

JA SOLAR

Harvest the Sunshine
Premium Cells, Premium Modules

New Era Solar Panels

REDEFINE LCOE & ROI

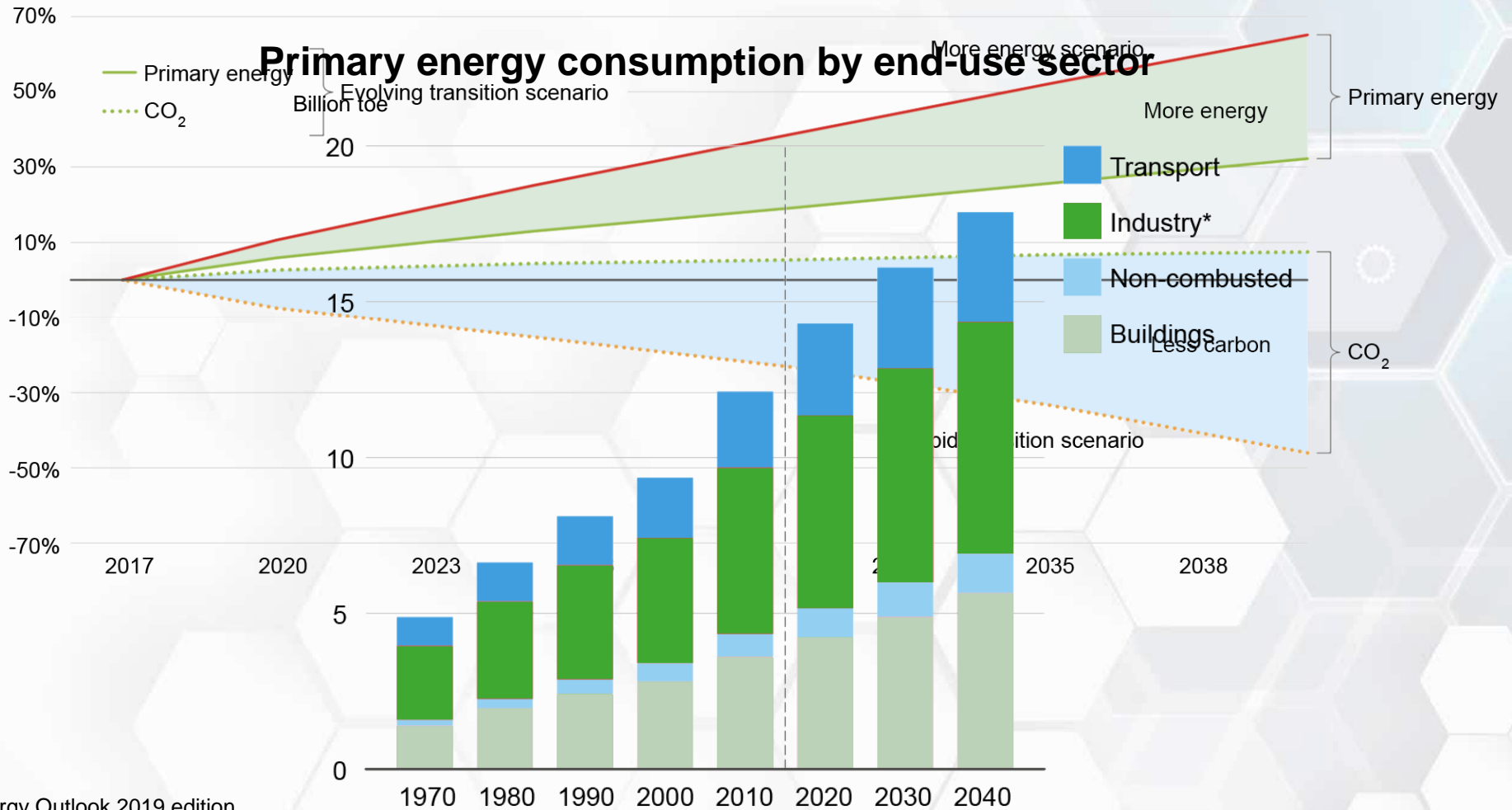
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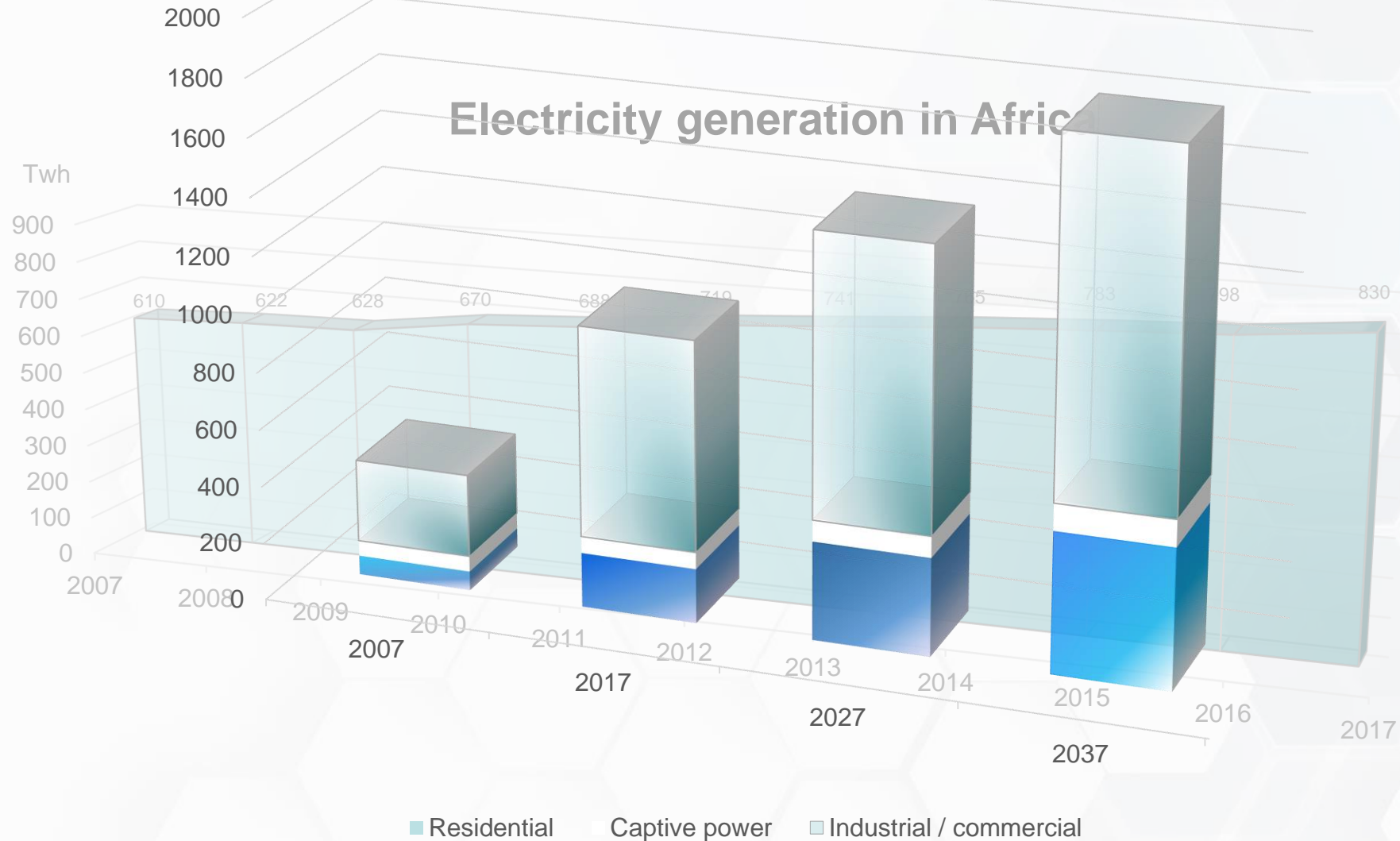


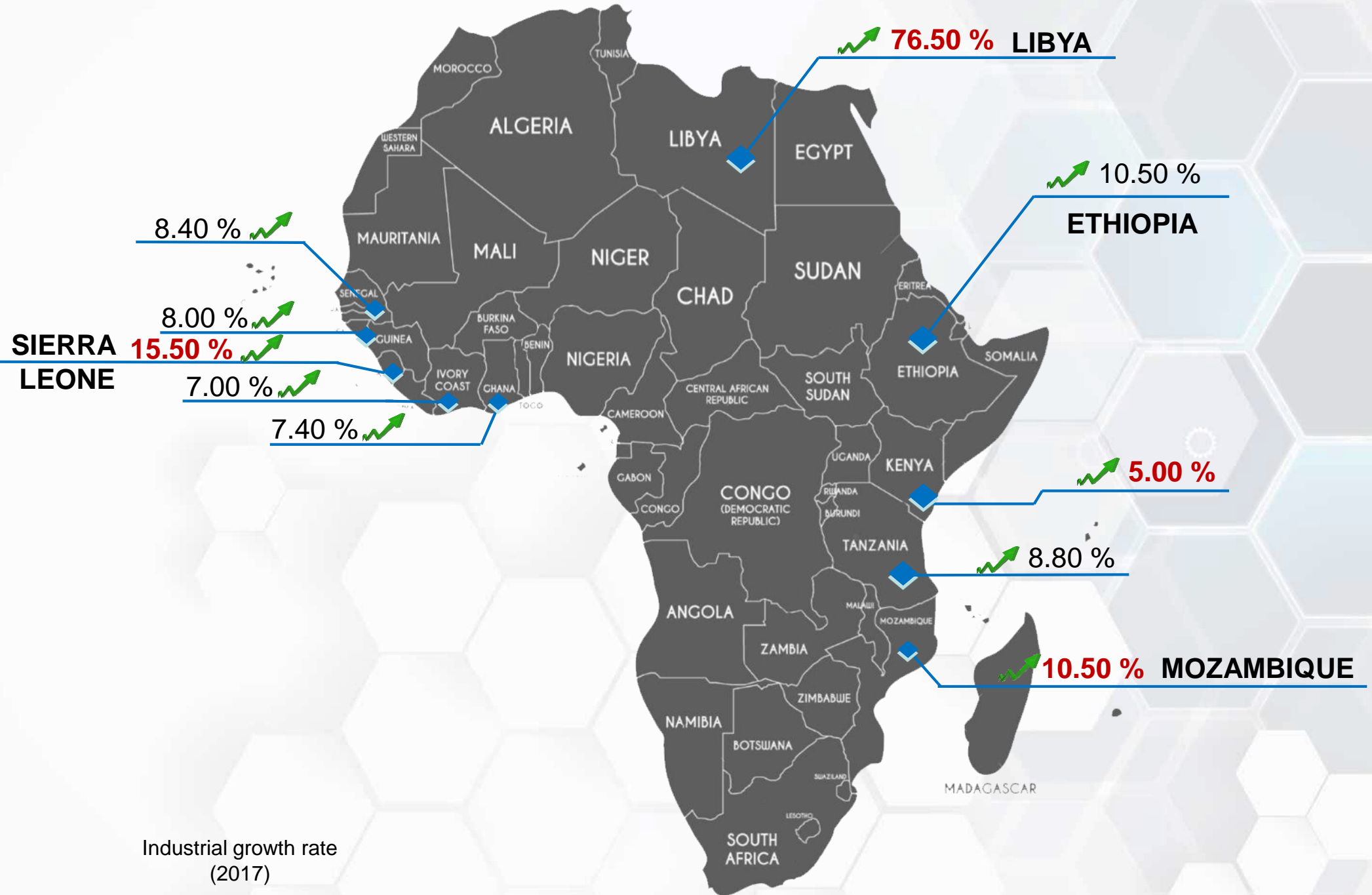
Global Energy Target

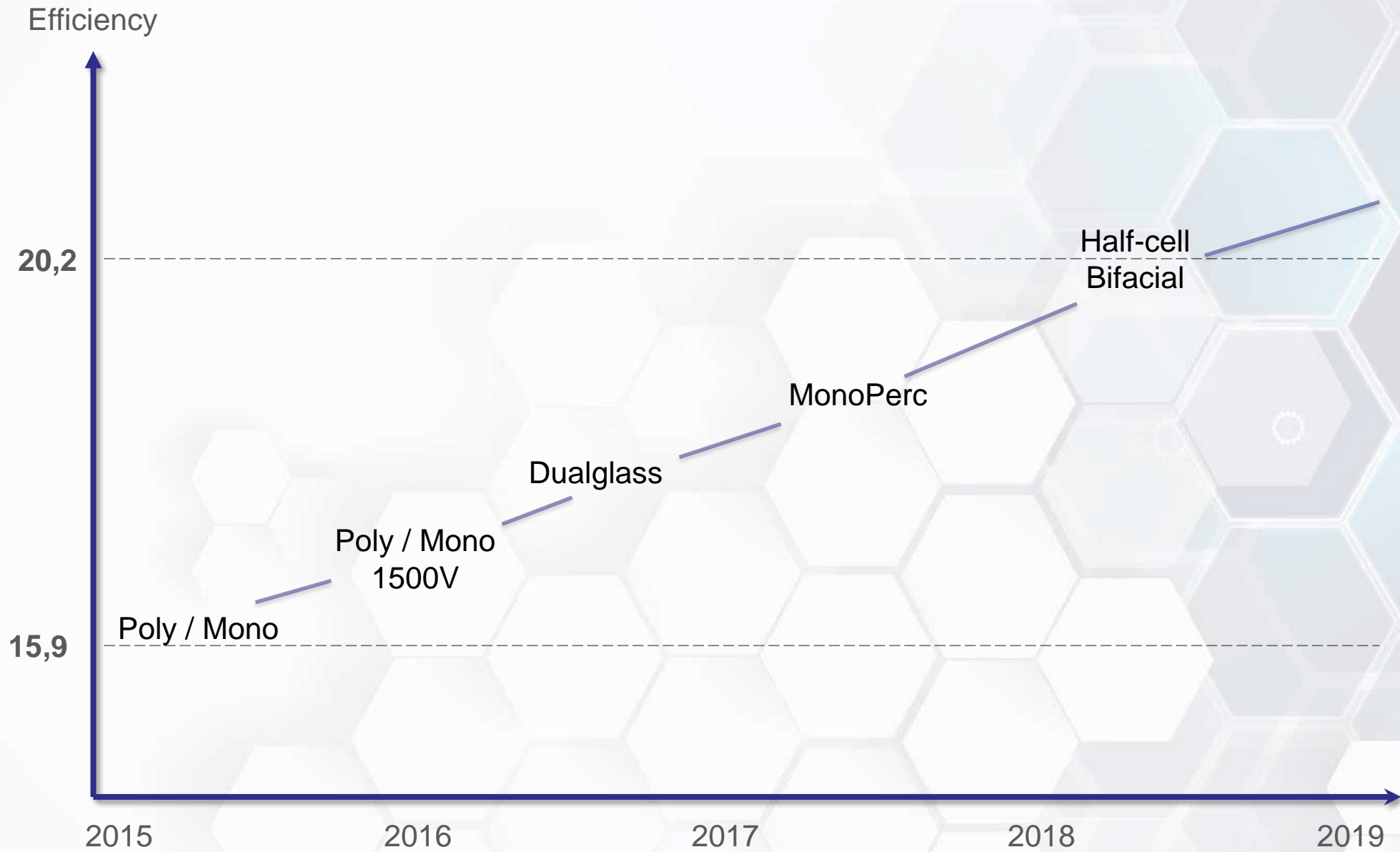


* BP Energy Outlook 2019 edition

Africa power demand







Half-cell
1/2 current

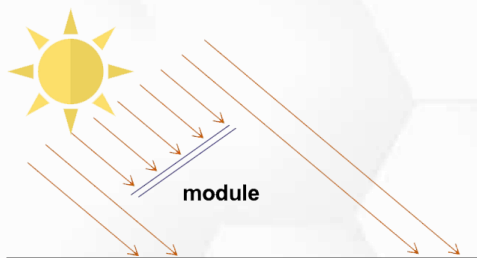


Full Cell
full current

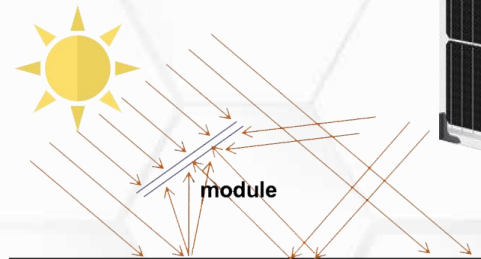




- ✓ Weather resistance
- ✓ Abrasion resistance
- ✓ Excellent water vapor resistance
- ✓ Lowest PID and degradation effect
- ✓ Lower temperature coefficient



Conventional modules absorb direct light



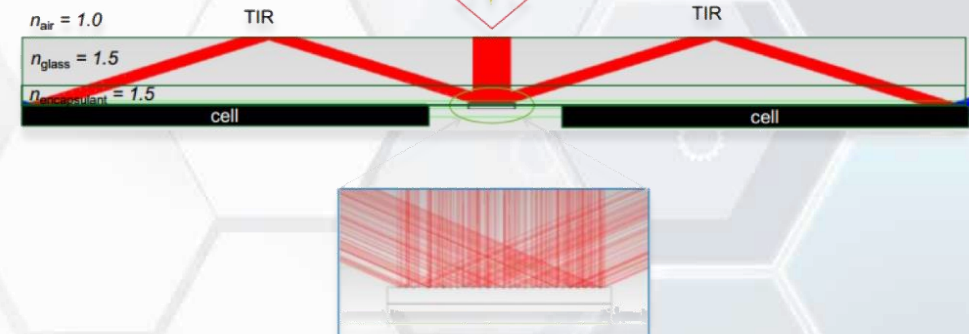
Bifacial modules absorb direct light, reflected light and scattered light



N-type Solar > 24%

3M Reflective film technical theory

Total Internal Reflection (TIR) at Glass/Air Interface



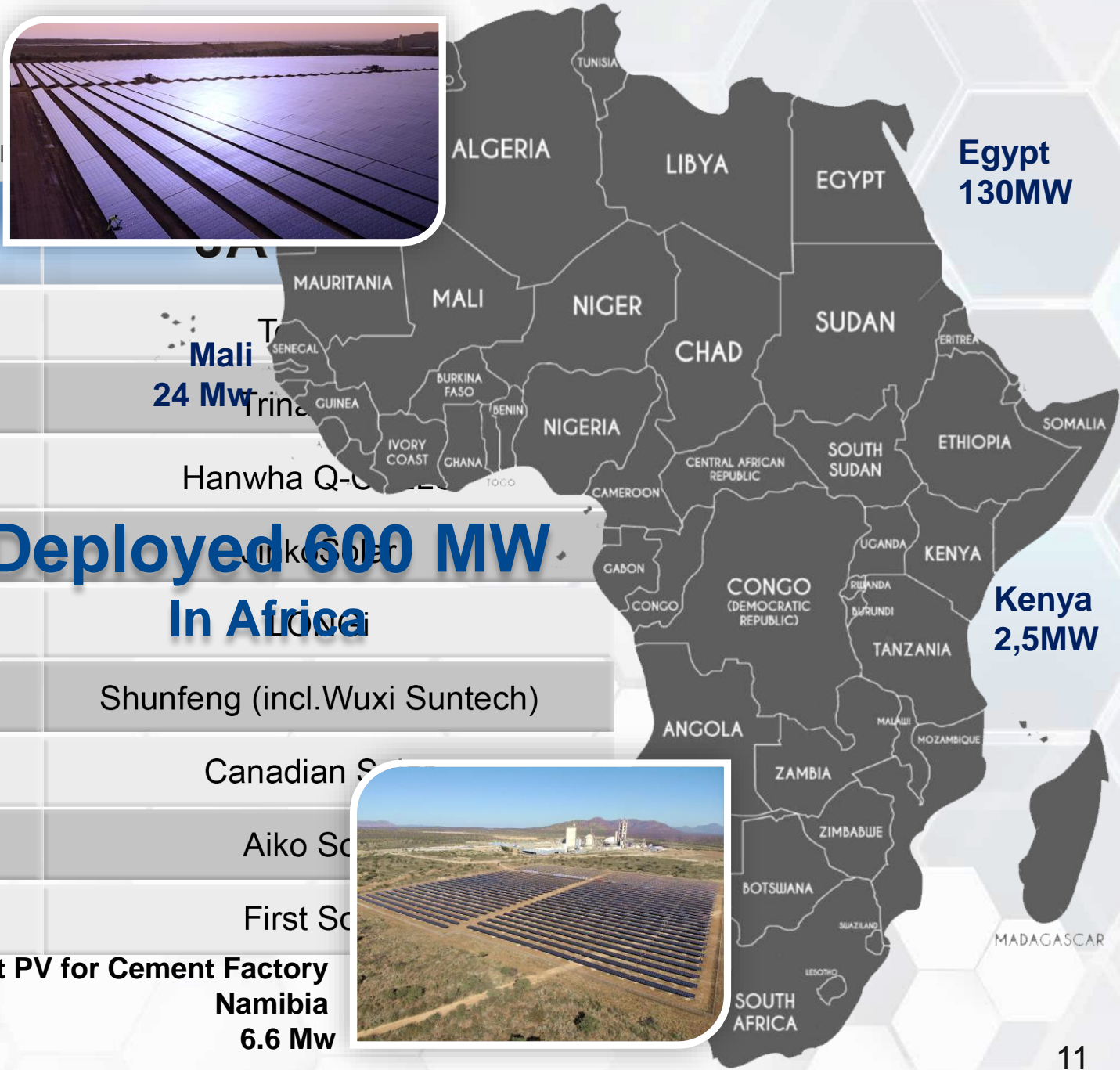
Light exhibits total internal reflection at the glass/air interface due to the difference, if refractive indices and the incidence angle.

**Top
Largest PV for Mines in Africa
Burkina Faso
Bankil**



1	JA Solar
2	Mali
3	24 Mw
4	Hanwha Q-Cells
5	Deployed 600 MW
6	In Africa
7	Shunfeng (incl. Wuxi Suntech)
8	Canadian Solar
9	Aiko Solar
10	First Solar

**Largest PV for Cement Factory
Namibia
6.6 Mw**





HISTORICAL SCORECARD

Consistent top performance in the PV Module Reliability Scorecard demonstrates a manufacturer's commitment to product quality. As new products are introduced and older models are retired, manufacturers must adhere to strict quality control standards to maintain high levels of reliability and performance of their products.

The Historical Scorecard below shows the 2019 Top Performers and their history of top performance in previous editions. Manufacturers are listed by the number of years they have been designated a Top Performer, in alphabetical order.



	2019	2018	2017	2016	2014
Jinko	●	●	●	●	●
Trina Solar	●	●	●	●	●
Hanwha Q CELLS	●	●	●	●	
JA Solar	●	●		●	●
REC Solar	●	●	●		
GCL					
LONGi	JA SOLAR			●	●
Phono Solar	Hanwha Q CELLS			●	●
Suntech					
Adani/Mundra	REC Solar			●	●
Seraphim	Jinko			●	●
Silfab					
Vikram Solar	Trina Solar			●	●
ZNShine	●			●	
Boviet	●				

THERMAL CYCLING
DAMP HEAT

DYNAMIC MECHANICAL LOAD SEQUENCE
POTENTIAL -INDUCED DEGRADATION



2019

Jinko	●
Trina Solar	●
Hanwha Q CELLS	●
JA Solar	●
REC Solar	●

JASOLAR

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**Thank you
for your attention!**

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