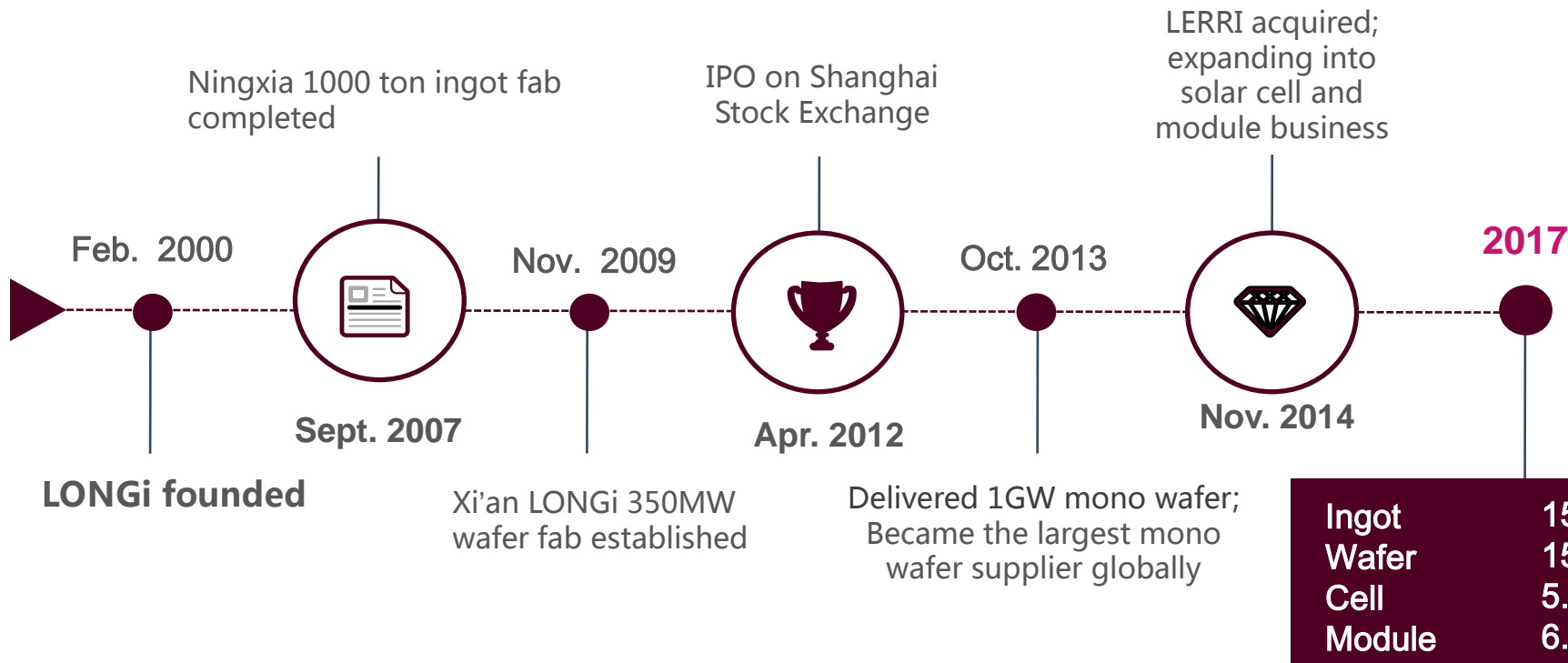




LONGi Solar Introduction and Technology Roadmap



THE LARGEST

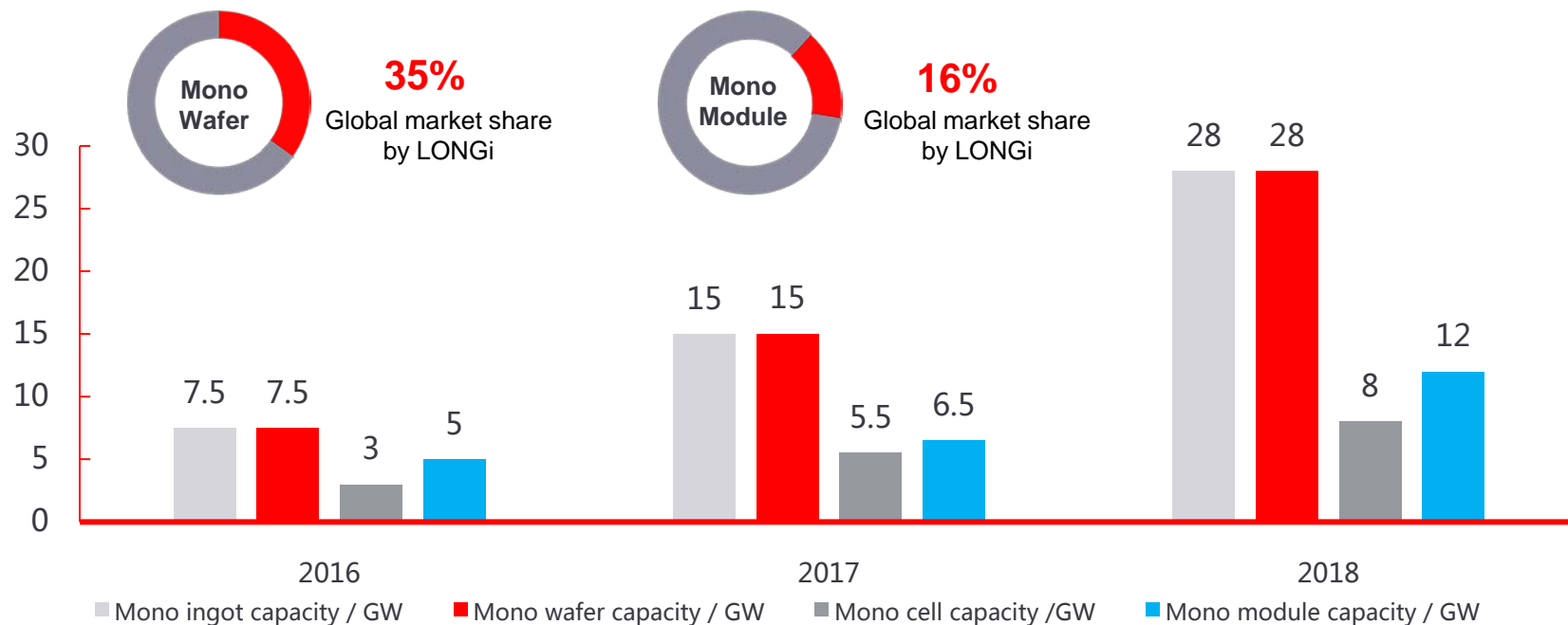
Mono-crystalline silicon wafer manufacturer

Source: Q1 2017 Global PV Market Outlook -Bloomberg New Energy Finance

No.1 In 2016 and 2017 Mono module shipment

Calculation based on the 2016 global installed capacity of Bloomberg statistics Feb 17, 2017

Source: Q1 2017 Global PV Market Outlook -Bloomberg New Energy Finance

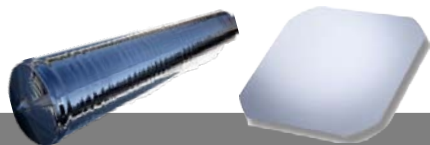


LONGi Green Energy Technology Company

Total
Employee
~18000

LONGi Silicon

Mono Ingot Mono Wafer

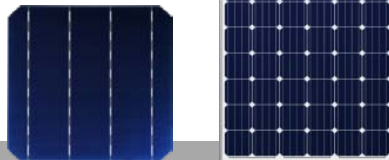


Founded in 2000, Xi'an LONGi Silicon Materials Corp. is the largest mono crystal manufacturer in the world. It provides high-quality products and services for photovoltaic and semiconductor industry; It was renamed LONGi Green Energy Technology Co. Ltd. in 2017

LONGi Solar

Mono Module

Mono Cell

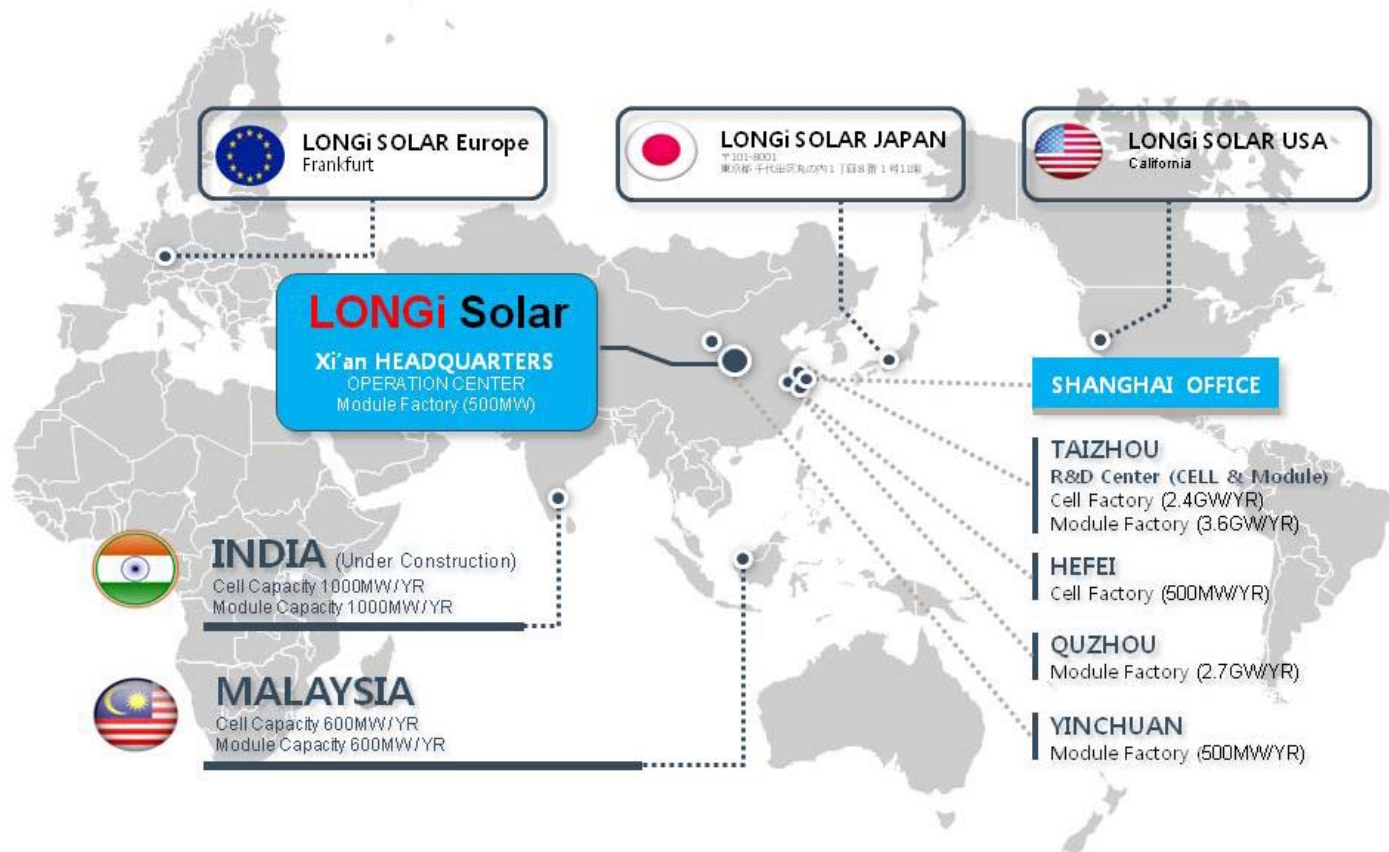


Since established in 2007, LERRI devotes itself to R&D and manufacturing of high efficiency mono solar cells and modules. LERRI Solar was renamed LONGi Solar in 2017

LONGi Energy

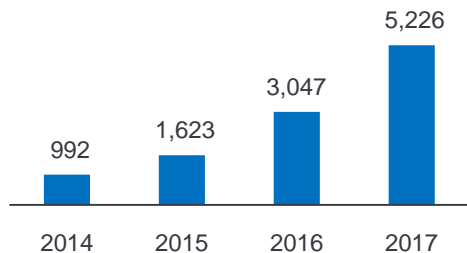
Mono Power Plants



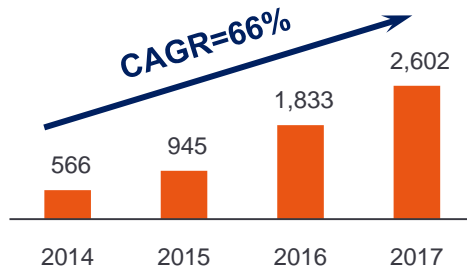


Financial Strength

Total assets (Million USD)

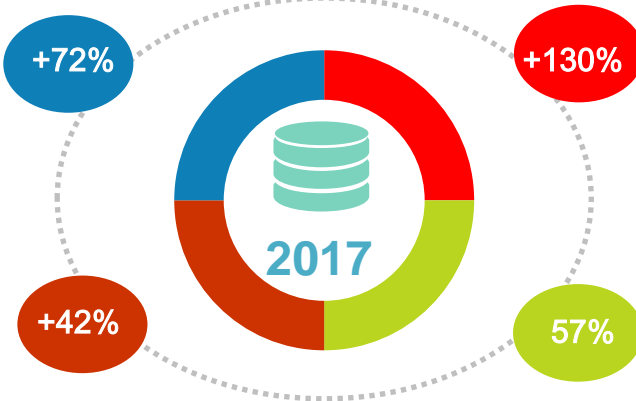


Revenue (Million USD)



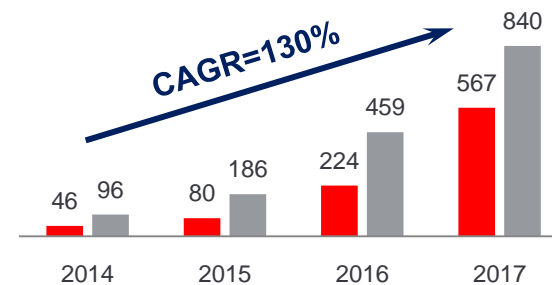
Market Cap
>US\$10.9B

as of 3/30/2018

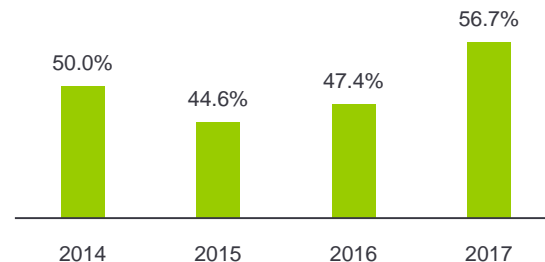


Net Profit (Million USD)

Gross Profit (Million USD)



Debt Ratio



Morgan Stanley (April 18, 2017) Prefer Cost and Technology Leaders Amid Dark Times for Solar

Stock ideas	Rating	Investment thesis
China Stocks		
Longi (601012.SS)	Overweight	1. leading mono c-Si player; strong growth momentum gaining market share from multi c-Si products; in addition, mono c-Si product price is strong in 2017 due to supply shortage, though the overall market is in oversupply; 2. Healthy balance sheet; 3. Coming catalysts: strong 1Q17 result; new 5GW capacity to ramp up gradually from late April to year end

	Longi 601012.SS	A	B	C	D	E	F
Rating	Overweight	Overweight	Overweight	Overweight	Equal-weight	Equal-weight	Underweight
Trading Currency	CNY	USD	USD	USD	USD	USD	USD
Price Target	22.9	8	28.3	19.4	32	6	11.3
Current Price	16.2	5.23	19.1	17.0	27.42	6.52	13.1
Upside/(Downside) (%)	41%	53%	48%	14%	17%	-8%	-14%
Market Cap (in USD mm)	4,337	559	199	577	2853	903	790
Average Daily Traded Vol (in USD mm)	42	7	0	2	2.5	2.5	25
Bull Case Value	28.7	16	35.0	25.5	43	11	20.0
Upside (%)	77%	206%	83%	50%	57%	69%	53%
Bear Case Value	11.1	2	11.0	10.0	21	1	7.0
Downside (%)	-31%	-62%	-42%	-41%	-23%	-85%	-47%
Risk/Reward Skew	2.5	3.3	2.0	1.2	2.5	0.8	1.1
Morgan Stanley Estimates							
FY16e	CNY	USD	USD	CNY	USD	USD	USD
Sales	11,420	454	229	21,401	2,951	2,703	2,853
EBITDA	2,550	-111	99	2,252	556	164	182
EBIT	2,151	-215	65	1,475	325	-11	86
EPS	0.84	0.87	4.15	30.14	5.17	-0.46	1.02
FY17e							
Sales	15,094	731	288	24,026	2,882	2,306	4,432
EBITDA	3,257	51	125	1,604	265	189	239
EBIT	2,573	-79	82	1,039	48	16	142
EPS	0.99	2.19	5.38	17.06	0.37	0.12	1.46

Market

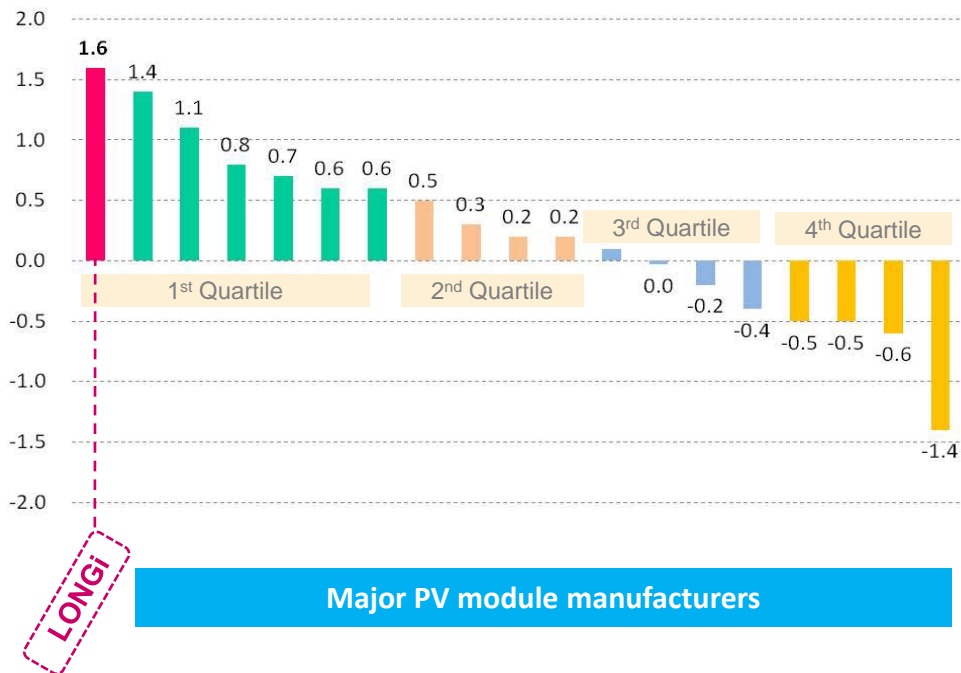
- Solar faces a strong headwind of oversupply in 2017-18
- Nevertheless, **mono c-Si** global market share to continue to grow **to 35% in 2017 and 50% in 2020**

LONGi

- Technology-driven cost reduction is the core competitiveness, **solar conversion efficiency improvement is the most effective way to cut costs**
- Solid bottom-line growth
- Growth potential from value chain extension to module and solar project development

Strong Financial Performance

Financial Health No. 1 among all PV Manufacturers



Strong financial performance recognized by industry:

- Financial health No.1
- Profitability and cost leadership top 3
- Overall score top 5

PHOTON Consulting, LLC
PV Triathlon Report in Nov, 2017

LONGi Solar

on Bloomberg (BNEF) PV Module Maker Tier 1 List !

LONGi Solar shipment 1GW in 2015, 2.3GW in 2016 and **4.66GW in 2017**





5-7%

R&D Investment

5-7% of LONGi 's total revenue is invested in R&D



260

Patents

Has developed 260 patents on ingot, wafer, cell and module technology

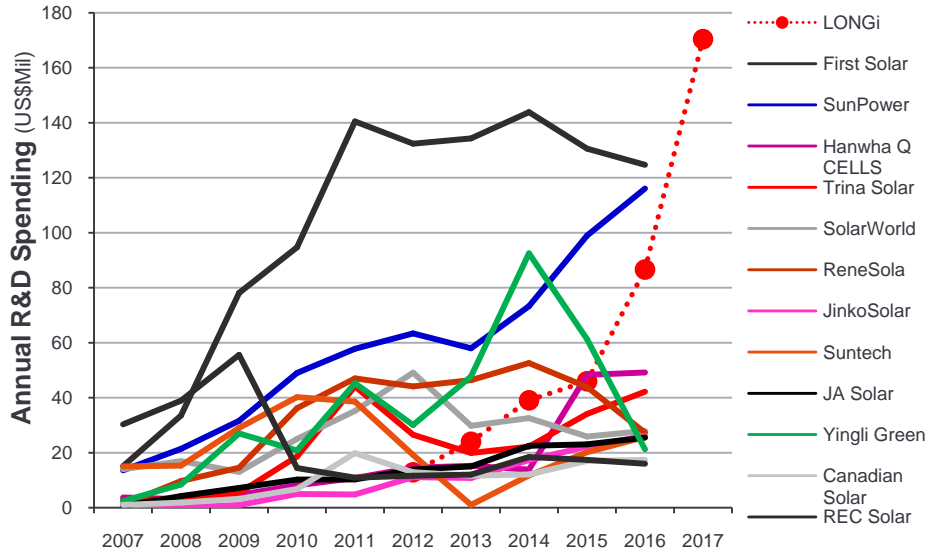


460

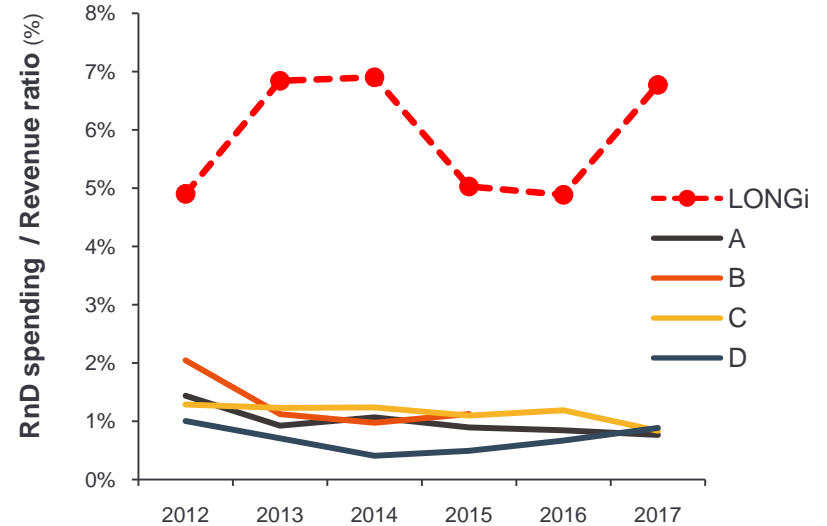
Technical Team

More than 460 technical staff working on ingot, wafer, cell, and module development

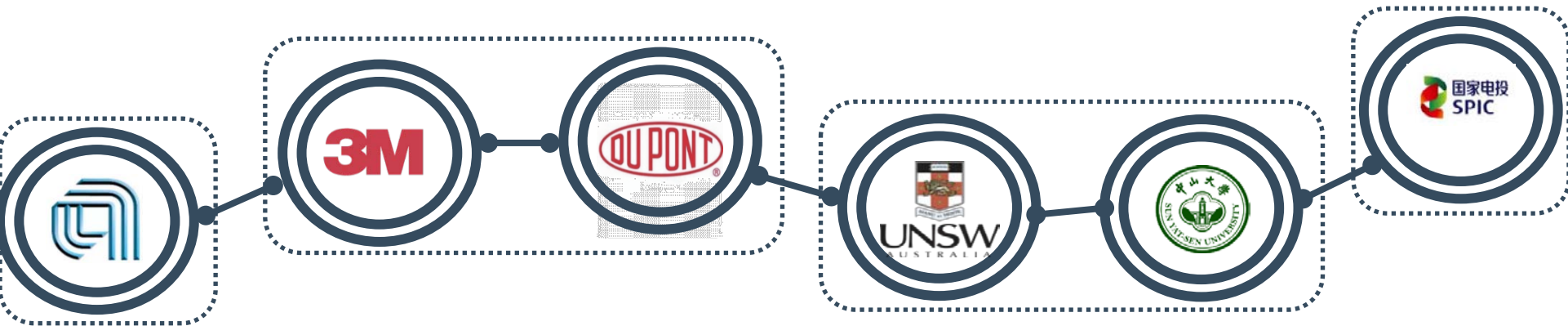
R&D Spending



R&D Spending as Percentage of Revenue



Technology strength is realized through consistent investment in RnD, to develop products with leading performance at lower cost



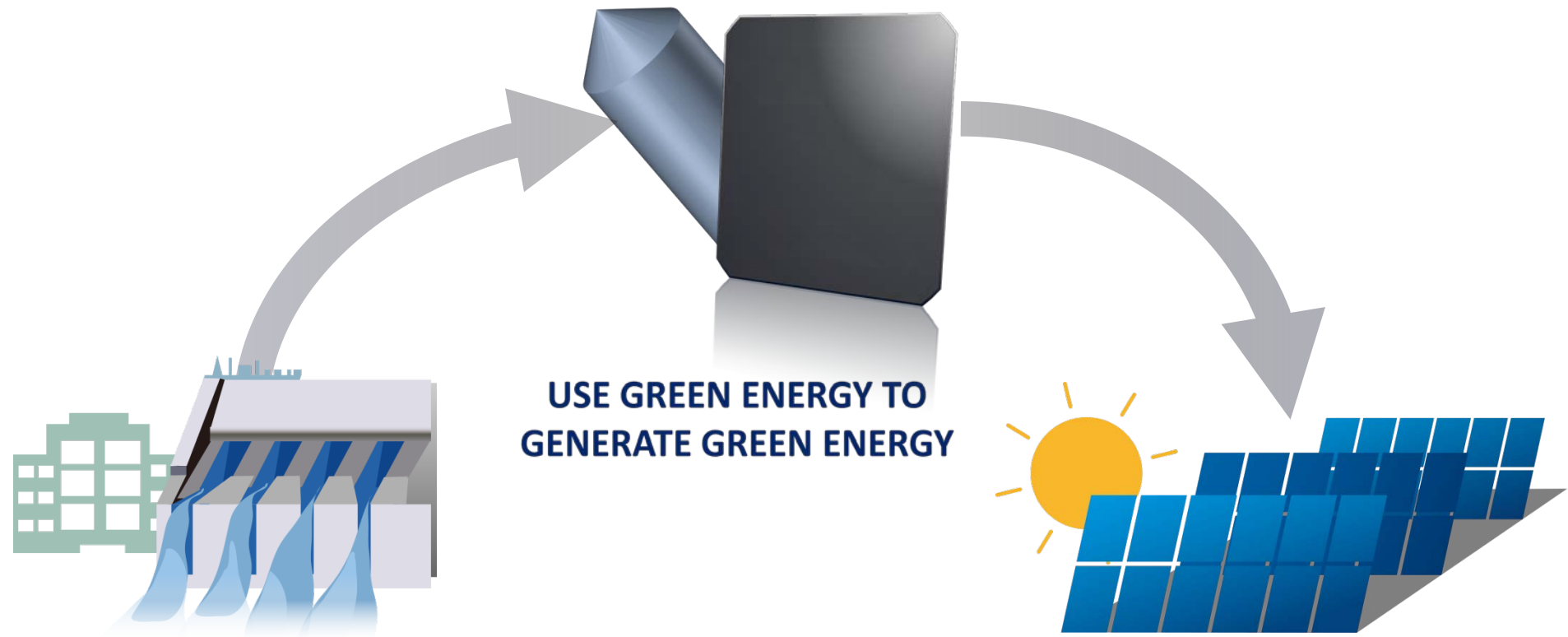
Equipment

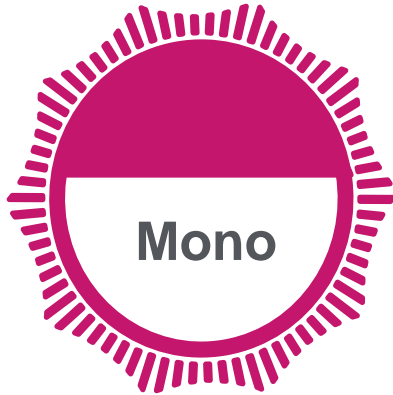
Materials

University

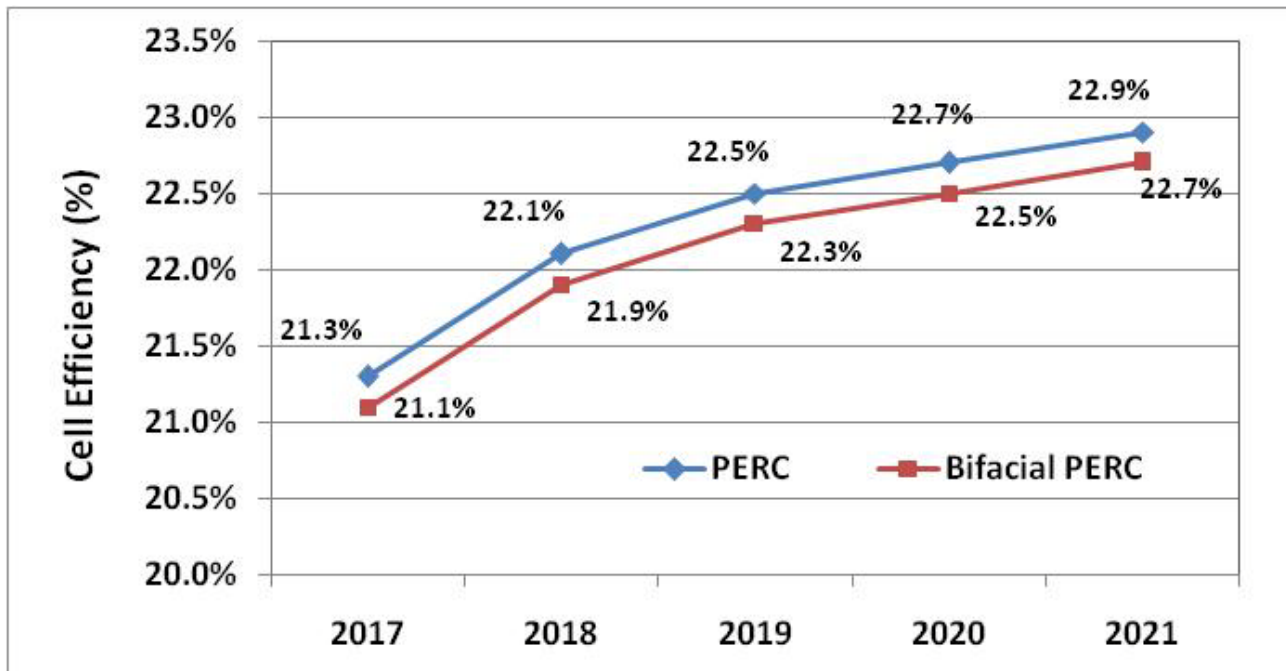
Customer

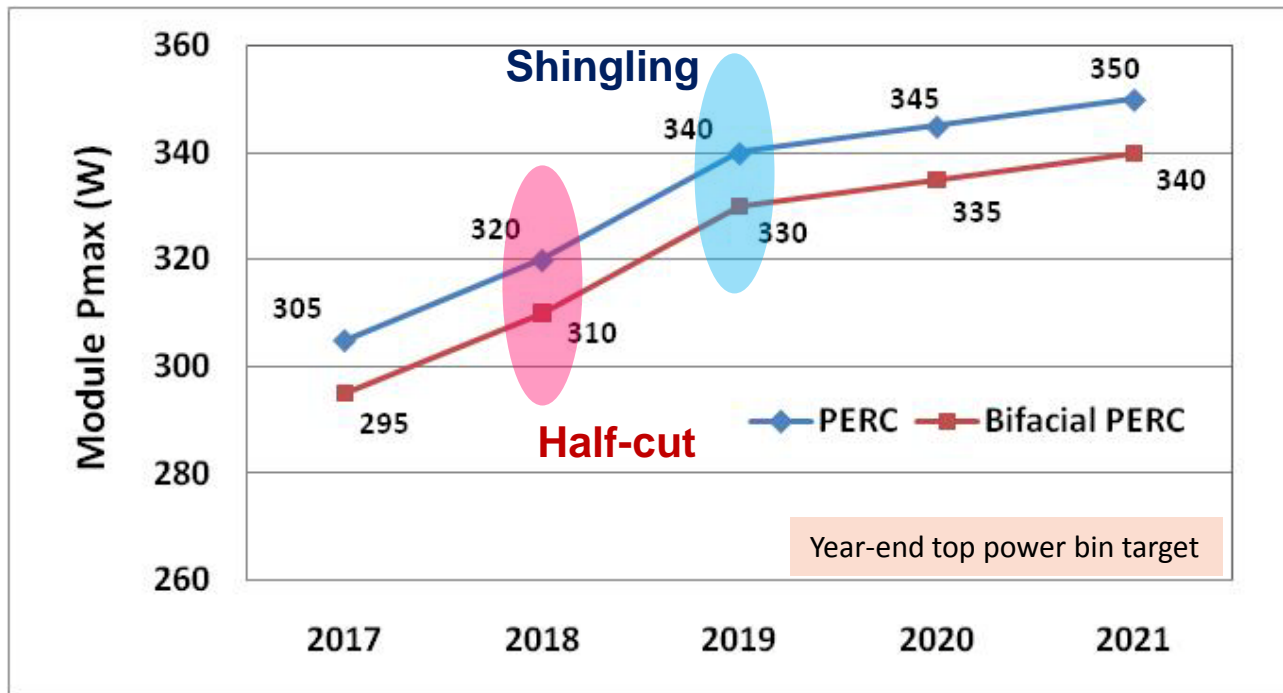
LONGi Solar has established strong strategic partnership with equipment and material suppliers, leading research institute and university, as well as customers, to advance development on ingot, wafer, cell and module technology

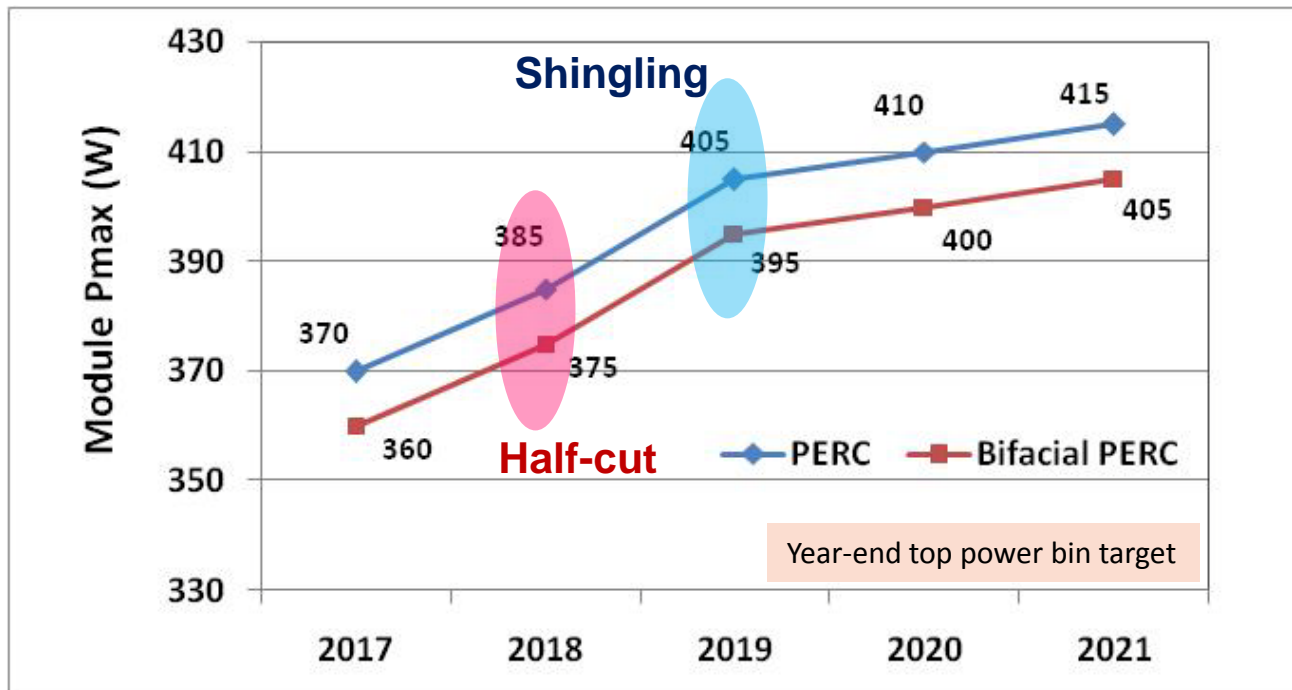




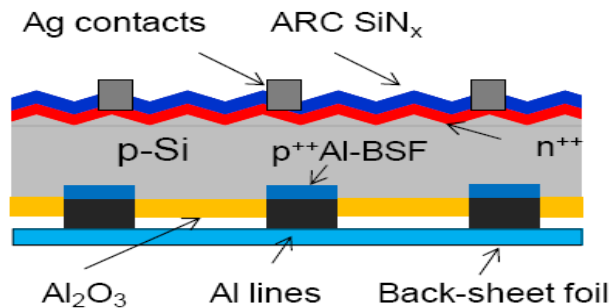
- Focus on MONO Products only







Mono PERC



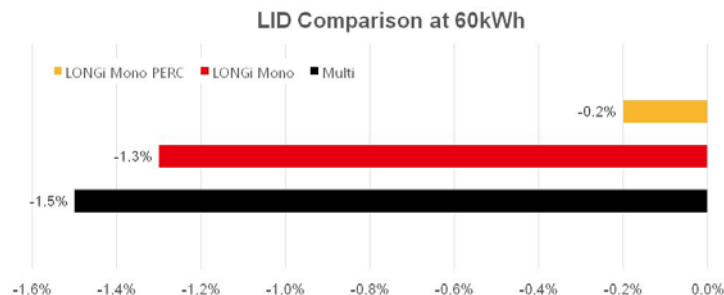
- ◆ 21%+ average cell efficiency, 60C module power at 300W+ and 72C module at 360W+

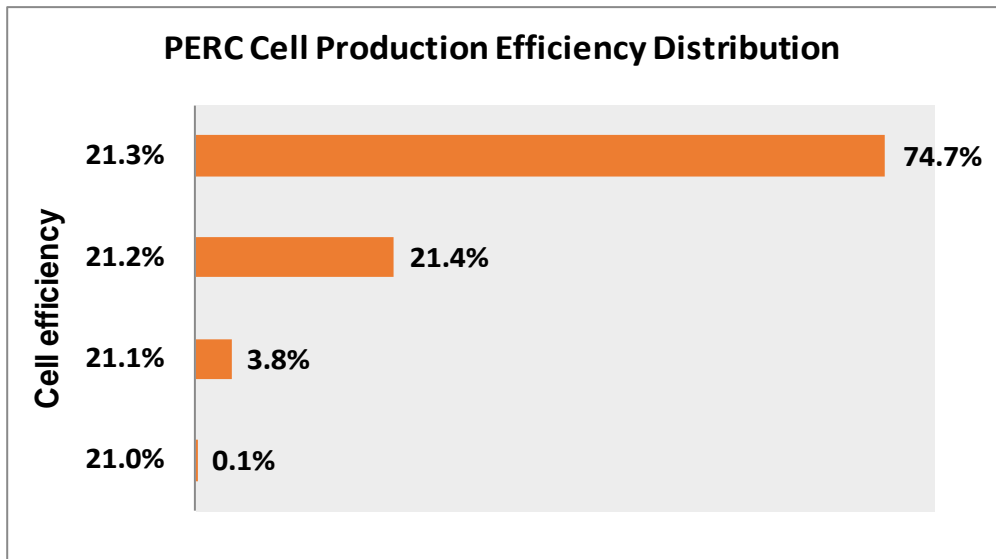
- ◆ Outstanding low-light performance, which produces more energy than normal AlBSF mono module at system level

- ◆ Outstanding temperature coefficient

- ◆ Excellent LID performance

- ◆ Suitable for utility, as well as commercial and residential rooftop applications





22.17% 2017.4

22.43% 2017.8

22.71% 2017.10

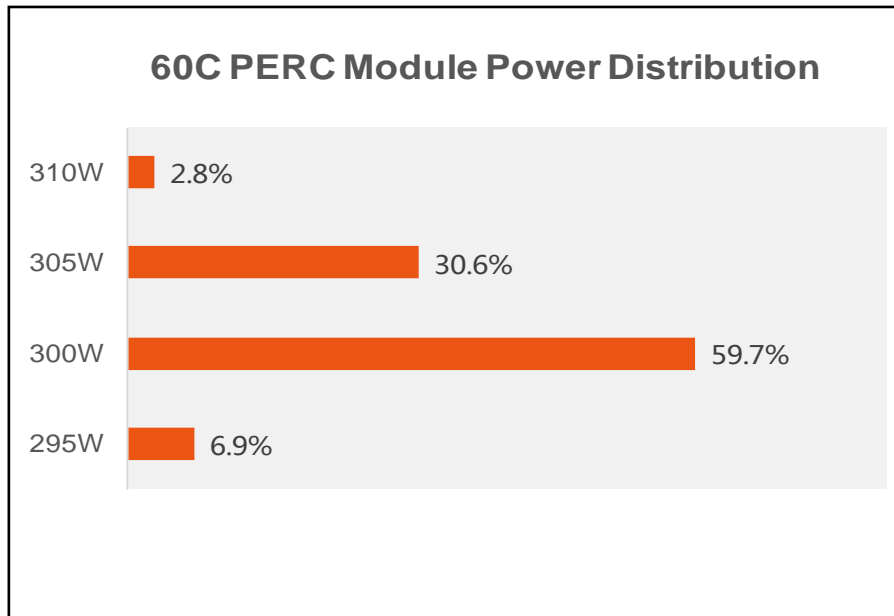
23.26% 2017.10

23.60% 2017.12

PERC Cell efficiency record

PERC production cell efficiency average >21.2%;

Record 23.26% PERC cell efficiency demonstrated through next Gen development

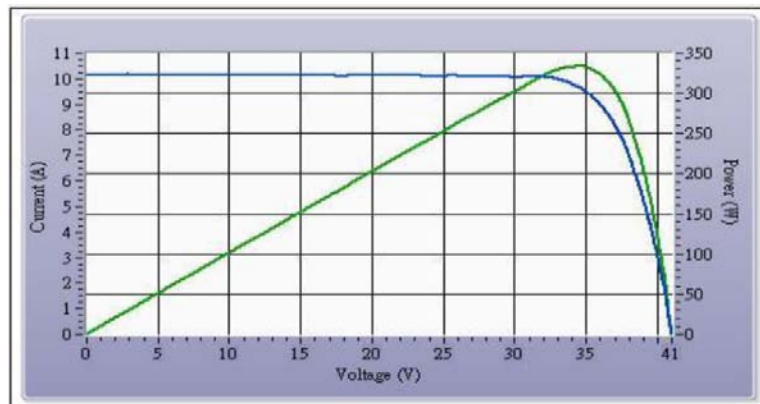


Module Power Record

316.6W Dec. 2016

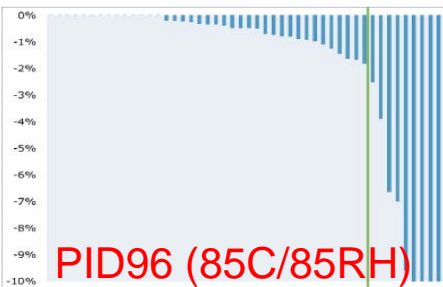
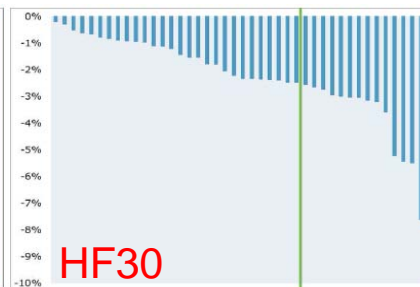
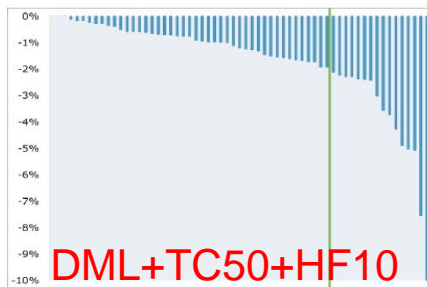
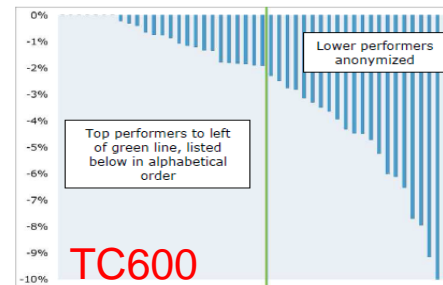
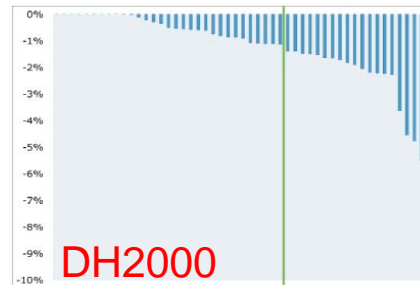
325.6W Apr. 2017

333.7W (20.41%) Jan. 2018



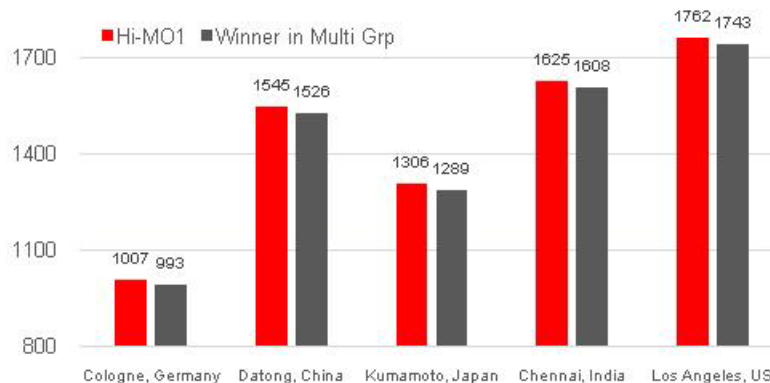
60C module production Pmax >90% at 300W or above;
Record 333.7W (60C) module power demonstrated through next Gen development

LONGi Solar modules are among **Top Performers** (to the left of each green line) for **All** extended reliability tests





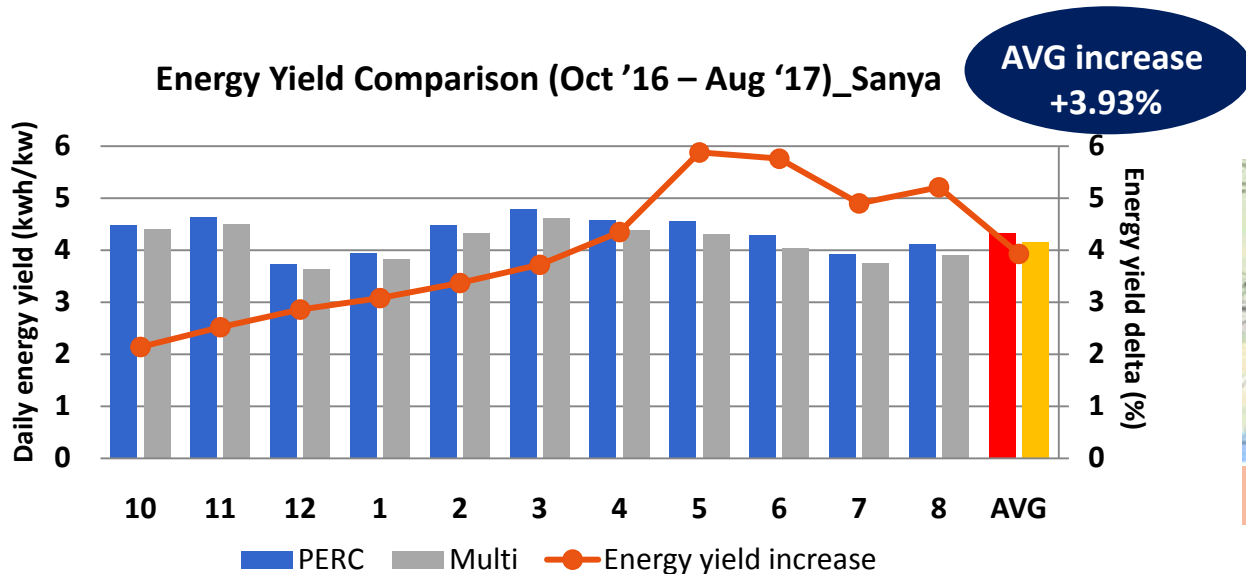
Simulated power generation (kWh/kWp/year)



- TUV Rheinland established module PAN file with performance measurement under different irradiance, temperature and incident angle using randomly selected module samples from production shipment
- Simulated energy yield in five different cities globally
- Not intended as performance guarantee

LONGi mono PERC module has been ranked No. 1 in TUV Rheinland energy yield simulation for two consecutive years

Better Energy Yield with PERC Modules



South China, hot and humid

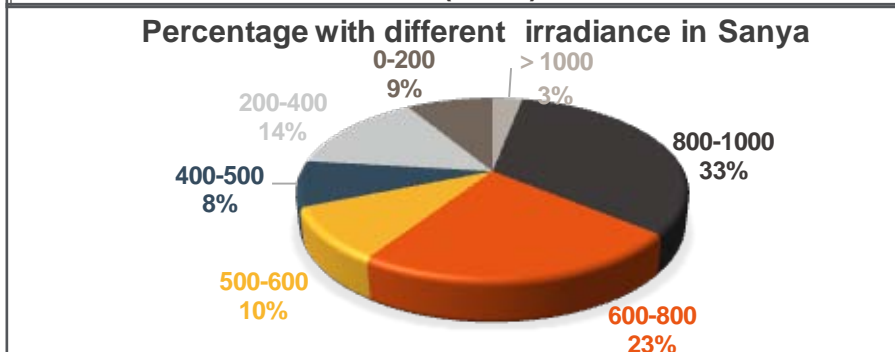
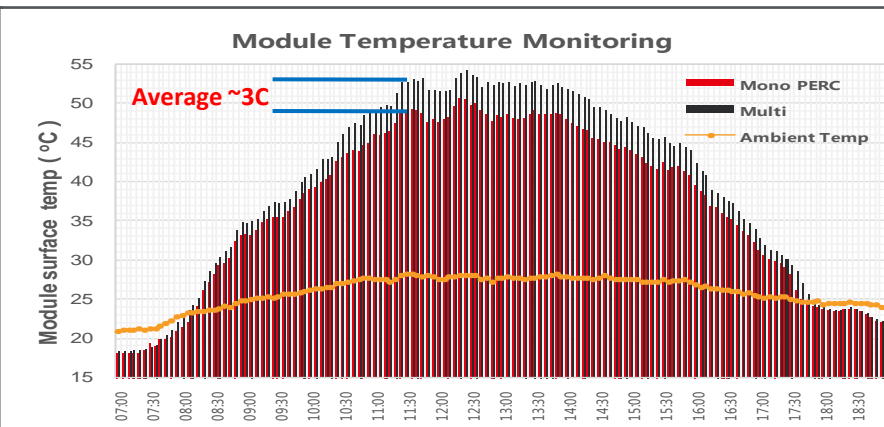
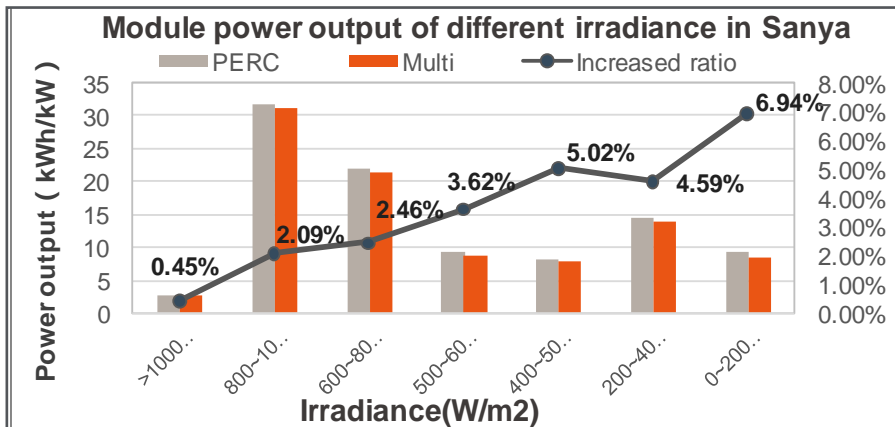
Contributions:

1. Better performance at low irradiance
2. Lower operation temp
3. Better TempCo with PERC

System setup: 8pcs 290W Hi-MO1 module and 260W Multi modules (Tier1 supplier), 3kw inverter
Data source: China Electric Institute

Hi-MO1 (PERC) module power generation is >3% higher than Multi module

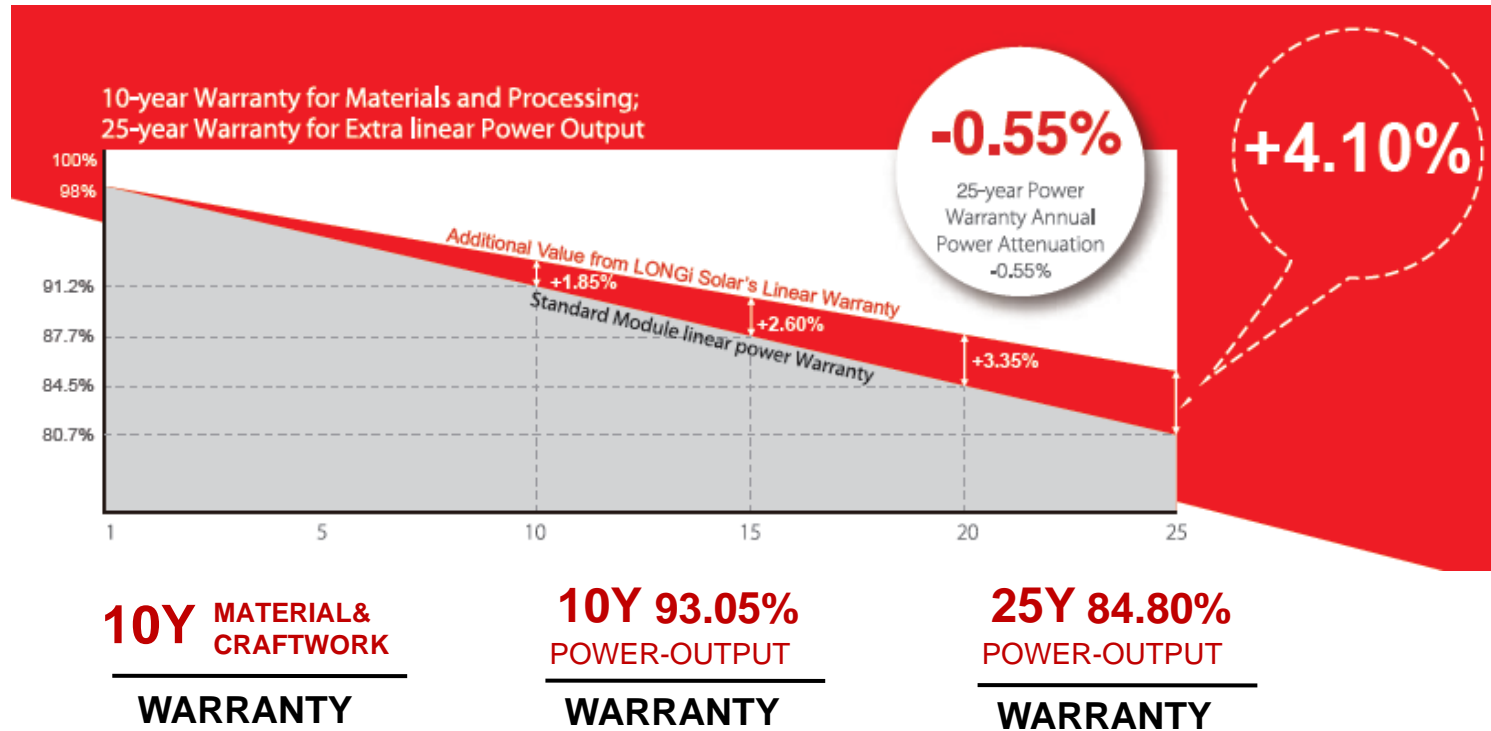
Better Energy Yield with PERC Modules



$P_{max} \text{ TempCo (Multi)} = -0.42\%/C$
 $P_{max} \text{ TempCo (Mono PERC)} = -0.38\%/C$

PERC Module Linear Power Performance Warranty

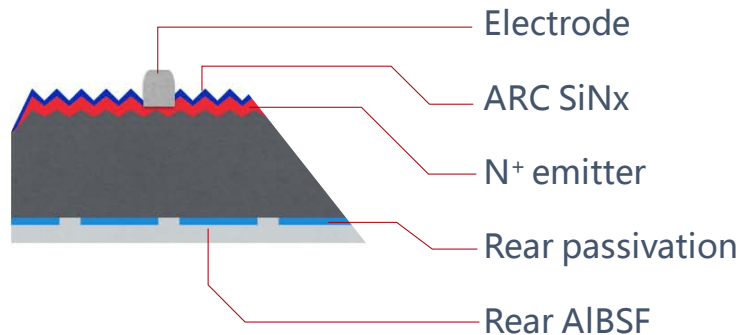
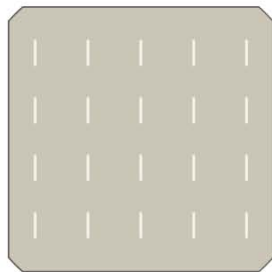
Low LID and slower power degradation enabled better warranty term



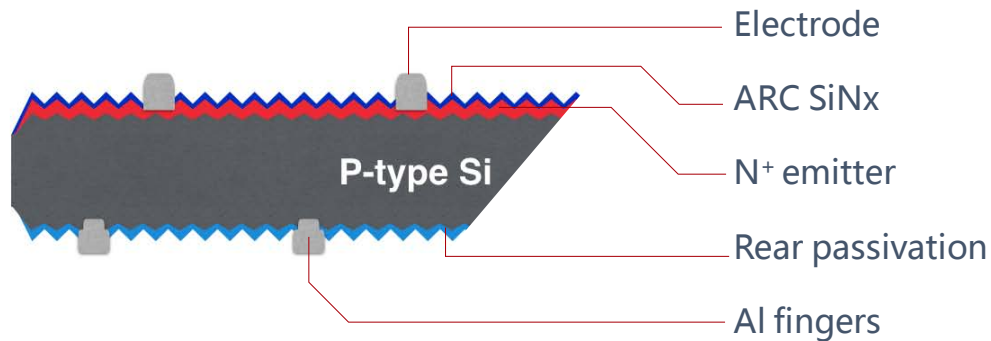
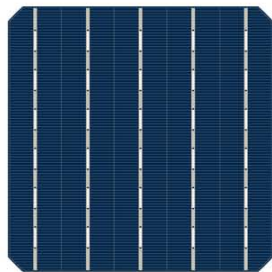
Bifacial PERC

Mono PERC and Bifacial PERC

PERC



Bifacial PERC



Bifacial Technology

Mono-facial to Bifacial power generation

- LONGi Solar Bifacial PERC Hi-MO2 cell and module bifaciality >75%
- Significant increase on energy yield
- Double glass lamination, 30 year power degradation warranty



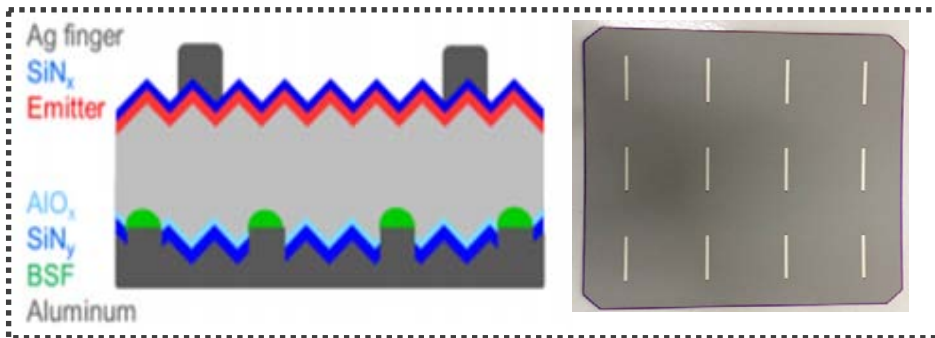
Product features

Product performance and cost

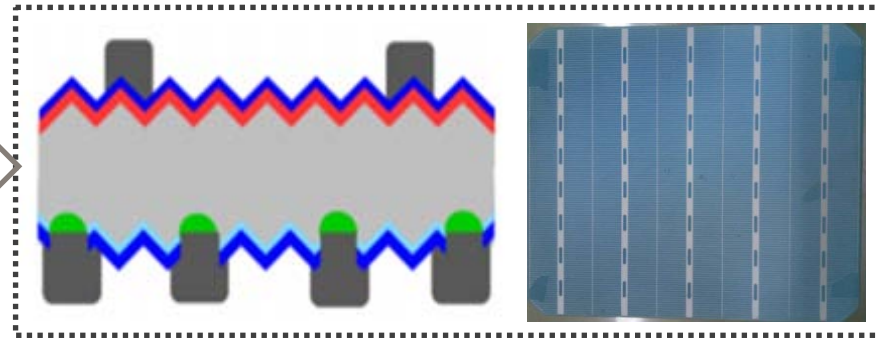
- Front side efficiency equivalent to conventional PERC
- Manufacturing cost comparable to conventional PERC
- Bifacial light harvesting, 8%-25% power gain from rear side

Application

- Utility
- Commercial rooftop and carport
- BIPV and BAPV



Conventional PERC cell structure

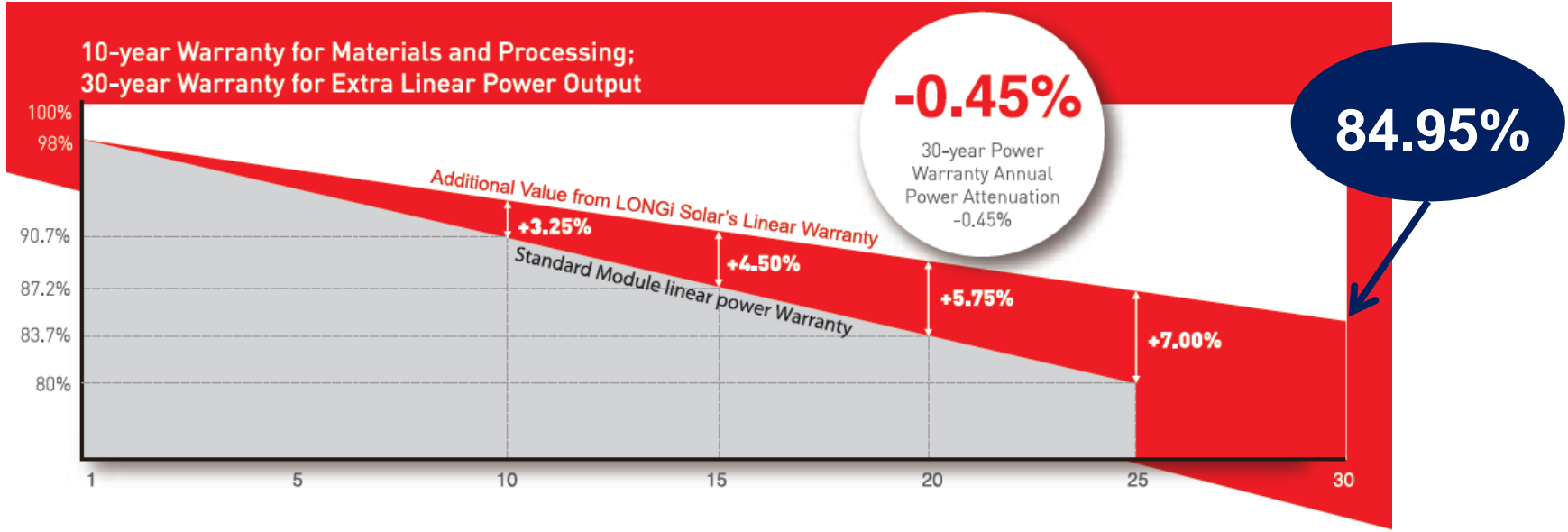


Bifacial PERC cell structure

2.4 Module datasheet

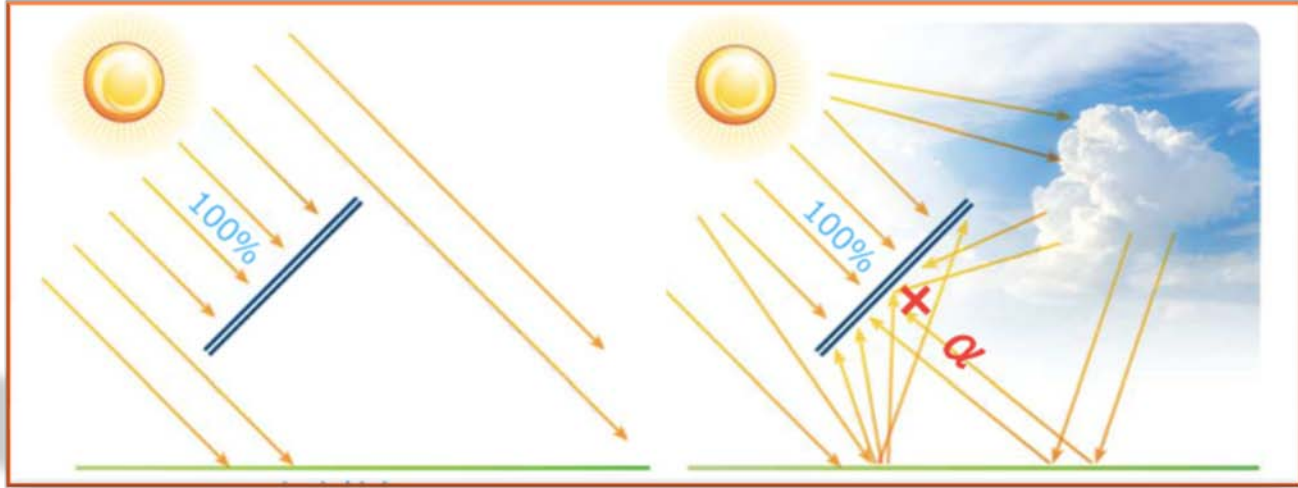
Electrical Properties(STC*)—P-PERC Bifacial—predicted data

Item	Units	Bifacial Gain—72 Type				
		0%	5%	10%	20%	30%
Maximum Power(Pmax)	[W]	360	378	396	432	468
MPP Voltage(Vmpp)	[V]	38.7	38.9	39.1	39.4	39.6
MPP Current(Imp)	[A]	9.30	9.72	10.13	10.96	11.82
Open Circuit Voltage(Voc)	[V]	47.9	48.1	48.3	48.6	48.8
Short Circuit Current(Isc)	[A]	9.76	10.32	10.70	11.60	12.52
Module Efficiency	[%]	18.30	19.32	20.18	22.02	23.85



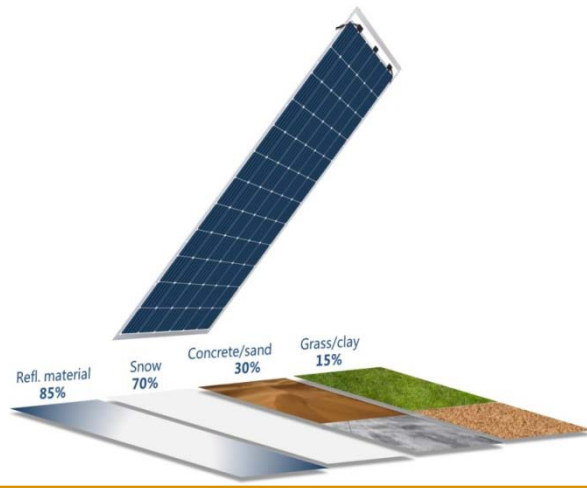
Mono facial module

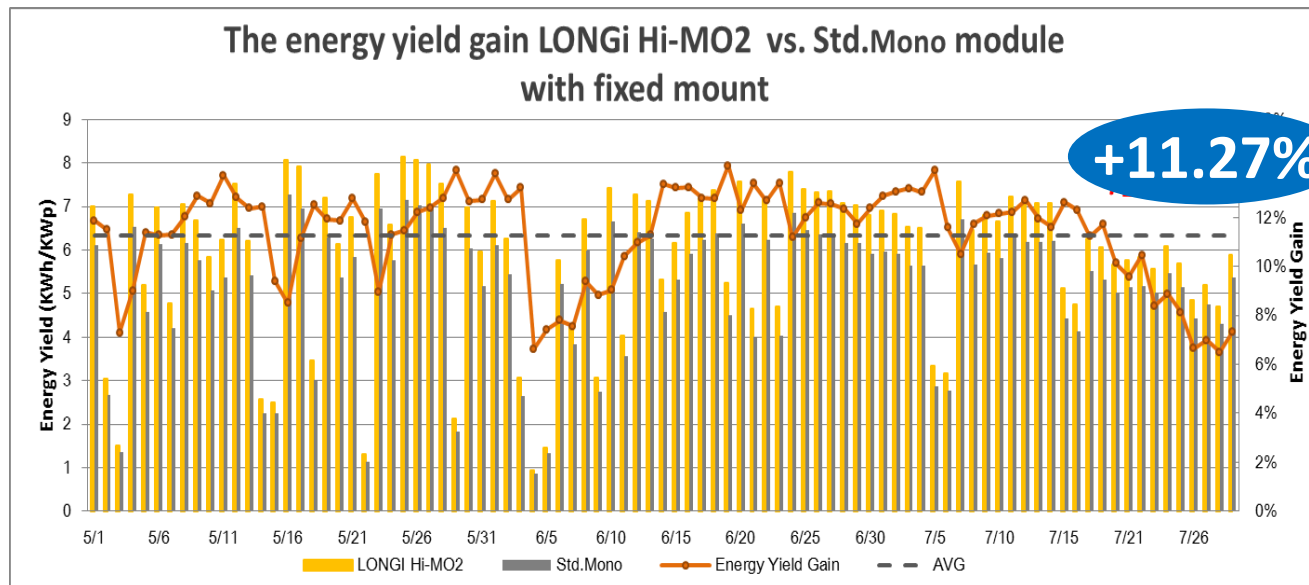
Bifacial module



Direct sunlight

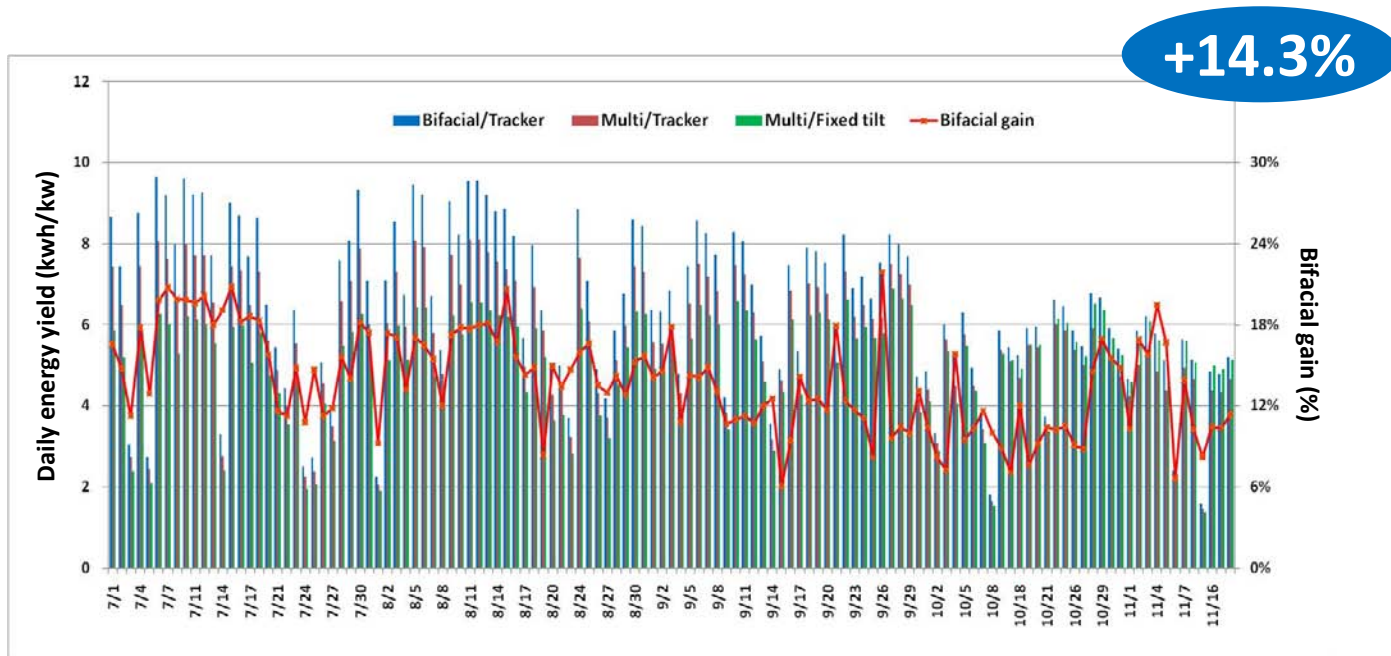
Direct sunlight + Reflection + Scattered light





- Bifacial PERC Capacity 18.9kw, std. mono capacity 18.25kw, project located in Pucheng, Shaanxi, China
- Fixed tilt configuration (15 degree), distance to ground 1.6m
- Three month monitoring data showed 11.27% energy yield from backside

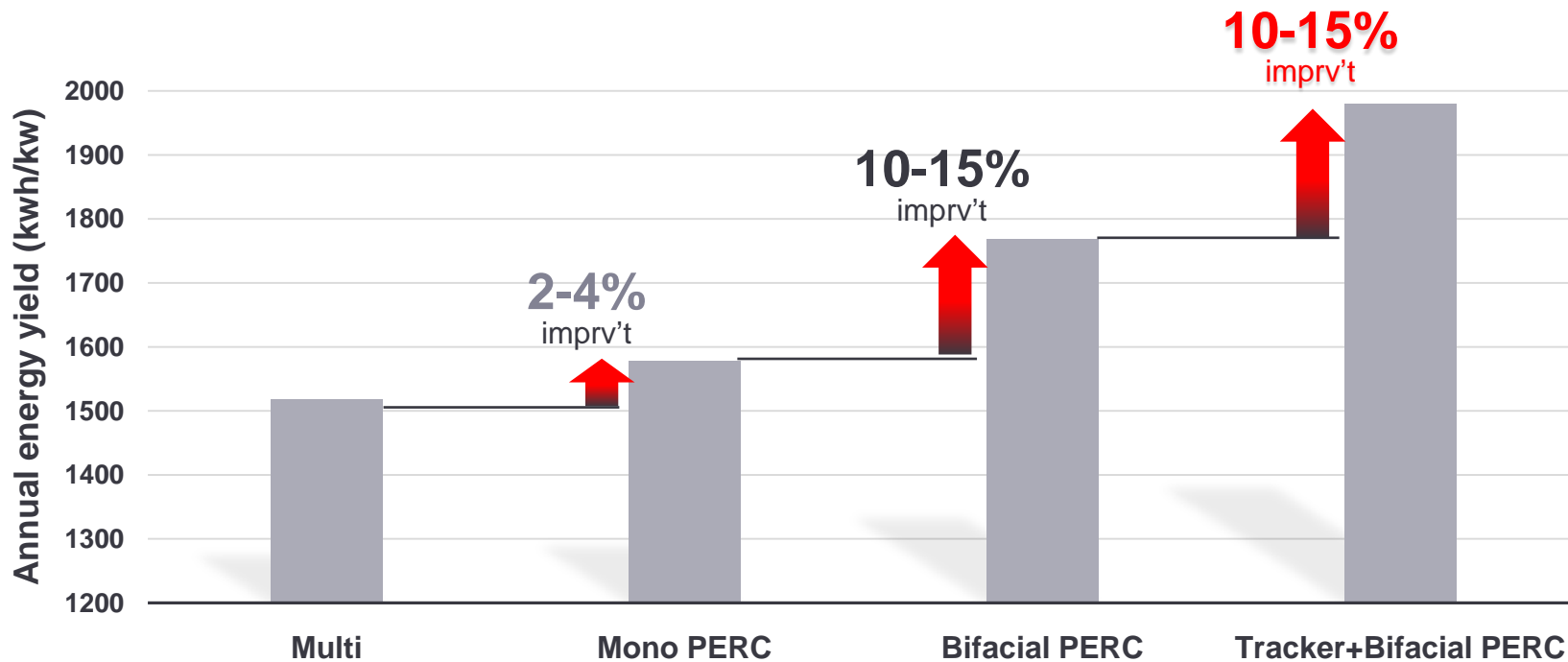
Bifacial PERC Module Field Monitoring Data



+14.3%

- Hi-MO2 Bifacial PERC Demo project (336kw on single axis tracker) in Kubuchi, Inner Mongolia, China
- Power generation in July- Nov by bifacial module + tracker is 27.3% higher than Multi module + fixed tilt and 14.3% higher than Multi + tracker

Higher Energy Yield



**Mono PERC (including Bifacial PERC)
is best solution to realize lower LCOE**

The logo for LONGi Solar, featuring the word "LONGi" in a bold, white, sans-serif font with a small dot above the "i", followed by the Chinese characters "隆基" in a similar font. The logo is set against a solid red square background.

LONGi 隆基

Thank You for Your Attention

乐叶光伏科技有限公司

地址：陕西省西安经济技术开发区尚稷路8989号B座

电话：4009696199

LONGi Solar

Block B, No.8989 Shangji Road, Xi'an Economic and Technology Development
Zone, Xi'an, Shaanxi, China

TEL: +86-4009696199