World's largest solar plant takes Chinese conglomerate to top of table

A new company tops the list of utility-scale solar project developers <u>released today</u> by Wiki-Solar. China's State Power Investment Corporation (SPIC) rose to number one thanks to the 2.2 GW_{AC} project its subsidiary Huanghe Hydropower completed in Qinghai province last year (*more below*).

Other notable climbers are NextEra Energy, whose subsidiary Florida Power and Light has commissioned several large projects in its home state; and France's Engie with new plants in Europe, the Americas and Africa. "Established energy multinationals are now moving strongly into the solar market", says Wiki-Solar's Philip Wolfe, "breaking the monopoly which specialist solar companies like First Solar, juwi and the late SunEdison used to hold a decade ago."

		Cumulative to date		Change since end 2019		
Rank	Project developer	Plants	GWac	Plants	GWac	Rank
1	SPIC [CN] inc. Huanghe, Shanghai Electric & others	57	5.266	1	2.200	1
2	First Solar [US] inc. Solar Chile	74	5.129	7	0.681	13
3	NextEra Energy [US] inc. FPL, Gulf Power & others	76	4.749	27	2.033	2
4	Canadian Solar [CA] inc. Recurrent Energy	200	4.742	9	0.754	11
5	ENEL Green Power [IT] inc. Tradewind & others	59	3.628	4	0.557	17
6	Engie [FR] inc. SolaireDirect, CNR & others	172	3.129	39	0.912	4
7	ACME Solar [IN]	70	3.090	3	0.570	16
8	Adani Green Energy [IN] inc. Parampujya	48	3.036	8	0.835	8
9	SunEdison [US] (in insolvency) inc. Enfinity & others	127	2.943	4	0.130	
10	Cypress Creek Renewables [US] inc. FLS Energy	221	2.482	27	0.806	9
11	Azure Power [IN]	44	2.331	5	0.745	12
12	Électricité de France [FR] inc. EDF-EN & others	71	2.001	16	0.676	14
13	Tata Power [IN] inc. Welspun, Northwest & others	41	1.789	3	0.200	28
14	AES Corporation [US] inc. sPower, Main Street	90	1.786	16	0.478	20
15	Shell [NL] inc. Silicon Ranch, ESCO Pacific	37	1.767	12	0.777	10
16	Enerparc [DE] inc. Pays de Montmédy Solaire	214	1.761	48	0.500	19
17	BayWa r.e. [DE] inc. GroenLeven	100	1.654	38	0.919	3
18	juwi AG [DE]	95	1.651	7	0.227	27
19	SunPower Corporation [US]	46	1.583	4	0.476	21
20	Shunfeng [CN] inc. S.A.G. Solarstrom	9	1.561	0		
21	Softbank [JP] inc. SB Energy, SBG Cleantech	14	1.524	4	0.653	15
22	Lightsource BP [GB] (part owned by BP)	102	1.493	11	0.841	7
23	Neoen [FR] inc. Eight Rivers Energy	45	1.481	17	0.233	26
24	ReNew Power [IN]	18	1.436	3	0.515	18
25	Scatec ASA [NO]	27	1.422	3	0.270	25
26	ACS Cobra [ES] (part of ACS Group)	10	1.411	5	0.856	6
27	Trina Solar [CN]	9	1.369			
28	8minutenergy [US]	12	1.369	3	0.404	22
29	JinkoSolar [CN]	16	1.317	1	0.157	
30	Hanwha [KR] inc. Q-Cells, 174 Power & others	23	1.303	5	0.344	24
31	National Thermal Power Corporation [IN]	18	1.290	4	0.383	23
32	Iberdrola Renewables [ES] inc. Avangrid	13	1.279	4	0.865	5
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Wiki-Solar's database holds Project developers for 70.2% of active plants (25.9% by these 32 listed companies) so some participants may not be shown, and for others figures may be understated by af factor of 1.4 on average.

The top developers for utility-scale solar ranked by cumulative AC capacity installed



Continued/-

Top plant owners

Some project developers retain ownership of the projects, so many of the companies above appear too in the list of the top plant owners also <u>released today</u> (see below).

Additionally, other power producers and infrastructure funds buy plants from developers before or after construction. In the US these include Dominion, Global Infrastructure Partners, Con Ed, Duke Energy and D E Shaw Renewables (DESRI) all in the top 15. European investors on the list are France's Neoen and Sonnedix; and UK-based Actis, Lightsource BP, Foresight and NextEnergy.

"Our lists are compiled from the cumulative AC capacity of operational plants over 4MW_{AC}", says Wolfe, "so owners with older subsidy-backed assets will appear lower than they would, if ranked by value. Companies would also show higher figures if measured by MW_P and if smaller projects were included."

The world's largest single solar plant

With a capacity of 2.2GW_{AC} (3.1GW_{P}), the new plant in Qinghai's Gonghe County is the world's largest single solar installation. Covering over 52 square km, it was built by Huanghe Hydropower in just 10 months and connected in September 2020. The power generated in this remote part of the country is despatched via 1,500 km of 800-kV transmission lines to Beijing and Shanghai.



Satellite image of solar projects in eastern Gonghe County

The new plant is some 15km west of the Longyangxia project, also developed by SPIC. This was itself the world's largest project when first commissioned in 2013, taking over from another of their projects – a 200MW_P installation from 2011 in Golmud Solar Park (about 500 km further west). SPIC's reign was interrupted in 2019 when ADWEA's 938MW_{AC} project was commissioned in Abu Dhabi in 2019.

There are larger multi-phase or multiple owner 'solar parks', including Golmud Solar Park and Longyangxia itself – both of which have been extended over the years to about $3GW_{AC}$ – and Bhadla in India.

TEXT ENDS

Notes for editors:

[1] This release on the utility-scale solar market is available here: http://wiki-solar.org/library/public/210428 Gigaproject changes top utility-scale solar developers+owners.pdf



- [2] The top-list, with further details of the role of the project developer is shown on Wiki-Solar's website <u>here</u>; and equivalent details for plant owners/IPPs are given <u>here</u>.
- [3] Wiki-Solar defines 'utility-scale solar' as 4 MW_{AC} and above (≈5MW_P for PV; ≈ electricity for 1,500 households in Europe) see: <u>http://wiki-solar.org/data/glossary/utility-scale.html</u>.
- [4] *'Solar Photovoltaic Projects in the mainstream power market'* was <u>published</u> in 2012.
- [5] Figures are based on the AC export rating of operational plants. Projects under development are excluded until they have been commissioned.
 - Cumulative to date Change since end 2019 Rank Plant owner / IPP Plants GWac Plants GWac Rank SPIC [CN] inc. Huanghe, Pacific Hydro & others 53 4.946 1 2.200 1 1 NextEra Energy [US] inc. FPL, Gulf Power 58 3.496 5 0.352 12 2 3 ENEL Green Power [IT] inc. Tradewind Energy 45 3.148 2 0.975 2 4 Dominion Energy [US] 7 0.531 7 66 2.314 5 Azure Power [IN] 42 2.303 4 0.675 4 6 Panda Green Energy [CN] inc. United Photovoltaics 38 2.182 7 AES Corporation [US] inc. sPower, Main Street 86 2.078 14 0 478 8 8 GIP [US] inc. Vena, Vector Green & others 40 2.018 7 9 Électricité de France [FR] inc. EDF-EN 69 1.915 0.434 9 10 Adani Green Energy [IN] inc. Parampujya 29 1.911 2 0.075 11 Canadian Solar [CA] 87 1.826 1 0.100 12 Consolidated Edison Development [US] 30 1.823 1 0.010 13 Enerparc [DE] 205 1.803 32 0.401 10 14 59 1.777 5 0.609 5 Duke Energy [US] D. E. Shaw Renewable Investments [US] 15 37 1.703 6 0.570 6 16 Southern Power [US] 25 1.499 11 17 Neoen [FR] 43 1.498 0.372 11 18 Actis [GB] inc. Sprng Energy, Atlas Renewable 16 1.353 19 Trina Solar [CN] 5 1.282 20 Iberdrola Renewables [ES] inc. Avangrid 9 1.241 6 0.815 3 1.207 21 ACME Solar [IN] 33 22 Cypress Creek Renewables [US] inc. FLS Energy 138 1.196 1 0.200 17 23 Lightsource BP [GB] (part owned by BP) 151 1.164 3 0.122 18 24 Acciona Energía [ES] 18 1.046 2 0.077 Softbank [JP] inc. SB Energy, SBG Cleantech 8 1.044 0.342 13 25 1 26 Cubico Sustainable Investments [GB] 23 0.954 3 0.267 15 27 Greenko Energy [IN] inc. Orange Renewable 13 0.953 28 National Thermal Power Corporation [IN] 14 0.948 GCL-Poly Energy Holdings [HK] 29 26 0.931 0.086 30 Foresight Group [GB] inc. ForVEI 95 0.930 5 19 Scatec ASA [NO] 23 3 0.120 31 0.876 Tata Power [IN] inc. Welspun, Northwest & others 2 32 28 0.856 0.100 33 First Solar [US] inc. 8point3 Energy Partners 16 1 0.100 0.841 9 2 34 ACWA Power [SA] (part owned by Silk Road [CN]) 0.834 0.228 16 35 ACS Cobra [ES] (part of ACS Group) 6 0.825 1 0.075 56 0.822 0.275 36 Sonnedix [FR] (now part of JP Morgan) 6 14
- [6] The table of top owners/IPPs is shown below:

Wiki-Solar's database holds Plant owner / IPPs for 44.0% of active plants (20.5% by these 36 listed companies) so some participants may not be shown, and for others figures may be understated by af factor of 2.3 on average.

The top owners / independent power producers for utility-scale solar ranked by cumulative AC capacity installed

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