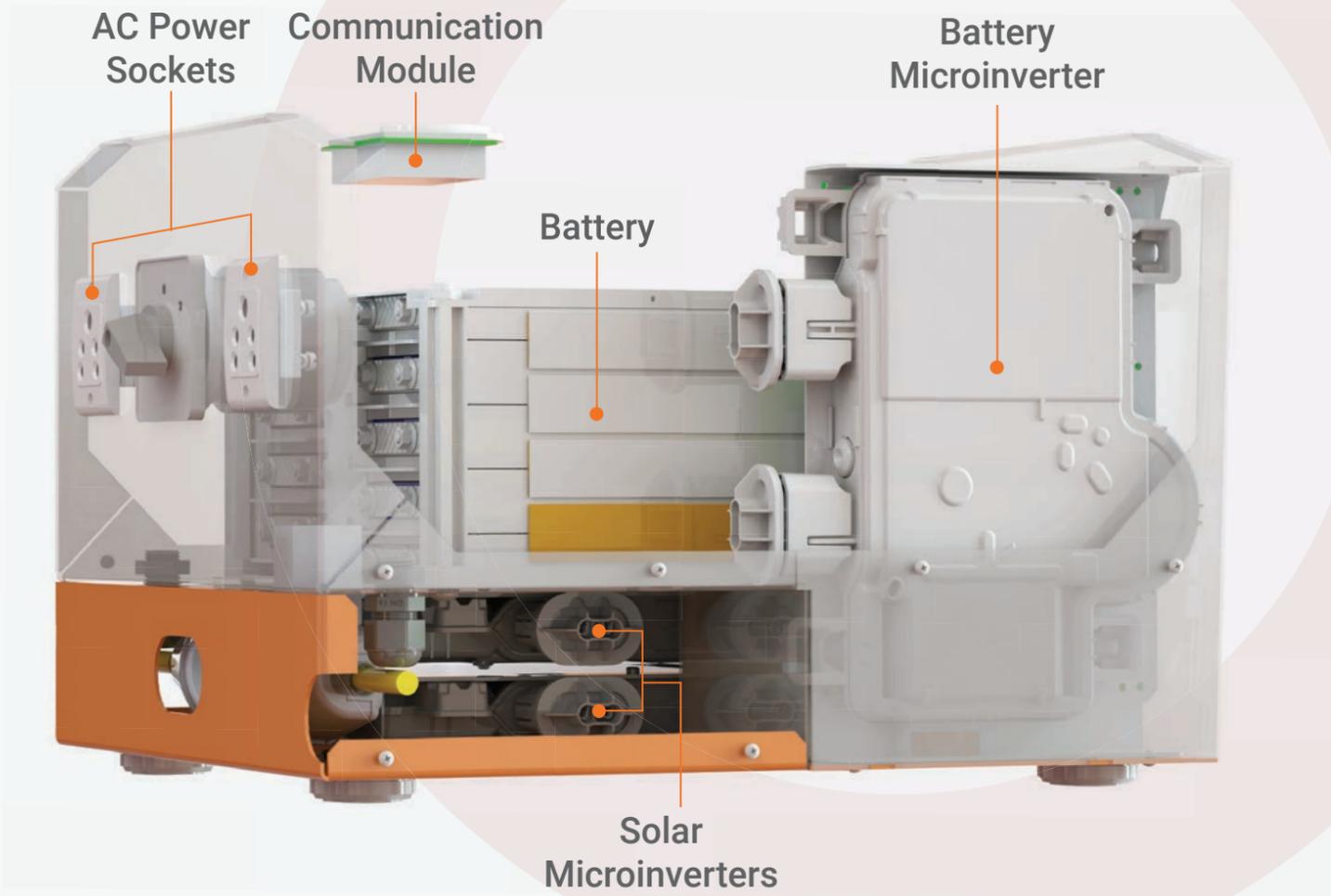
50%  
Greater  
Power  
Density<sup>1</sup>

500 dppm  
Reliability  
Target

97.5%  
Efficiency

<sup>1</sup> Power Density in W/cm<sup>3</sup> compared to IQ 8™

# Offgrid Solar and Storage Ensemble-In-A-Box™



2  
Solar Panel  
Inputs

Smart Phone  
Connectivity

1.2 kWh  
LFP<sup>1</sup>  
Battery

AC Power  
Sockets

Supports Multiple Applications for the Indian Market

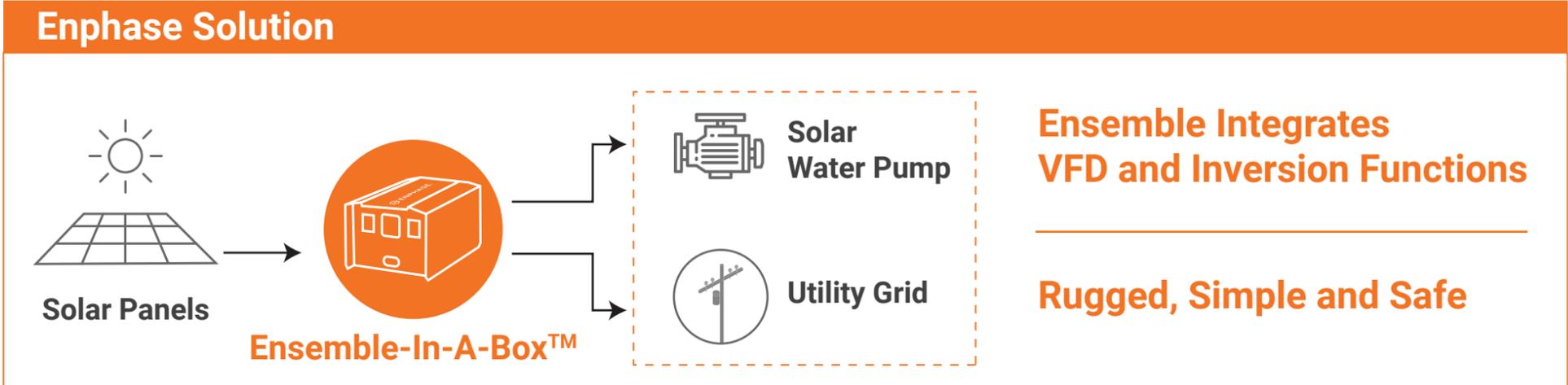
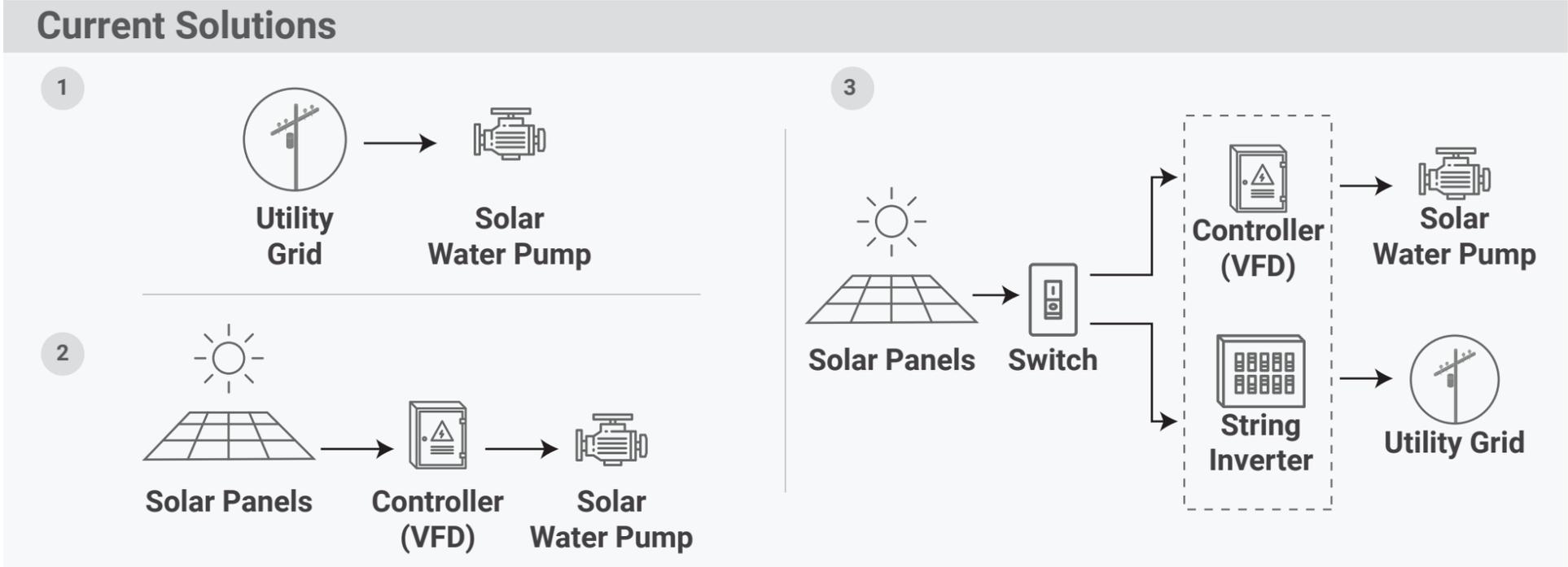
<sup>1</sup> Lithium Iron Phosphate



# Solar Water Pump

## Problem

Farmers in India have unreliable and intermittent grid power  
 Current solutions with Variable Frequency Drive (VFD) and Inverters are inefficient



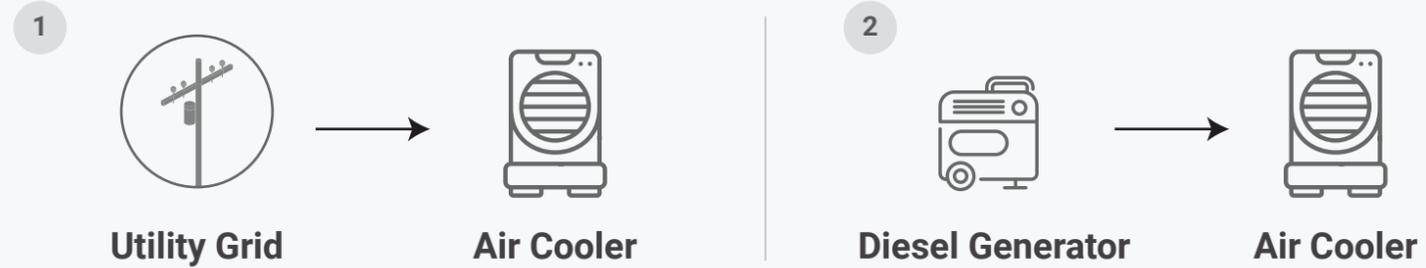
# Air Cooler

## Problem

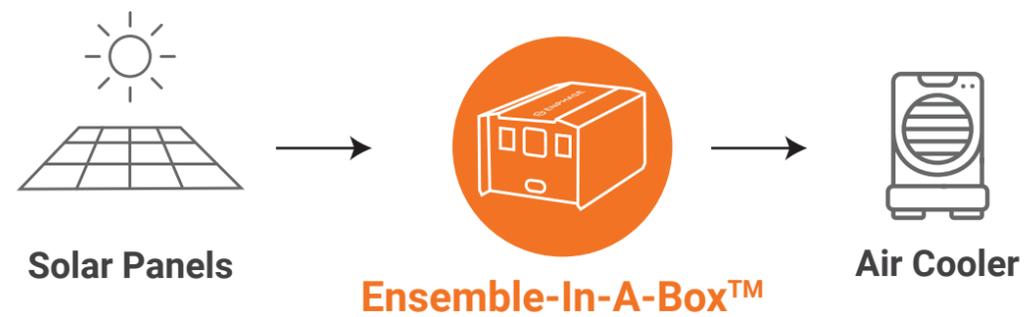
No viable solution for extreme heat in certain regions of India  
Both grid and diesel generators are unreliable



## Current Solutions



## Enphase Solution



**Ensemble Helps Provide a  
Reliable Source of Energy**

**Rugged, Simple and Safe**

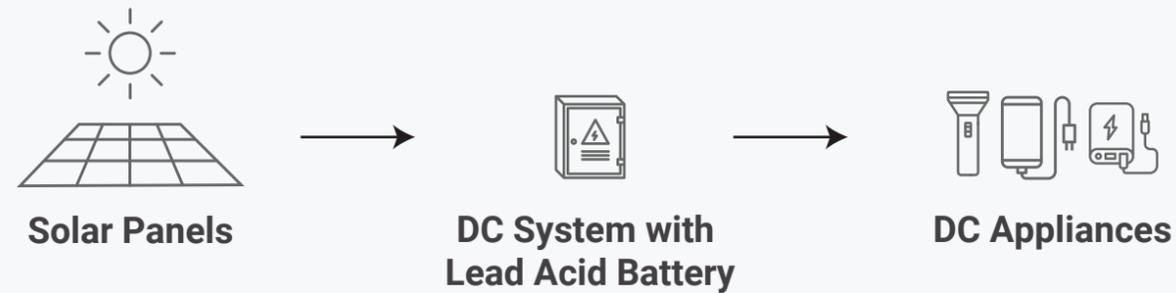


# Standalone System

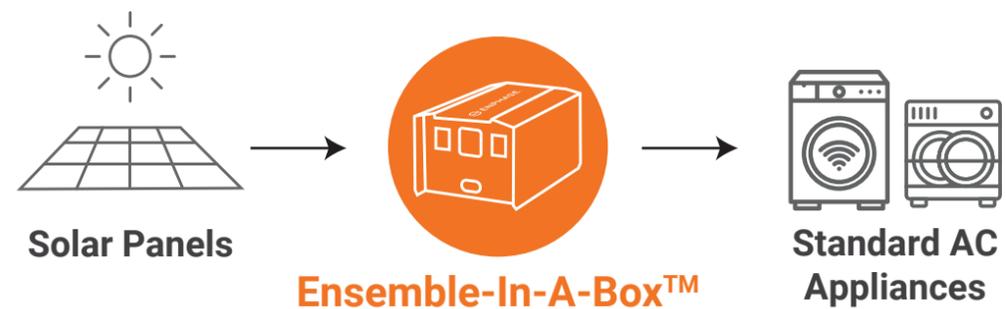
## Problem

Over 300 million<sup>1</sup> people in Asia, mainly in India, are living in energy poverty  
Current solutions with DC systems are inefficient

### Current Solutions



### Enphase Solution



**Ensemble Helps Provide a Viable Source of Energy**

**Rugged, Simple and Safe**

<sup>1</sup> Bloomberg New Energy Finance Report, 2018



# Recap

Increasing SAM from \$3.3B in 2019 to \$12.5B in 2022



Residential  
Solar

**IQ 8™**

**\$4B<sup>1</sup>**



Residential  
Storage

**Encharge™**

**\$3B<sup>1</sup>**



Small Commercial  
Solar

**IQ 8D™**

**\$1.5B<sup>1</sup>**



Offgrid  
Solar & Storage

**Ensemble  
In-A-Box™**

**\$4B<sup>1</sup>**

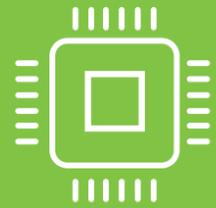
<sup>1</sup>All the numbers refer to 2022 SAM



# Ensemble<sup>TM</sup>

It's a game changer...

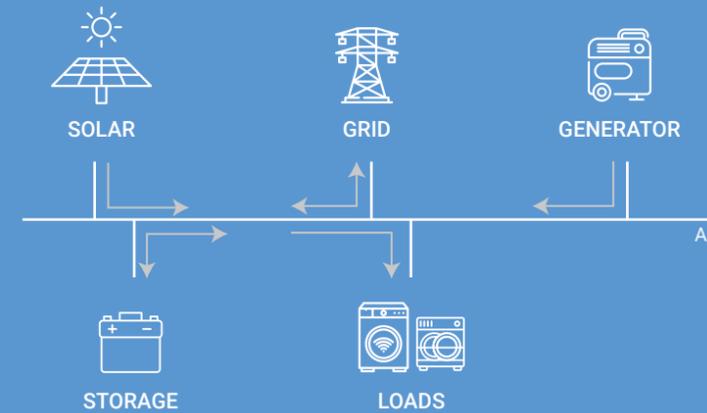
# Conclusion



Semiconductors  
Bring Greater  
Efficiencies in  
Integration



Software Defined  
Architecture  
Creates Flexible  
and Future Proof  
Designs



Ensemble™  
Enables New  
Categories of  
Products

One-stop-shop  
for Home  
Energy  
Management

# Introducing Two of Our Top Customers



**Arthur Souritzidis**

Founder and Chief Executive Officer



**Marc Jones**

Founder and Chief Executive Officer



# Introducing Momentum Solar



- Founded in 2009
- Enabling customers to take control over rising energy costs by generating cleaner, price-protected power
- Industry leading growth; recognized by Deloitte and Inc.500 as fastest growing residential solar company in the nation
- Over 2,000 employees with operations in New Jersey, New York, California, Florida, Texas, Pennsylvania and Connecticut
- Focus on customer experience, forward thinking in terms of technology and very successful in their markets





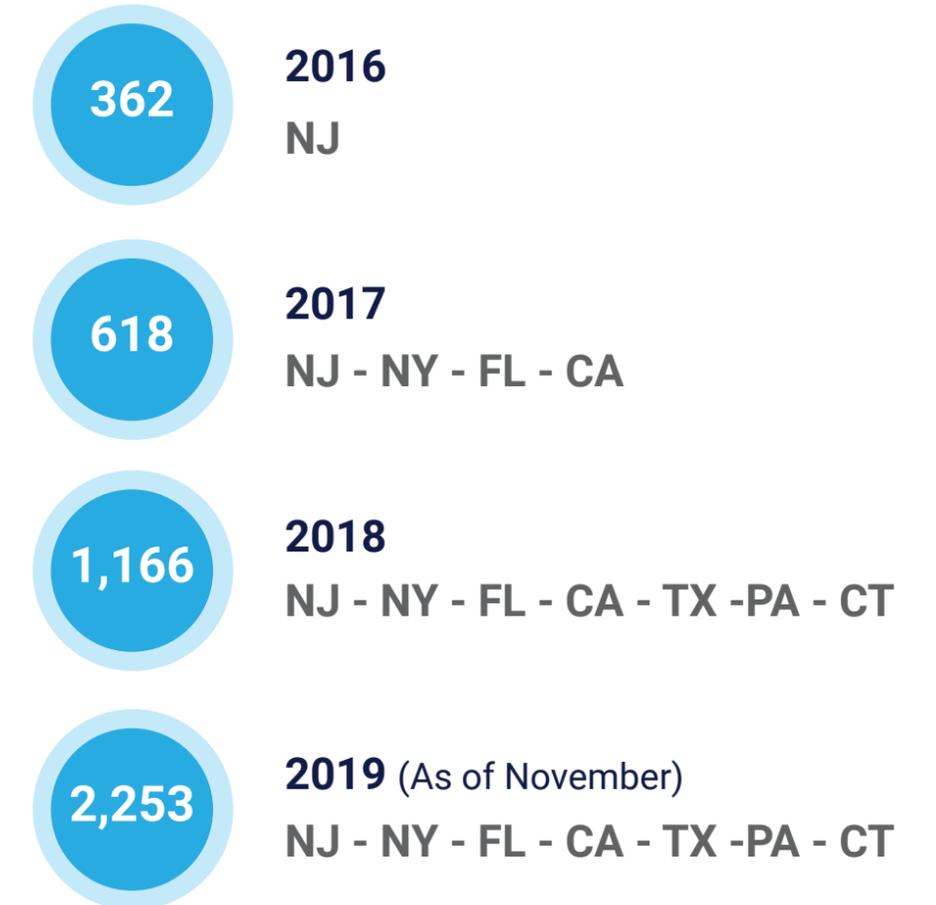
## Strategic Partnership

- Optimal Performance
- Durable Equipment
- Long-term Warranties
- Simplified O&m
- Best-in-class Monitoring
- Installation Efficiency
- Product Innovation
- Supply Chain Management

### 2020 New Offices in Existing Markets (Q1)

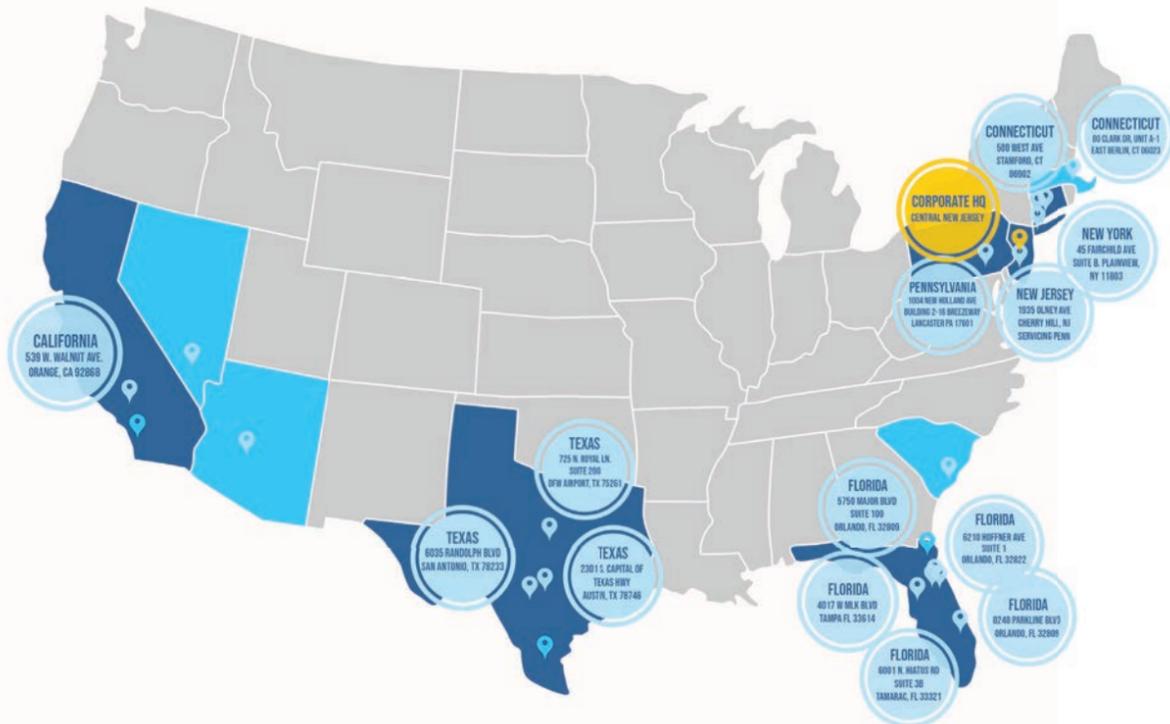
- Jacksonville, Florida
- Weslaco, Texas
- San Diego, California

## Year-End Employee Count



### 2020 New Markets (Q1)

- Phoenix, Arizona
- Boston, Massachusetts
- Charleston, South Carolina



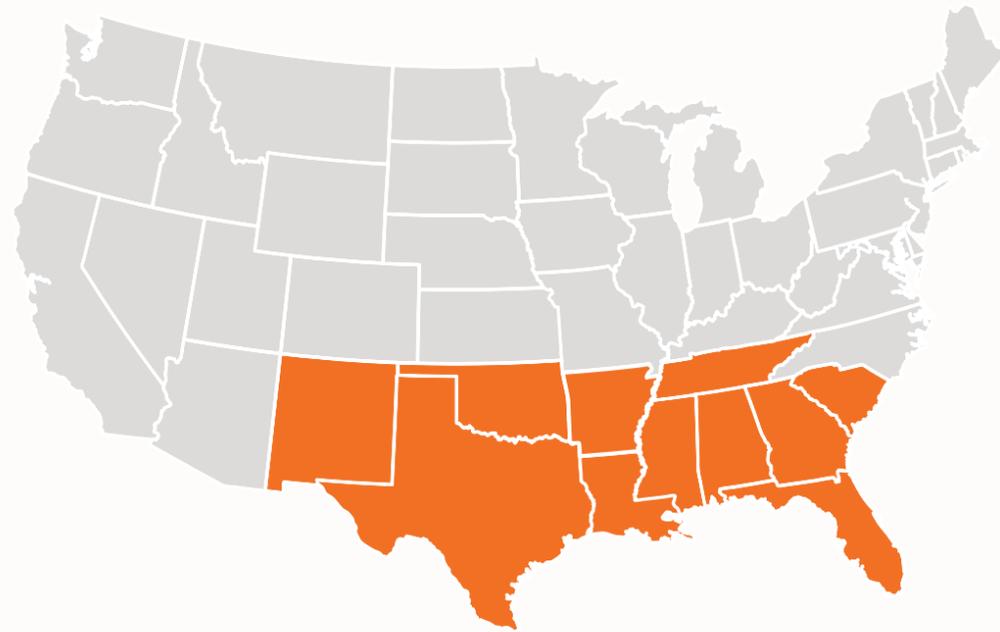
Current # of States 7  
 Current # of Offices 17

# Introducing Sunpro Solar



- Founded in 2008
- Sunpro Solar is one of the leading providers of rooftop solar for Gulf Coast and Southeast regions
- Ranked #8 for 2019 in Solar Power World's Magazine - Top Solar Rooftop Contractors Worldwide
- Approximately 1100 employees with operations in Louisiana, Mississippi, Arkansas, Tennessee, Oklahoma, Texas, Georgia, South Carolina and Florida
- Focus on customer experience, forward thinking in terms of technology, and very successful in their markets





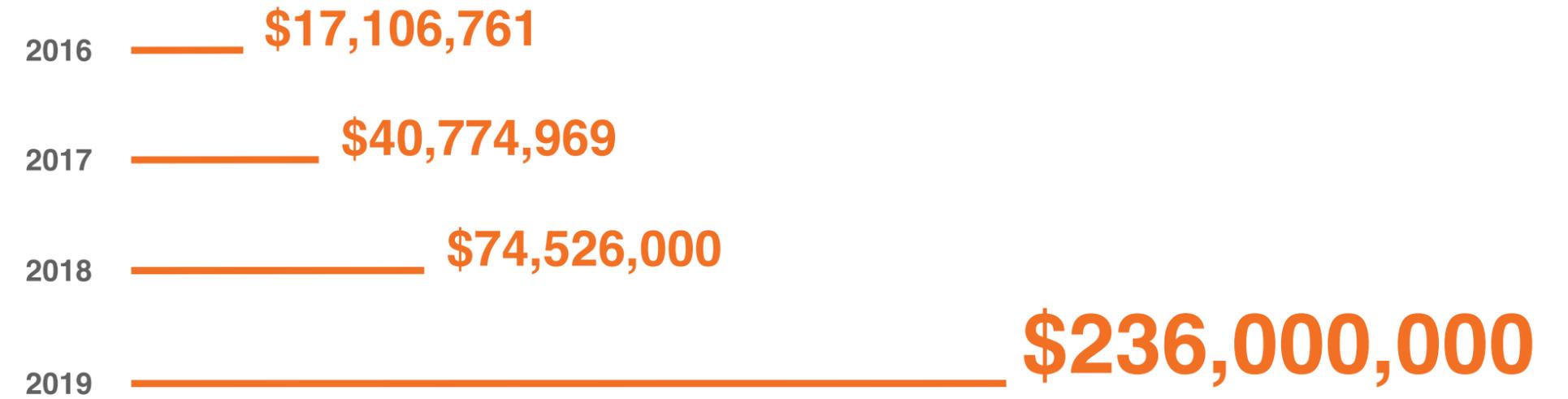
● Current Territories

**100% Energized by**  
 **ENPHASE.**

**50 MW  
Installed  
in 2019**

**170,000  
Enphase  
Inverters**

### Revenue



**Eric Branderiz**  
Chief Financial Officer



# New Baseline Financial Model

**35%**

Gross  
Margin

**Pricing Management**

**New Products**

**Cost Reductions**

**15%**

Operating  
Expenses<sup>1</sup>

**Executive Leadership in the U.S.**

**Core teams in India & New Zealand**

**No Compromise on Innovation**

**20%**

Operating  
Income<sup>1</sup>

**Sustainable Profitability**

**Strong Cash Generating Model**

# Revenue Growth Framework



## Residential Solar

\$2K<sup>1</sup> revenue per home now

17% SAM CAGR to 2022

IQ 8™ brings added value

Continue share gain in NA, Grow Europe, Enter Japan



## Residential Storage

Adds Over \$8K revenue<sup>2</sup> per home

~5% ENPH attach<sup>3</sup> on new homes in US by Q4'20

\$80M retrofit revenue for every 1% of ENPH installed base



## Small Commercial Solar

\$1.5B SAM in 2022

2020 Product launch

Targeting similar market share as residential by 2022



## Offgrid Solar & Storage

Blue Ocean Opportunity

2020 Product launch

<sup>1</sup>ENPH Assumption: ASP of \$100 per Microinverter system and 20 Microinverters per home

<sup>2</sup>ENPH Assumption: \$8K for 10KWh of Storage and Smart Switch

<sup>3</sup>ENPH Estimate



# Strong Balance Sheet

## Adjusted FCF



**\$29M**  
Ending Cash



**\$106M**  
Ending Cash



**\$250M**  
Ending Cash<sup>1</sup>

<sup>1</sup>2019 assumes midpoint of Q4'19 guidance. Refer to Appendix for adjusted FCF reconciliation to the most comparable GAAP measure  
2019 ending cash is subject to prepayments received for the ITC safe harbor product shipments we will make in Q1'20

# Conclusion



35-15-20  
Our New Baseline  
Financial Model



Revenue Growth  
Framework  
Built on Ensemble™



Strong Balance  
Sheet and Healthy  
Free Cash  
Flow Generation

Laying The  
Financial  
Foundation  
For The Next  
Decade

Q & A

 ENPHASE<sup>®</sup>



# Appendix



# GAAP to Non-GAAP Reconciliation

\$ in Millions

	Q1'19	Q2'19	Q3'19	Q4'19 <sup>1</sup>	FY19 <sup>1</sup>
<b>Income (loss) from operations (GAAP)</b>	\$7.1	\$17.4	\$33.7	\$40.3	\$98.5
Stock-based compensation expenses, restructuring and acquisition related amortization	\$4.2	\$5.8	\$6.5	\$7.0	\$23.5
<b>Income (loss) from operations (Non-GAAP)</b>	<b>\$11.3</b>	<b>\$23.2</b>	<b>\$40.2</b>	<b>\$47.3</b>	<b>\$122.0</b>

\$ in Millions

	2017	2018	2019 <sup>1</sup>
<b>Cash flows from operating activities</b>	\$(28)	\$16	\$90
Payments for acquisition reported in cash flows from operating activities	-	10	-
Purchases of property and equipment	(4)	(4)	(10)
<b>Adjusted free cash flow</b>	<b>\$(33)</b>	<b>\$22</b>	<b>\$80</b>

<sup>1</sup>Assumes midpoint of guidance for Q4'19

# Thank You



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