TIGER Neo III

The PV industry has never stoped its pursuit of higher energy efficiency, as TOPCon becoming dominant technology, Jinkosolar continue e bleeding edge to raise the bar of cell efficiency over 27%. Its latest Tiger Neo 3.0 claimed of 650-670Wp power output, 85+/- 5% Bifacility p coefficient, -0.35% linear degradation, 96.77% low irradiance performance (200W/m²), etc., provides chance of lowering the levelised cost o E) than traditional TOPCon and N-type BC.

This paper is purposed to compare the LCOE of Tiger Neo 3.0 and its N-type BC in different scenarios as follows, based in the supposition of Tiger Neo 3.0 is same with N-BC module,module information is listed in . We chose four project scenarios (two rooftop, two ut ur locations with typical climate features, irradiance levels and balance of system (BOS) cost levels.

Product Tẽpe	Tiger Neo 3.0	N-Type BC
/Šť óKł·fŦπł·dzΰù vdzł·\Ûəúẽ	132	132
Module Length (mm)	2382	2382
Module Width (mm)	1134	1134
Nominal Power (W)	670	670
a2Řdzfŝ 9ũ℗	24.8%	24.8%
Voc (V)	50.98V	50.12V
.ЛТł·ŎΛł·ΰΰẽ	85±5%	75±5%
tƶóŜ\Ûℓ$YĽJ℗ /2ŜŸÓ!Ŝyΰ	-0.26%/°C	-0.26%/°C
Low Irradiance Performance (200W/m²)	96.77%	94.28%
First-èear 5ŜƎ\Ûł·Řł·əƨy˝	1%	1%
Annual 5ŜƎ\Ûł·Řł·əƨy˝	0.35%	0.35%

Energy generation is simulated with the PVsyst software. The Tiger Neo 3.0 and N-type BC module PAN file is b d by Jinkosolar while the PAN files of N-type BC are based on a general industry-wide performance level.

We chose four typical locations, including Kagoshima (Japan), Berlin (Germany), Dubai (UAE), Qinghai (China) al average temperature are listed in .

[zÔł·əƨyâ	Kagoshima (Japan)	Berlin (Germany)	Dubai (UAE)	Qinghai (China)
Annual Average Irradiance	1387-1460kWh/m2	1100-1300kWh/m²		
Annual Average Temperature	18.8°C	10.1°C	27.5°C	6.1°C

The calculation for LCOE is the net present value of total life cycle costs of the project, d n's lifetime. The total life cycle costs can be disaggregated as initial investment, annual ial investment (US$/Wdc) is the sum of the BOS cost and the module price. Module price he same at each location.

The AC capacity of the utility-scale plant is designed to be 100MW, 1500V system vo m voltage, fixed mounted, 20% albedo in Qinghai . The system lifetime is 30 years.