Industrial Bifacial Silicon Heterojunction Technology that Improves System LCOE

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- **12.8MW**
- **Cost-competitive**
- **Eco-friendly**

Empowering the Sun from all Directions

Sunpreme Introduction

Advanced R&D, Sunnyvale, CA, USA

50MW capacity in 2016, Jiaxing, China

Milestones:

- Founded 2009
- 1st shipment 2012
- Mono certification 2013
- 1st bi-facial module 2014
- 21.8+% production cell 2015

World-class team of 250 people, with experience from:

APPLIED MATERIALS® SUNPOWER intel Bell Laboratories

World-class investors:

CAPRICORN INVESTMENTGROUP IFC International Finance Corporation WORLD BANK GROUP 青雲創投 TSING CAPITAL

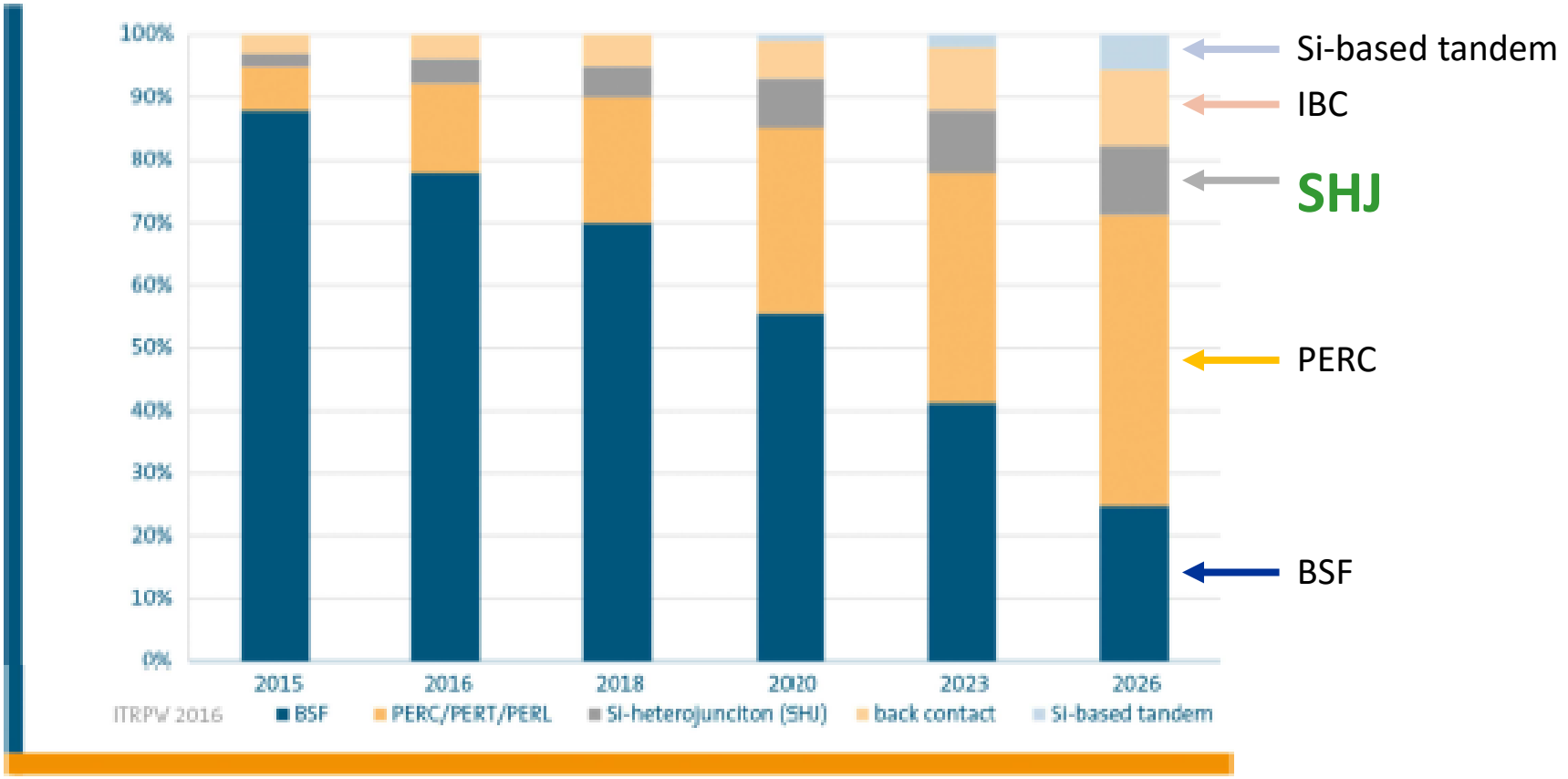
World-class advisory board, including:

Richard Swanson
SunPower founder

Eicke Weber
Fraunhofer Institute directo

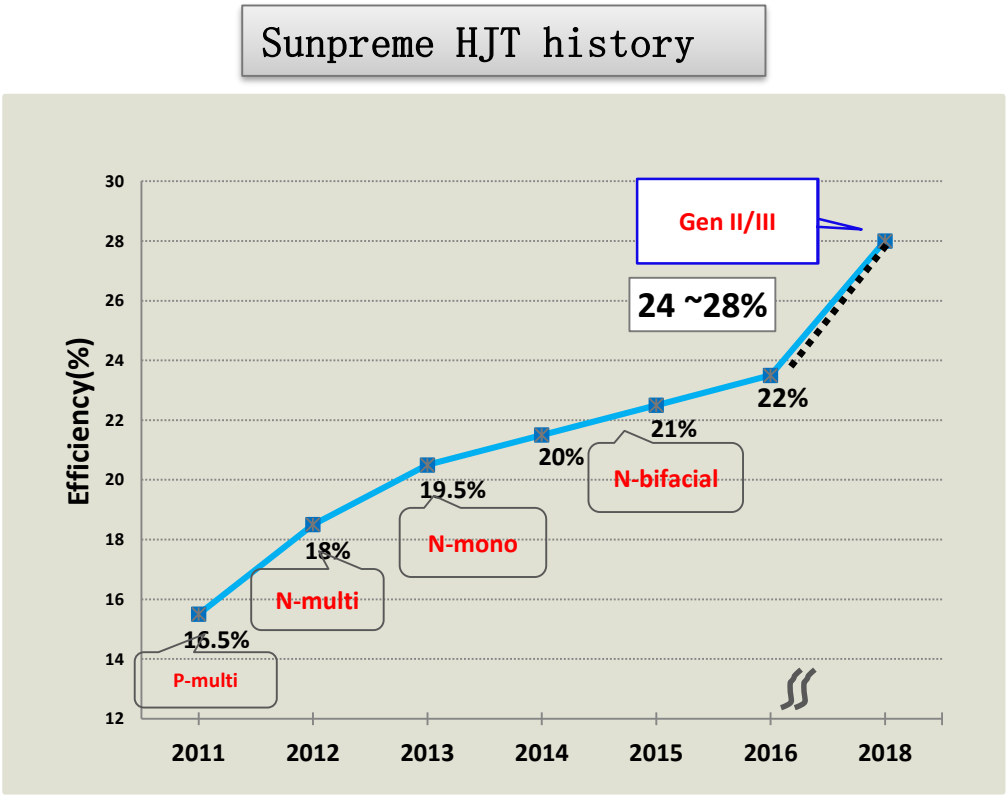
Reyad Fezzani
BP Solar ex-CEO

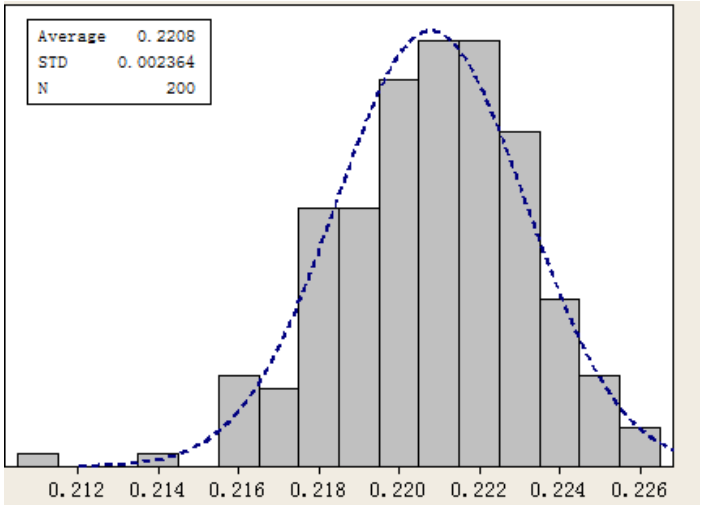
ITRPV



2016 PV Roadmap: World market share of different technology

Sunpreme High Volume Heterojunction Cell Production



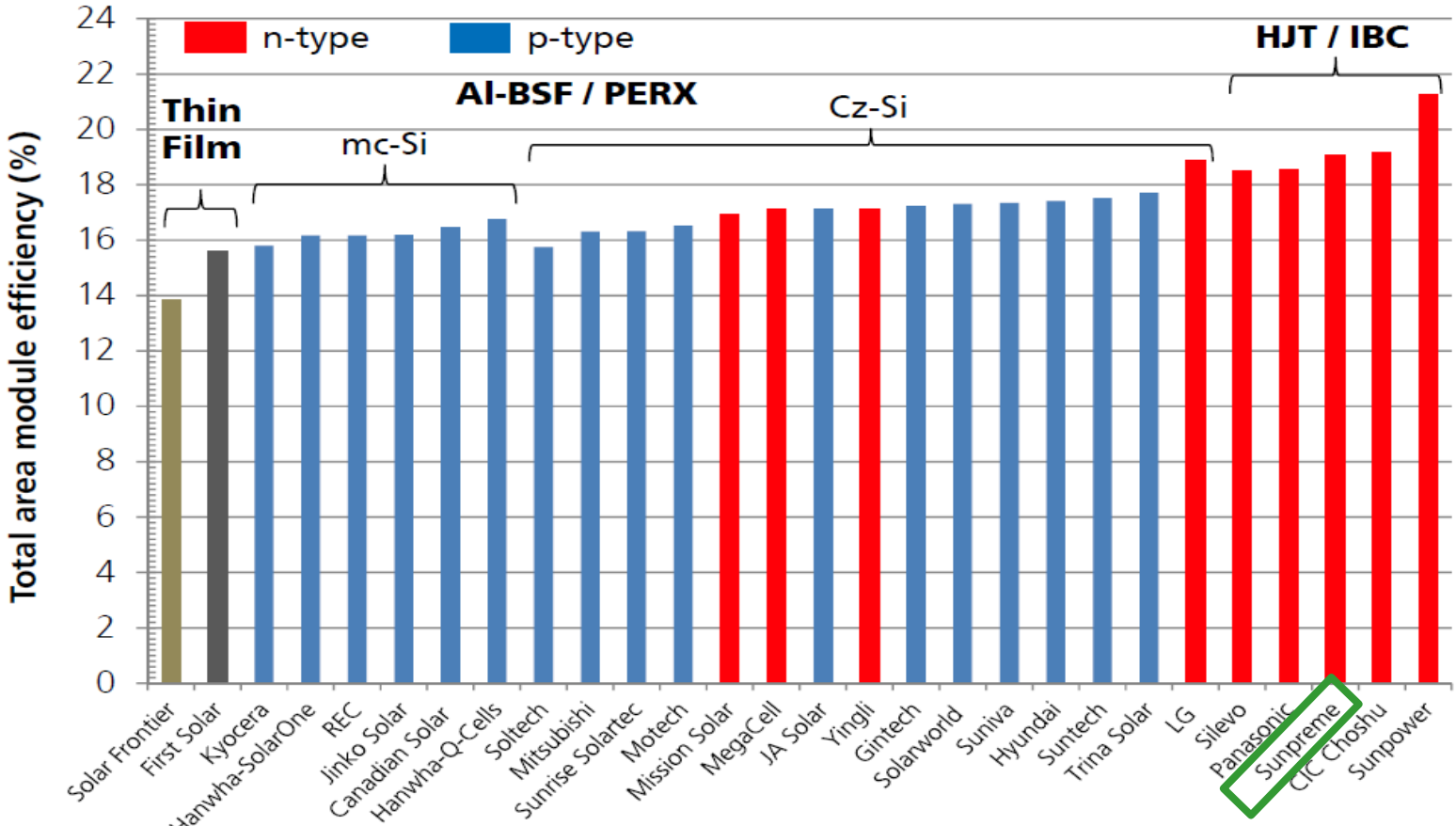


Typical production lot distribution

- World class R&D team from China and US

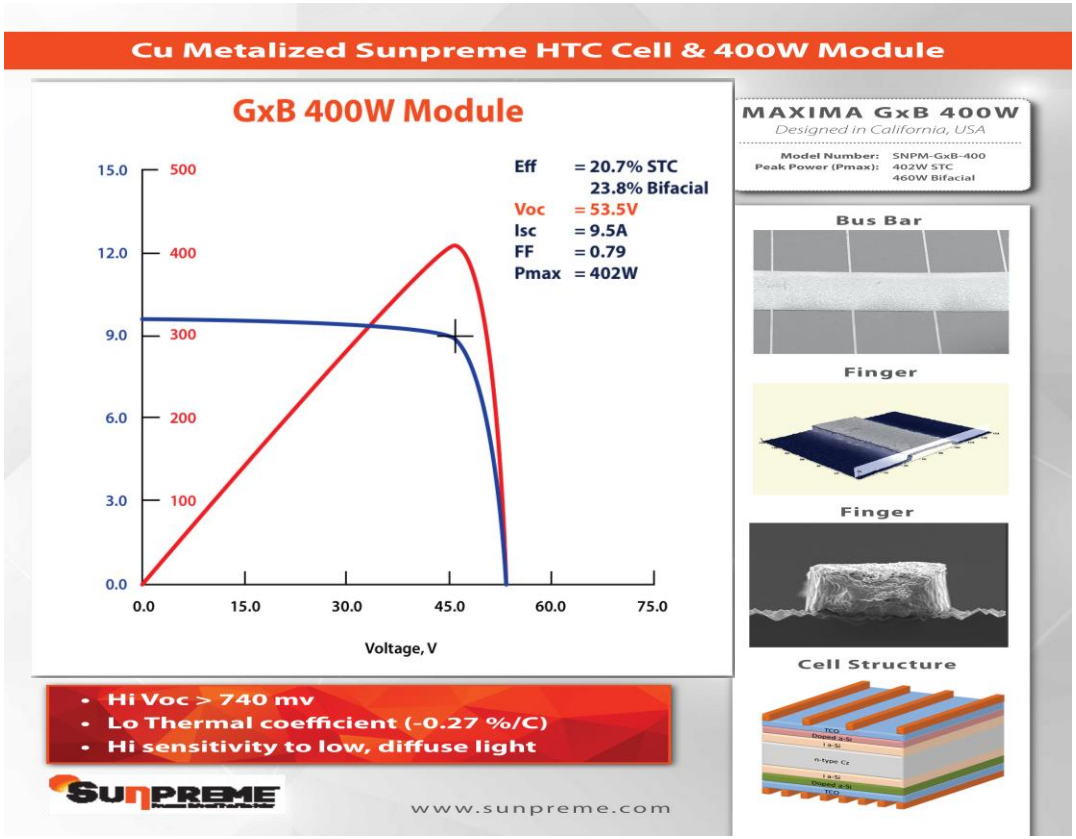
Sunpreme is independently ranked among top 3 global providers

Current Efficiencies of Selected Commercial PV Modules
Sorted by Bulk Material, Cell Concept and Efficiency



Note: Exemplary overview without claim to completeness; Selection is primarily based on modules with highest efficiency of their class and proprietary cell concepts produced by vertically integrated PV cell and module manufacturers; Graph: Jochen Rentsch, Fraunhofer ISE. Source: Company product data sheets. Last update: Nov. 2015.

Fraunhofer ISE



SUNPREME, INC.

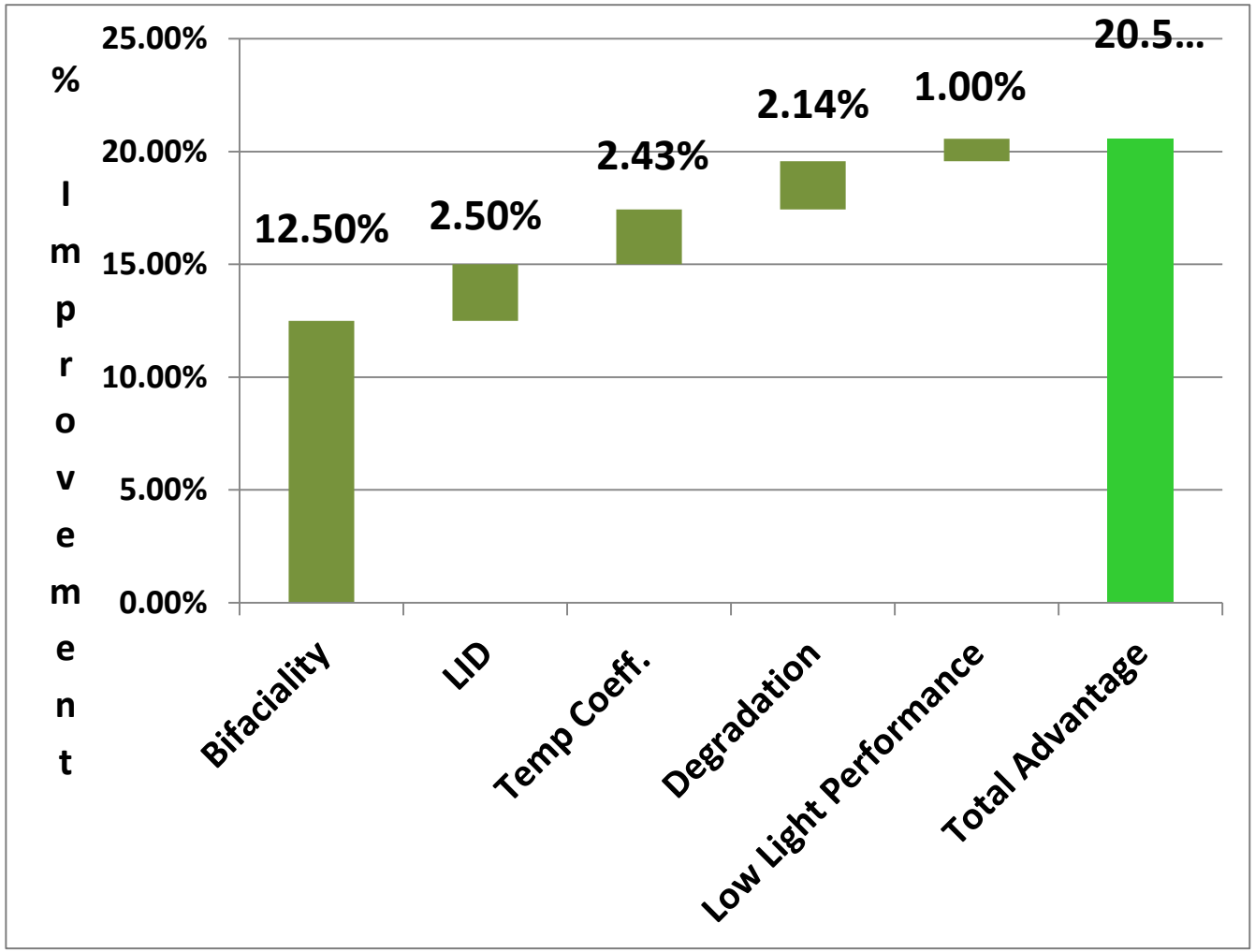
Location: Sunnyvale, CA

SunShot Award Amount: $4,993,823

Awardee Cost Share: $6,976,508

Project Summary: This project is developing an advanced manufacturing toolset and process technology for low-cost copper metallization of high-efficiency heterojunction solar cells and glass-glass bifacial modules. While copper electrodes are well-known to be the best option for high-performance solar cells, very few are made with copper due to the complex and costly process needed to pattern it.

Electricity generation by Sunpreme module is 20.6% higher than same name plate p-mono-Si module



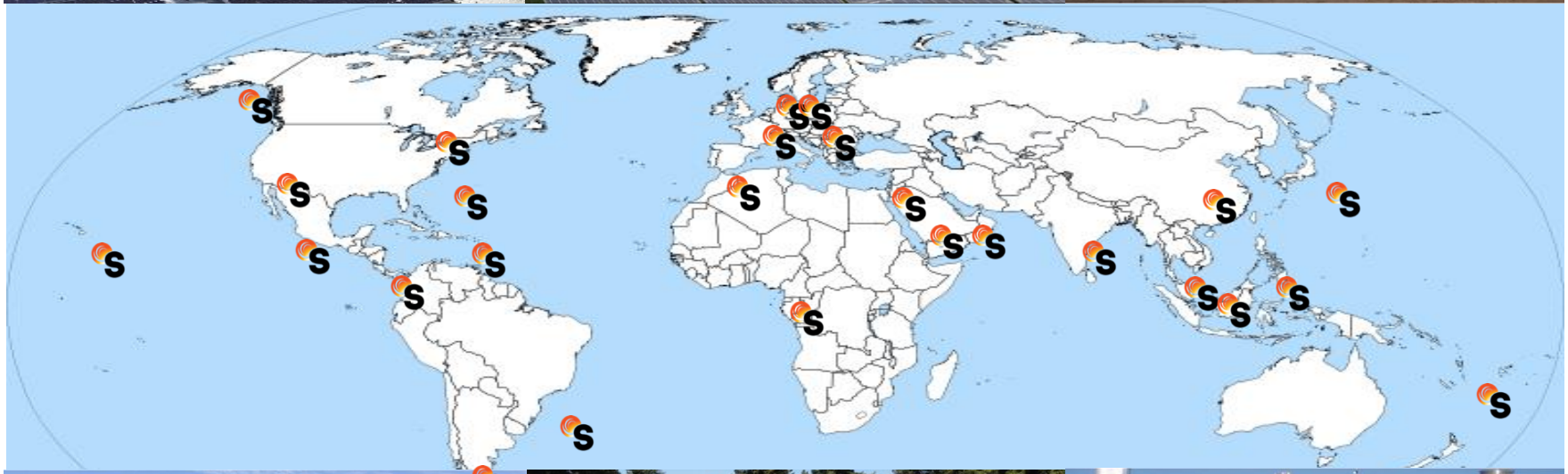
1. Bifaciality: 12.5% (conservative);
2. LID: 2.5% (compare with AlBSF mono);
3. Temp coeff: 2.43% (based on Sunpreme -0.28% vs. mono -0.41%)
4. Regular degradation: 2.14% (based on Sunpreme 0.6% vs. mono 0.7%, for 25 years).
5. Better low light performance, higher Voc

More Than 50 MW Deployed on 5 Continents and 24 Countries

Commercial Rooftop

Distributed Generation

Ground Mount



Residential

Carport

Extreme Environments

SUNPREME
Premium Bifacial Thin Film Solar

Empowering the Sun from all Directions™

New Jersey 12.8Mw Bifacial Power Plant

New Jersey, USA

Ground mount

Size: 12.8 MW

Product：GxB 360W

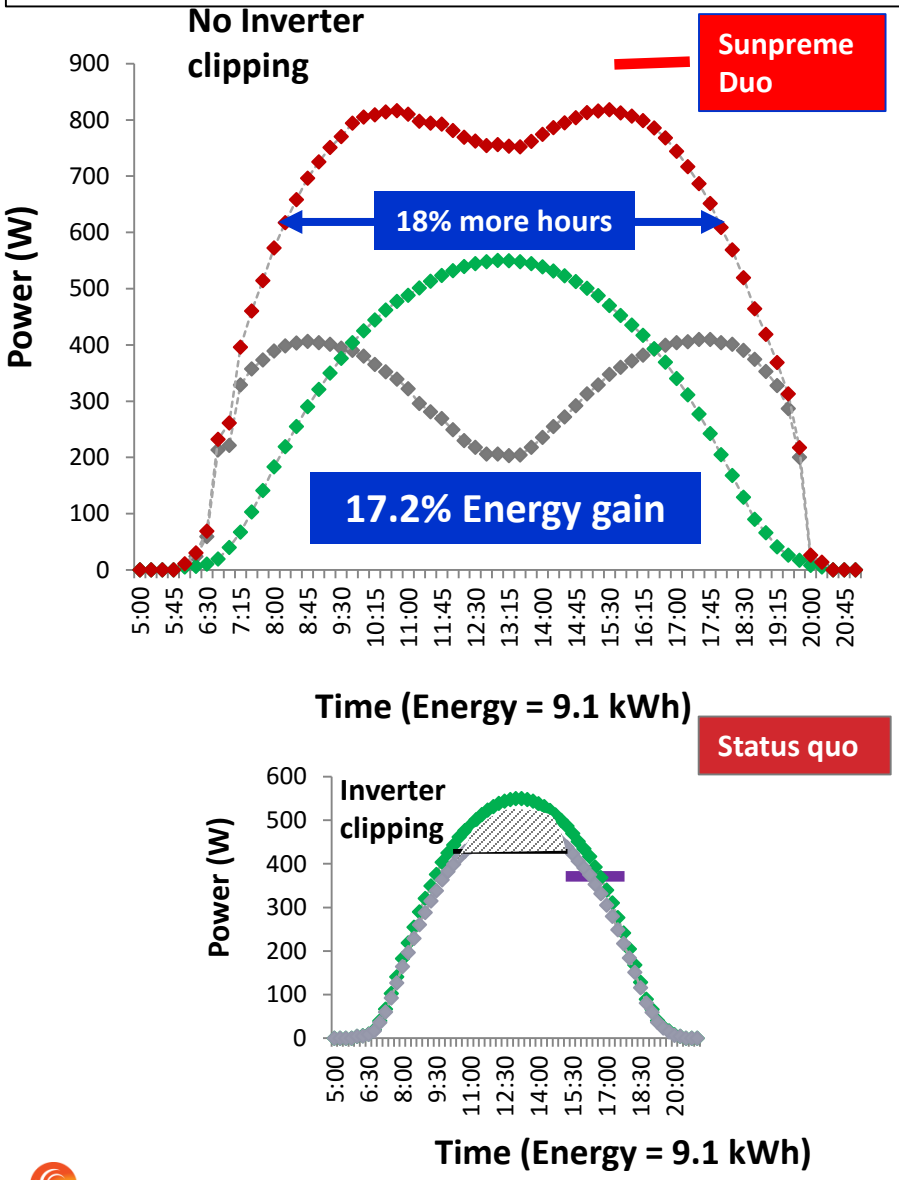
The 12.8 MW installation project, which began in mid-2015 was commissioned in February 2016. Initial energy production numbers are showing the results expected with an 8-10% additional energy harvest. Different albedos will be evaluated to further maximize the energy harvest of the system.

Martin Luther King (MLK) School Cambridge City, MA

Roof Mount
Size: 600KW
GxB 370W

As a result of the project, the school building has not only exceeded its energy conservation goals but is on track to achieve the prestigious LEED Platinum certification. As for the energy output, the site has generated over
250 Megawatt-hours of power since commissioning in Q2 of 2016.

Our 500W Duo panels produce a nearly flat, 3-peak power profile with 17% greater energy and 18% more energy hours and no inverter clipping



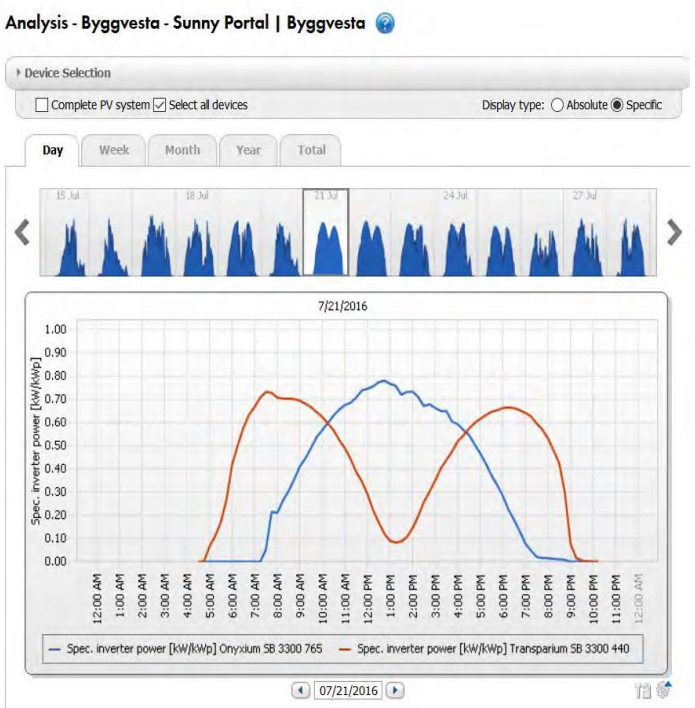
- In Duo configuration (red) the composite produced a broad, nearly flat top plateau, with extended width on the time scale
- No need for power clipping at mid-day
- The Duo power profile yields 17% greater energy and extends the daily production hours by ~18%
- A significant improvement over an equivalent number of "status quo" panels
- The Duo may compare favorably with 500W panels on single or dual axis trackers

SUNPREME Premium Bifacial Thin Film Solar

Empowering the Sun from all Directions™

Then, Sunpreme Bifacial Modules can do Applications which others simply cannot, e.g. Highway Smart Noise Barriers in Sweden

PPAM SOLKRAFT



Customer Energy Production Data

Byggvesta

Test location from April 2016.
Shows yields clearly without seld-shading effect.

Summary

- Sunpreme has been in high volume production of bifacial silicon heterojunction cell and module in the past 3 years. Module efficiency was rated as number 3 in the industry by Fraunhofer ISE
- High efficiency silicon heterojunction technology, bifaciality and competitive cost all contract to low LCOE

Thank You!

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