

Energy majors put the squeeze on renewables specialists Top-lists of utility-scale solar owners and developers

Established energy utilities are gaining a stranglehold on the ownership and development of large solar plants. Only six renewable specialists now make the top twenty in Wiki-Solar's latest league table of project developers. And only two appear in the top twenty utility-scale solar plant owners.

NextEra Energy now tops both lists. According to Wiki-Solar's Philip Wolfe, this is "thanks especially to the recent Intense 'solarization' of its subsidiary Florida Power & Light. Just six years ago NextEra was down at #6, but it has moved up one place each year since then."

Independent renewables developers are led by Canadian Solar and First Solar at #5&6, though the latter has now largely withdrawn from project development. India's ACME Solar follows at #9, with US-focused Cypress Creek at #14. Wiki-Solar counts Lightsource (#17) as a renewables company, though BP now has a major stake. Last of the six is the legacy of projects left by the now-defunct SunEdison.

Five other substantial renewables pure-plays make it into the top-30. China's JinkoSolar, and Europe's BayWa r.e, Neoen, FRV and X-Elio each have at least 2-GWac of cumulative capacity under their belts.

The owners list is dominated by established power companies. China's State Power Investment Corporation (SPIC) holds the #2 spot, with five other Chinese companies in the top 20. Europe is led by ENEL at #3, with EDF, Engie and Iberdrola all high on the list. India comes in with Adani at #4 and NTPC and Azure are also listed. Representing the USA alongside NextEra are utilities AES, Dominion and Duke Energy.

"Utility-scale solar projects are getting ever larger, with the biggest now measured in gigawatts", says Wolfe. "Few but the major multinationals have the financial muscle to take on projects at that scale, so we expect their dominance to continue."

The only renewables companies in the top twenty IPPs/owners are JinkoSolar and Lightsource BP. Three infrastructure investors also feature, led by Global Infrastructure Partners at #19, with D E Shaw (DESRI) and Warren Buffett's Berkshire Hathaway lower down.

T E X T E N D S

Notes for editors:

- [1] The lists of top developers and owners are included on the following pages.
- [2] Wiki-Solar defines 'utility-scale solar' as 4 MW_{AC} and above ($\approx 5\text{MW}_P$ for PV; \approx electricity for 1,500 households in Europe) see: <http://wiki-solar.org/data/glossary/utility-scale.html>.
- [3] Wiki-Solar is the leading authority on utility-scale solar with a database covering over 20,000 utility-scale solar projects, of which about three-quarters are operational. All figures in this release are based on the AC export rating of operational plants. Projects under development are not included until they have been commissioned.

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Wiki-Solar

Top project developers for utility-scale (4-MWac+) solar projects cumulative to Q2-2023

Rank	Project developer [a,c]	Operating		Change since 01-Jan-22			
		Plants	GWac [b]	Plants	GWac [b]	Rank	
1	NextEra Energy [US] (inc. Florida Power & Light, Gulf Power and others)	144	10.5	38	3.4	1	
2	SPIC (State Power Investment Corporation) [CN] (inc. Huanghe Hydropower Developments, Shanghai Electric and others)	130	9.3	3	0.8	30	
3	Adani Green Energy [IN] (inc. SB Energy, Parampujya Solar Energy)	67	6.7	5	1.7	7	
4	ENEL [IT] (inc. ENEL Green Power, Codensa & others)	90	6.7	24	2.1	2	
5	Canadian Solar [CA] (inc. Recurrent Energy)	231	6.5	15	1.4	10	
6	First Solar [US]	78	5.4	4	0.1	49	
7	Engie [FR] (inc. SolaireDirect, SoCore Energy & others)	220	4.6	28	0.7	31	
8	AES Clean Energy [US] (inc. Main Street, sPower)	154	3.9	36	1.4	12	
9	ACME Solar [IN]	69	3.5	4	0.7	32	
10	Électricité de France [FR] (inc. EDF Energies Nouvelles, Photon Technologies [FR] and others)	110	3.5	29	1.2	19	
11	Tata Power [IN] (inc. Welspun Renewables, Northwest Energy and others)	50	3.2	12	1.4	9	
12	China Datang Corporation [CN]	55	3.2	2	1.0	23	
13	Iberdrola Renewables [ES] (part of Iberdrola SA) (inc. Infigen, Avangrid Renewables)	38	3.2	11	0.9	25	
14	Cypress Creek Renewables [US] (acquired by EQT Infrastructure [SE]) (inc. FLS Energy)	243	3.2	19	0.9	27	
15	Shell [NL] (inc. Silicon Ranch, Savion and others)	65	3.1	15	1.2	20	
16	ACWA Power [SA] (49% owned by Silk Road Fund [CN])	13	3.1	3	1.7	4	
17	Lightsource BP [GB] (part owned by BP)	130	3.1	20	1.0	24	
18	SunEdison [US] (in insolvency) (inc. Enfinity, First Wind and others)	131	3.0	2	0.2	46	
19	China Huaneng Group [CN]	60	3.0	4	0.5	38	
20	CGN Solar Energy Development [CN] (part of CGNPG)	44	2.9	1	0.1	52	
21	Azure Power [IN]	48	2.9	4	0.8	28	
22	ReNew Power [IN]	26	2.7	5	1.0	22	
23	JinkoSolar [CN]	28	2.7	2	0.5	36	
24	Total [FR] (inc. Quadran Energie, Total Solar and others)	92	2.6	17	0.7	33	
25	China Energy Conservation and Environmental Protection Group [CN] (inc. CECEP Solar Company)	70	2.5	1	0.0	53	
26	BayWa r.e. [DE] (inc. GroenLeven)	128	2.5	22	0.5	35	
27	Avaada Power [IN] (inc. Giriraj Enterprises)	19	2.2	5	1.2	21	
28	Neoen [FR] (inc. Eight Rivers Energy)	71	2.1	20	0.3	41	
29	National Thermal Power Corporation [IN]	27	2.0	7	0.9	26	
30	FRV (Fotowatio & Renewable Ventures) [NL] (now part of ALJ) (inc. MMA Renewable Ventures)	33	2.0	3	0.5	34	
31	X-Elio [ES] (part owned by KKR [US] 50% with Brookfield [CA]) (inc. Gestamp)	64	2.0	7	0.5	39	
fTopPC_5105		Totals listed above:		2,728	118.0	368	29.6

[a] These top 31 project developers account for 118-GWac, ~25% of the world total.

[b] GWac total for projects over 4MWac; GWp figures typically ~25% higher

[c] Wiki-Solar database holds project developers for ~86% of projects so there will be some omissions from this list and figures for others may be understated by a factor of 1.2 on average



Wiki-Solar

Top plant owner / IPPs for utility-scale (4-MWac+) solar projects cumulative to Q2-2023

Rank	Plant owner / IPP [a,c]	Operating		Change since 01-Jan-22			
		Plants	GWac [b]	Plants	GWac [b]	Rank	
1	NextEra Energy [US] (inc. Florida Power & Light, Gulf Power and others)	119	8.9	16	2.0	2	
2	SPIC (State Power Investment Corporation) [CN] (inc. Huanghe Hydropower Developments, Shanghai Electric and others)	177	8.5	2	0.1	39	
3	ENEL [IT] (inc. ENEL Green Power, Tradewind Energy & others)	75	6.4	18	2.4	1	
4	Adani Green Energy [IN] (inc. SB Energy, Parampujya Solar Energy)	68	5.3	2	0.3	31	
5	China Huaneng Group [CN]	123	4.7	4	0.3	25	
6	AES Clean Energy [US] (inc. Main Street, sPower)	173	4.4	37	1.3	7	
7	China Three Gorges New Energy [CN]	67	3.7	0	0.0		
8	Dominion Energy [US]	83	3.4	3	0.2	33	
9	China Energy Conservation and Environmental Protection Group [CN] (inc. CECEP Solar Company)	95	3.3	2	0.0	44	
10	JinkoSolar [CN]	55	3.3	2	0.5	17	
11	Duke Energy [US]	79	3.2	10	0.9	12	
12	Électricité de France [FR] (inc. EDF Energies Nouvelles, EDF Renewable Energy)	81	3.2	9	1.0	10	
13	National Thermal Power Corporation [IN]	31	3.1	10	1.6	4	
14	CGN Solar Energy Development [CN] (part of CGNPG)	80	3.1	1	0.1	41	
15	ACWA Power [SA] (49% owned by Silk Road Fund [CN])	17	3.1	3	1.5	5	
16	Engie [FR] (inc. SolaireDirect, SoCore Energy & others)	62	2.9	4	0.4	18	
17	Azure Power [IN]	47	2.9	3	0.8	13	
18	Lightsource BP [GB] (part owned by BP)	168	2.9	7	0.8	16	
19	Global Infrastructure Partners [US] (inc. Vena Energy, Energon Soleq)	53	2.8	1	0.0	46	
20	Iberdrola Renewables [ES] (part of Iberdrola SA) (inc. Avangrid Renewables)	20	2.7	6	0.8	14	
21	D. E. Shaw Renewable Investments [US]	45	2.4	5	0.4	21	
22	Jingneng [CN] (inc. Beijing Jingneng Clean Energy, Qinghai Jingneng Construction Investment)	46	2.4	0	0.0		
23	ACME Solar [IN]	43	2.4	4	0.8	15	
24	China Datang Corporation [CN]	60	2.3	2	0.1	40	
25	ReNew Power [IN]	35	2.2	1	0.2	35	
26	Enerparc [DE]	228	2.2	19	0.2	32	
27	Tata Power [IN] (inc. Welspun Renewables, Northwest Energy and others)	33	2.1	7	0.9	11	
28	Neoen [FR]	73	2.1	23	0.4	19	
29	Canadian Solar [CA] (inc. Recurrent Energy)	88	2.0	4	0.3	27	
30	Berkshire Hathaway Energy [US] (inc. BHE Renewables, NV Energy)	11	2.0	2	0.3	29	
fTopPC_5101		Totals listed above:		2,335	103.9	207	18.7

[a] These top 30 plant owner / IPPs account for 104-GWac, ~22% of the world total.

[b] GWac total for projects over 4MWac; GWp figures typically ~25% higher

[c] Wiki-Solar database holds plant owner / IPPs for ~75% of projects so there will be some omissions from this list and figures for others may be understated by a factor of 1.3 on average