

INVESTORS
VS.
THE PARIS CLIMATE
AGREEMENT





Flooding in Thailand

Who is still Investing in Coal Plant Development?

Newspaper headlines such as “BlackRock Issues Climate Change Warning” or “Investors Call for Climate Risk Disclosure” are now commonplace.^{1 2} And associations such as the *Institutional Investors Group on Climate Change* representing assets of over 21 trillion € continuously push for governments to speed up the transition to a low carbon economy. Investors’ concerns are, however, almost exclusively focused on the risks climate change poses for their portfolios. But the question they need to be asking is: Which risks do their portfolios pose for our climate?

1 „BlackRock Issues Climate Change Warning“, Financial Times, Sept. 6, 2016

2 „Investors Call for Climate Risk Disclosure“, The Herald, Dec. 15, 2016

Meeting the goals set out in the Paris Climate Agreement is a race against time. In order to keep the 1.5°C target within reach, global CO₂ emissions must begin declining by 2020 and drop by 50% over the following decade.³ Whether we succeed or fail in this race will largely depend on how quickly we manage to phase out the over 1,964,000 MW of coal-fired power stations currently on line. To stay within the limits laid out in the Paris Climate Agreement, climate scientists calculate that emissions from the world's coal plant fleet must be reduced by at least 30% by 2025.⁴

Coal Expansion Instead of Coal Exit

While most large institutional investors acknowledge the urgency of decarbonizing energy production, they continue to invest in companies which are planning a massive expansion of the global coal plant fleet. Currently, over 1,600 new coal plants and units are planned or under development in 62 countries. If built, these new plants would increase the world's installed coal capacity by over 42%.⁵ As Bill Hare, CEO of Climate Analytics and lead author of the 4th IPCC Assessment Report, says:

“Building these coal plants would lead to a failure to reach the Paris climate goals and put us on a fast-track towards a 4°C temperature rise.”

This briefing paper summarizes research Urgewald and its partners commissioned to determine which institutional investors are backing the world's top 120 coal plant developers. These 120 companies are responsible for 2/3 of the new coal-fired power stations planned around the globe.⁶ Collectively, they plan to build over 550,000 MW of new coal plants – this is equal to the combined coal fleets of India, the United States and Germany. Investments in coal plant developers are investments against the Paris Climate Agreement.

US\$ 140 billion that Could Make Paris Fail

All in all, our research identified 1,455 institutional investors with a total investment of US\$ 139,6 billion in coal plant developers.⁷ These are investments held by pension funds, insurance companies, mutual funds, asset management companies, commercial banks, sovereign wealth funds and other types of institutional investors. The top 7 institutions in our ranking account for almost 1/3 of the total value institutional investors hold in top coal plant developers.

3 „2020 – The Climate Turning Point“, Mission 2020, 2017

4 „The 10 Most Important Short-term Steps to Limit Warming to 1.5°C“, Climate Action Tracker, 2016

5 <https://coalexit.org/biggest-coal-plant-developers-worldwide>

6 For a full list of these companies, see: <https://coalexit.org/database>

7 Out of this total, US\$ 112 billion are in shares and US\$ 28 billion in bonds.



First and foremost is the US-based investment giant *BlackRock*, which holds shares and bonds of 52 coal plant developers with a total investment value of US\$ 11.5 billion. BlackRock is the world's largest asset manager and according to its webpage, its clients are "governments, companies, foundations and millions of individuals saving for retirement, their children's education and a better life."⁸ What its clients don't realize is that BlackRock is sinking their money into companies whose coal power expansion plans threaten to make everyone's life on this planet much, much worse.

BlackRock is also a perfect showcase for investors' unwillingness to connect the dots. *BlackRock* is a member of the *Institutional Investors Group on Climate Change* (IIGCC) and calls on companies to disclose their climate risks. *BlackRock* warns that "investors can no longer ignore climate change", and its position papers show that it is fully aware that coal reserves must stay in the ground. Yet *BlackRock* is incapable of acknowledging the inconvenient truth that its own investment choices are helping to accelerate climate change.



The world's second largest investor in coal plant developers is Japan's *Government Pension Investment Fund* (GPIF), which manages the pensions of Japanese public sector employees. It is the world's largest sovereign pension fund and holds investments of US\$ 7 billion in the bonds and shares of 32 coal plant developers.



Number 3 is the US investment manager *Vanguard*, which holds investments of US\$ 5.7 billion in the bonds and shares of 53 coal plant developers. *Vanguard* is a client-owned mutual fund company and the world's second largest asset manager.



Number 4 is Malaysia's sovereign wealth fund *Kazanah Nasional Berhad*. It holds investments of US\$ 5.5 in shares of the utility TNB which is building coal power stations in Bangladesh, Indonesia and Malaysia.



The number 5 in our ranking is the *National Pension Service of South Korea*, the world's 3rd largest pension fund. It holds shares of US\$ 4.2 billion in 3 coal plant developers.



Number 6 is the *Life Insurance Corporation of India*, a state-owned insurance and investment company, which holds shares of US\$ 3.8 billion in 6 coal plant developers.

8 <https://www.blackrock.com/corporate/en-in/about-us>



Number 7 is the California-based *Capital Group*, one of the world's oldest investment management companies. It holds bonds and shares of US\$ 3.4 billion in 13 coal plant developers.

The following chart shows the top 30 institutional investors in coal plant developers. They account for 55% of all institutional investments that were identified in these companies.

Dirty Thirty

Top institutions investing in bonds and shares of coal companies (in USD mln)

Rank	Investor	Country	Shareholding	Bond-holding	Total	Share of Investment in National Coal Companies (%)
1	BlackRock	United States	10216	1291	11506	9%
2	Government Pension Investment Fund	Japan	4767	2237	7004	83%
3	Vanguard	United States	5570	113	5683	15%
4	Khazanah Nasional	Malaysia	5458		5458	100%
5	National Pension Service	South Korea	4172		4172	100%
6	Life Insurance Corporation of India	India	3846		3846	100%
7	Capital Group	United States	1407	2021	3428	33%
8	Butterfield Group	Bermuda	3292		3292	0%
9	Employees Provident Fund	Malaysia	2360		2360	100%
10	Mizuho Financial	Japan	2080	11	2091	99%
11	Yayasan Pelaburan Bumiputra	Malaysia	1977		1977	100%
12	Dimensional Fund Advisors	United States	1511	293	1804	2%
13	JPMorgan Chase	United States	1473	295	1768	14%
14	Mitsubishi UFJ Financial	Japan	1671	42	1713	38%
15	Fidelity Investments	United States	1089	583	1672	22%
16	Franklin Resources	United States	1138	531	1669	18%
17	Citigroup	United States	1513		1513	0%
18	State Street	United States	1155	208	1362	34%
19	Prudential (UK)	United Kingdom	995	348	1343	0%
20	Nippon Life Insurance	Japan	1313	1	1313	99%
21	Wellington Management	United States	377	914	1291	29%
22	Norwegian Government Pension Fund - Global	Norway	1284		1284	0%
23	Allianz	Germany	321	958	1279	6%
24	T. Rowe Price	United States	783	473	1256	19%
25	ICICI Bank	India	796	432	1229	100%
26	TIAA	United States	539	676	1215	18%
27	Sumitomo Mitsui Trust	Japan	1059	15	1074	97%
28	KWAP Retirement Fund	Malaysia	1049		1049	100%
29	National Social Security Fund	China	1007		1007	100%
30	Central Huijin Asset Management	China	930		930	100%
	Total		65146	11442	76587	

The top 30 investors in coal power expansion companies fall into two distinct groups. The 12 US investors and investors from Germany, Norway and the UK hold stakes in coal plant developers all around the world, while investors from Japan, Malaysia, India, China and South Korea are mainly invested in their own “national champions” among the coal plant developers. It is important to note that these “national champions” are, however, building many of their coal plants abroad. A typical example is Japan’s Marubeni, which is planning to build coal-fired power stations in Botswana, Egypt, Indonesia, Japan, Mongolia, Myanmar, South Africa, Vietnam and the Philippines. Marubeni’s two largest institutional investors are the Japanese Government Pension Investment Fund and BlackRock. Both the global investment strategies of Western investors and the more nationally focused investments of Asian investors thus end up fueling the global coal plant pipeline.

Ranking of Investor Countries

While most of the top banks underwriting share and bond issues of coal plant developers are Chinese (See our sister publication “[Banks vs the Paris Agreement](#)”), the picture from the investor side is quite different. The country whose institutional investors hold the largest stakes in coal plant developers is the United States. All in all, US investors account for 37% of total institutional investments in the bonds and shares of coal plant developers. The second most important country is Japan, whose investors account for 13% of the investments identified in our research. The following chart shows the 15 countries, whose institutional investors hold over US\$ 1 billion in shares and bonds of coal plant developers.

Rank	Country	Shareholding	Bondholding	Grand Total	Share in %
1	United States	37584	14110	51694	37
2	Japan	15352	2445	17796	13
3	Malaysia	11610		11610	8
4	China	9835	257	10092	7
5	India	5487	2922	8408	6
6	United Kingdom	5423	1873	7296	5
7	South Korea	5381	3	5384	4
8	Canada	2971	1463	4434	3
9	Bermuda	3351	32	3383	3
10	Germany	1462	1562	3024	2
11	France	1443	1315	2758	2
12	Switzerland	1858	724	2582	2
13	Netherlands	1985	245	2230	2
14	Australia	1251	272	1523	1
15	Norway	1341	26	1367	1
	Other	5176	842	6018	4
	Total	111508	28092	139600	100

One of the most positive outcomes of the 2017 Climate Summit in Bonn was the launch of the *Powering Past Coal Alliance*, led by Canada and the UK. The Alliance’s 19 member countries commit themselves to a moratorium for new coal plants and a rapid national phase-out of exis-

ting coal plants.⁹ In a press release, civil society organizations from throughout Southeast Asia applaud this move, but urge members of the Alliance to also curb public and private financial flows from their countries to the global coal plant pipeline.¹⁰ The validity of this demand is underlined by the fact that 5 of the “Powering Past Coal” member countries (Canada, France, the Netherlands, Switzerland and the UK) are among the 15 nations, whose institutional investors hold the largest stakes in coal plant developers.

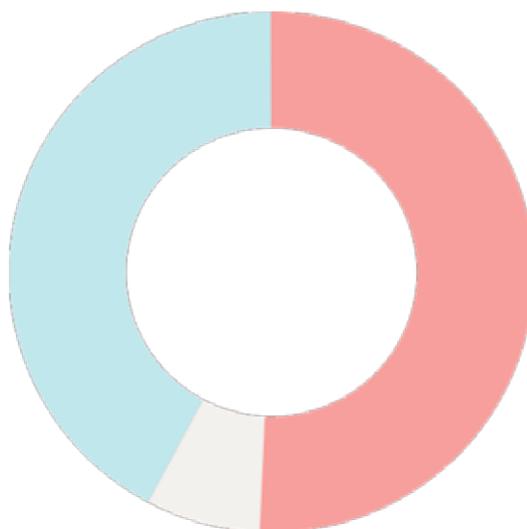
Standard Divestment and Decarbonization Approaches Fall Short

In June 2015, the Norwegian Parliament announced that it was “pulling the *Norwegian Government Pension Fund Global* out of coal”¹¹ and in November 2015, Germany’s insurance giant *Allianz* announced that it will “phase out coal”.¹² Yet both institutions are still among the top 30 investors in coal plant developers. How so?

Both the *Norwegian Government Pension Fund Global* (GPF) and *Allianz* only divest companies that base over 30% of their power generation or revenues on coal.¹³ While this approach prevents them from investing in coal-based utilities such as India’s National Thermal Power Corporation (94% coal share of power production) or South Korea’s *KEPCO* (39% coal share of power production), a 30% coal share of power production threshold only captures about half of the 120 top coal plant developers.

Coal Share of Power Production (cspp) of the 120 Top Global Coal Plant Developers

- 62 companies above 30% (cspp)
- 50 companies below 30% (cspp)
- 8 companies, information not available



9 <http://www.ym.fi/download/noname/%7B2ECC2AA5-F5D9-4551-BEC1-63C29DDB57A4%7D/132328>

10 “Southeast Asian CSOs and Movements on the UK-Canada Powering Past Coal Alliance”, Nov. 16, 2017

11 <http://newsroom.unfccc.int/financial-flows/norway-decides-to-pull-its-pension-fund-out-of-coal/>

12 https://www.allianz.com/en/press/news/financials/stakes_investments/151123_allianz-is-phasing-out-coal/

13 Allianz applies this threshold to its own investments, but not to the assets it manages for third parties. Many coal plant developers in Allianz’s portfolio are thus assets it holds for third parties.

Investors tend to assume that the key drivers of new coal projects are always the “old” coal-based utilities. But the top 120 coal plant developers are, in fact, a diverse group. They include companies like China’s *Harbin Electric* and *Dongfang Electric*, whose major business is manufacturing boilers and turbines for new coal plants. In some cases, these equipment providers, however, plan to own and operate coal plants, especially in frontier countries like Egypt or Pakistan that have little or no coal-fired capacity up to now. Some coal plant developers are power companies, but have only recently begun moving into coal. An example is *ACWA Power* from Saudi Arabia, which has a history of developing gas and renewables projects, but has now become the world’s 25th largest coal plant developer with plans to build coal power stations in Egypt, Mozambique, South Africa, Turkey, the United Arab Emirates and Vietnam.¹⁴ Some coal plant developers are huge diversified companies like the Japanese Trading House *Marubeni*, others are oil companies like *PetroVietnam* or steel companies like China’s *Jiuquan Iron & Steel Group*, which wants to build Jamaica’s first coal-fired power plant, thus increasing the country’s CO₂ emissions by 80%.¹⁵

The 30% criteria adopted by *Allianz* and the Norwegian *GPF* do not prevent these institutions from investing in coal plant developers. The same is true for the decarbonization approach taken by investors such as the Dutch pension fund *ABP*. *ABP* has committed to reduce the CO₂ footprint of its portfolio by 25% and to massively increase its investments in renewable energy, but it is still the world’s 34th largest investor in coal plant developers.¹⁶

“Percentage criteria only capture the status quo of a company’s dependency on coal, but do not address the new coal projects companies have in their pipeline,”

says Heffa Schuecking, director of *Urgewald*. In November 2017, *Urgewald* and partners therefore launched the *Global Coal Exit List*, a forward-looking database that reveals the names of 282 companies planning new coal power projects.

Today’s Investments Form Tomorrow’s World

“Responsible investment” has become a buzzword, but most large institutional investors still fail to heed the warning climate scientists keep on repeating: There is no space for new coal. It does not require a giant leap of logic to understand this also means: There is no space for investments in new coal.

Investors self-perception is that they are already mitigating climate change by buying green bonds, increasing investments in renewables, offering low-carbon funds or engaging with

14 ACWA Power has installed around 2,200 MW in renewables, but plans to build coal plants totaling over 6,000 MW.

15 <http://jamaica-gleaner.com/article/lead-stories/20160825/coal-plant-will-increase-jamaicas-co2-emission-79-82-cent-us-coal>

16 ABP has investments of US\$ 884 million in 30 coal plant developers.

companies to improve their climate risk reporting. These are all laudable steps, but climate risk reports are no guarantee for effective actions to reduce emissions. And green bonds do not undo the damage of investing billions of dollars in companies whose business plans are a blueprint for overshooting the Paris goals and triggering catastrophic climate change.



Protest in Bangladesh against NTPC coal plant Rampal

For an institution like *BlackRock*, the US\$ 11.5 billion it has invested in 52 top coal plant developers is tiny, and in fact represents less than 0.2% of the total assets *BlackRock* manages.¹⁷ Yet collectively, these 52 companies account for coal power expansion plans of 340,622 MW – this is equal to the entire coal fleets of India, Japan, South Korea and Russia combined. And in many cases, *BlackRock's* stakes make it a significant shareholder in these companies. “The hypocrisy of warning against climate change while simultaneously delivering it through massive investments in coal plant developers is shameful,” comments Schuecking.

“It is a clear case of BlackRock vs. Paris and we have to make sure Paris wins.”

The first large investor to acknowledge that investments in coal plant developers are at odds with science-based climate targets is the Norwegian insurer and pension provider, *Storebrand*, which manages a portfolio of almost US\$ 70 billion. In 2013, *Storebrand* was already a first mover on coal divestment and began excluding companies on the basis of their coal share of revenue. During COP23, the CEO of *Storebrand* Asset Management, Jan Erik Saugestad announced: “With a view to the UN climate negotiations in Bonn, we have decided to act on what we see as our responsibility: We are taking a more confrontational course towards the coal industry and pulling our money out of 10 companies planning large coal plants. We call on all investors to follow suit and thereby accelerate an exit from the coal industry. This is meant as a warning to coal plant developers: Companies that build new plants will have to forgo our capital.”¹⁸

17 According to its 3rd Quarter Report 2017, *BlackRock* currently manages assets of US\$ 5.98 trillion.

18 Own translation. Quoted from „Storebrand hofft auf Dominoeffekt“, *Börsenzeitung*, Nov. 18, 2017. The 10 companies *Storebrand* dropped were: Eskom Holdings, PGE, Uniper SE, Genting International, Tenaga Nasional Berhad, Kyushu Electric Power, Origin Energy, EDP Energias do Brasil, RWE AG and Power Assets Holdings Ltd.

Storebrand hopes for a “domino effect”, but hope is not enough. Today’s investments form tomorrow’s world and we must act now to ensure that investors like *BlackRock*, *Vanguard* and the *Japanese Government Pension Investment Fund* do not propel us into a future where the Paris climate goals are no longer within reach.

Note on Our Research

The data for this briefing was compiled by the research consultancy *Profundo*. The research focused on institutional investors and does not cover shares and bonds held by governments, companies or private individuals. In order to identify the institutional bond- and shareholders of the 120 top coal plant developers, *Profundo* used financial databases such as *Thomson EIKON* and *Bloomberg*. The gathered data is, however, far from complete as many pension funds do not report on their holdings, but also because financial databases fail to reflect all available information. While shareholding data is generally more complete, coverage of bondholders is mostly very low. It is therefore likely that institutional investments in the bonds and shares of coal plant developers are in fact, significantly higher than the US\$ 139.6 billion that were identified.

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Appendix

Top 100 Institutional Investors (in USD mln)

Rank	Investor	Country	Shareholding	Bondholding	Total Value
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25	ICICI Bank	India	796	432	1229
26	TIAA	United States	539	676	1215
27	Sumitomo Mitsui Trust	Japan	1059	15	1074
28	KWAP Retirement Fund	Malaysia	1049		1049
29	National Social Security Fund	China	1007		1007
30	Central Huijin Asset Management	China	930		930
31	Sun Life Financial	Canada	483	412	895
32	AXA	France	450	445	894
33	UBS	Switzerland	630	264	894
34	APG Group	Netherlands	884		884
35	Commonwealth Bank of Australia	Australia	873	2	875
36	Aditya Birla Group	India	85	767	851
37	Bank of New York Mellon	United States	776	73	849
38	Nomura	Japan	794	46	840
39	Invesco	United States	639	174	813
40	Standard Life Aberdeen	United Kingdom	469	337	807

Top 100 Institutional Investors (in USD mln)

Rank	Investor	Country	Shareholding	Bondholding	Total Value
41	China Life Insurance	China	800		800
42	Meiji Yasuda Life Insurance	Japan	788	8	796
43	Afro Asia Trade & Investments	Mauritius	767		767
44	Prudential Financial (US)	United States	195	533	727
45	SailingStone Capital Partners	United States	715		715
46	Pictet	Switzerland	633	75	708
47	NN Group	Netherlands	563	144	707
48	Deutsche Bank	Germany	413	277	690
49	HDFC Bank	India		654	654
50	CITIC	China	650		650
51	Morgan Stanley	United States	476	172	647
52	Crédit Agricole	France	253	379	632
53	Power Financial Corporation	Canada	424	208	631
54	Aviva	United Kingdom	528	103	631
55	HSBC	United Kingdom	552	77	629
56	Orix Corporation	Japan	531	76	606
57	Silchester International Investors	United Kingdom	606		606
58	Lucion Group	China	586		586
59	Principal Financial Group	United States	391	158	548
60	Eaton Vance	United States	301	245	545
61	Legg Mason	United States	175	335	510
62	Industrial and Commercial Bank of China	China	480		480
63	Fidelity International	United Kingdom	222	255	476
64	Goldman Sachs	United States	257	216	474
65	Ameriprise Financial	United States	302	166	468
66	PZU Group	Poland	468		468
67	China Southern Fund Management	China	460	2	462
68	Sumitomo Mitsui Financial Group	Japan	449	3	452
69	Florida State Board of Administration	United States	449		449
70	MetLife	United States	13	425	438
71	Caisse de dépôt et placement du Québec	Canada	433		433
72	BNP Paribas	France	382	49	431
73	Public Mutual	Malaysia	427		427
74	Schroders	United Kingdom	171	249	420
75	American Family	United States		416	416
76	Nordea	Sweden	363	47	410
77	China Chengtong Holdings Group	China	402		402
78	Reliance Group	India	157	244	402
79	Old Mutual	United Kingdom	393	5	398
80	China Construction Bank	China	393		393
81	Zhongyuan Equity Investment Management	China	388		388

Top 100 Institutional Investors (in USD mln)

Rank	Investor	Country	Shareholding	Bondholding	Total Value
82	Elara Capital	United Kingdom	384		384
83	Geode Capital Management	United States	384	0	384
84	Daiwa Securities	Japan	365	2	367
85	BPCE Group	France	72	295	366
86	Royal Bank of Canada	Canada	141	215	356
87	Northern Trust	United States	353		353
88	E Fund Management	China	346	3	349
89	Neuberger Berman	United States	64	282	345
90	American International Group (AIG)	United States	14	327	341
91	Value Partners	China	340		340
92	New York Life Insurance	United States	104	213	317
93	Kochi Shinkin Bank	Japan	312		312
94	PGGM	Netherlands	310		310
95	Charles Schwab	United States	303		303
96	HSZ Group	Hong Kong	295		295
97	Credit Suisse	Switzerland	217	75	291
98	Manulife Financial	Canada	85	197	282
99	State Bank of India	India	153	128	282
100	Matthews International Capital Management	United States	281		281
	Other		18802	6875	25678
	Total		111508	28092	139600

Top 120 Coal Plant Developers

Company	Country of Headquarters	Expansion Plans Coal Power (Pro-rated) in MW	Expansion Plans Coal Power (Total) in MW
24 Hour Company Limited	Myanmar	2550	2800
Aboitiz Power Corporation	Philippines	1344	2696
ACWA Power	Saudi Arabia	6070	12700
Adani Group	India	6940	6940
AES Corporation	USA	818	1655
African Energy Resources	Guernsey	1750	2050
Al Nowais Investments LLC	United Arab Emirates	2640	2640
Andhra Pradesh Power Generation Corporation (APGENCO)	India	10200	10200
Anhui Province Energy Group Co Ltd (Wenergy Group)	China	3330	4340
Ayala Corporation	Philippines	985	1876
Bangladesh Power Development Board	Bangladesh	3355	6875
Beijing Energy Investment Holding	China	3420	3420
Bhimasena Power Indo (BPI) (Joint venture)	Indonesia	1900	1900
Bihar State Power Holding Co Ltd (BSPHCL)	India	6878	7995
CDEEE	Dominican Republic	770	770
Centum Investment	Kenya	525	1050
CEZ Group	Czech Republic	1410	1410
China Africa Sunlight Energy (Joint venture)	Zimbabwe	600	600
China Datang Corporation	China	28945	30790
China Energy Engineering Corporation	China	2200	3310
China Guodian Corporation	China	17250	19570
China Huadian Corporation	China	25810	27550
China Huaneng Group	China	20750	24450
China Resources Power Holdings Co Ltd	China	10700	13340
Chongqing Energy Investment Group	China	3240	5220
Chubu Electric Power Co Inc	Japan	2378	4020
Chugoku Electric Power Company, inc.	Japan	1801	4224
CIIDG Erdos Hongjun Electric Power Co Ltd (Joint venture)	China	675	675
CLP Holdings Ltd	China (Hong Kong)	3670	6000
Coal Power Generation Company Bangladesh	Bangladesh	1200	1200
Colenso Power	South Africa	525	1050
Daewoo Engineering & Construction (E&C) Co Ltd	South Korea	3610	4620
Dongfang Electric Corporation Ltd	China	2055	4110
Electricity Generating Authority of Thailand (EGAT)	Thailand	8450	10050
Elektrik Üretim A.Ş. Genel Müdürlüğü (EÜAŞ)	Turkey	5800	5800
Elektroprivreda BIH (EPBIH)	Bosnia and Herzegovina	1650	1650
Elektroprivreda Srbije (EPS)	Serbia	1450	1450
EMCO	India	600	600
Enea SA	Poland	1575	2075
Energa SA	Poland	500	1000

Company	Country of Headquarters	Expansion Plans Coal Power (Prorated) in MW	Expansion Plans Coal Power (Total) in MW
Engro Powergen Limited	Pakistan	660	660
Eren Holding	Turkey	700	700
Eskom Holdings SOC Ltd	South Africa	9440	9440
Essar Energy Ltd	Mauritius	2580	2580
Eta-Zuma Group	Nigeria	1200	1200
First Quantum Minerals	Canada	620	920
Harbin Electric Corp	China	1975	3950
Hattat Holding	Turkey	3500	3500
IL&FS Energy Development Company Limited (IEDCL)	India	3960	3960
Inter RAO UES	Russia	4250	8500
Intra Energy Corporation Ltd	Australia	335	470
J-POWER (Electric Power Development Co., Ltd.)	Japan	3158	4550
Jamshoro Power Company	Pakistan	1320	1320
Jindal Steel & Power Ltd	India	2570	2570
Jinneng Group Co Ltd	China	4120	4120
Jiuquan Iron & Steel (Group) Co Ltd (JISCO)	China	1600	1600
JSW Energy Ltd	India	4140	4140
Kansai Electric Power Co (KEPCO)	Japan	1817	3522
Kibo Mining plc	Irish Republic	350	350
Korea Electric Power Corporation (KEPCO)	South Korea	10795	14327
Kosovo Energy Corporation J. S. C. (KEK)	Kosovo	500	500
Kuyasa Mining Pty Ltd	South Africa	600	600
Lanco Infratech Limited (Lanco Group)	India	2640	2640
LYP Group	Cambodia	1000	2000
Maharashtra State Power Generation Co (MAHAGENCO)	India	3550	3550
Manila Electric Co (MERALCO)	Philippines	2090	2955
Marubeni Corporation	Japan	5865	13620
MCM Energy (Myanmar Chemical & Machinery)	Myanmar	660	1320
Namane Group	South Africa	660	660
NLC India Ltd (former Neyveli Lignite Corp Ltd)	India	6810	7800
NTPC Limited	India	38372	44945
Odisha Power Generation Corp (OPGC)	India	3720	3720
Orascom Construction	United Arab Emirates	1980	3960
PER Lusulu Power	Zimbabwe	2100	2100
PGE SA (Polska Grupa Energetyczna SA)	Poland	5260	5260
Posco Energy Co Ltd	South Korea	3213	4050
Power Construction Corp of China / PowerChina	China	10341	15598
Power Finance Corporation	India	16000	16000
Prophecy Development Corp	Canada	300	600
PT Adaro Energy Tbk	Indonesia	1033	2700
PT Bhumi Jati Power (joint venture)	Indonesia	2140	2140
PT Bukit Asam	Indonesia	1810	3220
PT PLN (Persero)	Indonesia	10880	11780

Company	Country of Headquarters	Expansion Plans Coal Power (Prorated) in MW	Expansion Plans Coal Power (Total) in MW
Public Power Corporation SA (PPC)	Greece	885	1110
Rajasthan Rajya Vidyut Utpadan Nigam Limited	India	3960	3960
Resource Generation Ltd (Resgen)	Australia	600	600
Riozim	Zimbabwe	1200	2800
Rural Power Company Limited (RPCL)	Bangladesh	777	1670
RWE AG	Germany	1475	1600
S Alam Group	Bangladesh	924	1320
Safi Energy Company (joint venture)	Morocco	1368	1368
SDIC (State Development and Investment Corporation)	China	5233	8700
SGCC (State Grid Corporation of China)	China	4210	9050
Shaanxi Coal and Chemical Industry Group Co Ltd	China	6270	10620
Shaanxi Yulin Energy Group Co Ltd	China	5400	5400
Shandong Weiqiao Pioneering Group Co Ltd	China	8720	8720
Shanghai Electric Group Corp	China	6945	7930
Shannxi Energy Group Co Ltd (Shaanxi Provincial Investment Group)	China	10000	12000
Shanxi International Energy Group	China	5650	6000
Shenhua Group Corp Ltd	China	26014	29924
Shumba Energy (former Shumba Coal)	Botswana	600	900
SMC Global Power Holdings	Philippines	1678	1678
State Power Investment Corporation (SPIC) (merged China Power Investment Corp, CPI)	China	31587	36040
Sunflower Electric Cooperative	USA	895	895
Taiwan Power Company (TAIPOWER)	Taiwan	4800	4800
Tamil Nadu Generation and Distribution Corp Ltd (TANGEDCO)	India	8340	8340
Tata Power Co Ltd	India	3770	3320
TAURON Polska Energia S.A	Poland	910	910
Telangana State Power Generation Corp (TSGENCO)	India	4800	4800
Tenaga Nasional Berhad (TNB)	Malaysia	3260	4920
Termotasajero SAESP	Colombia	450	450
Tokyo Electric Power Co Inc (TEPCO)	Japan	1529	4450
Toyo Ink Group Berhad	Malaysia	2000	2000
TTCL Public Company Limited (TTCL) (formerly Toyo Thai)	Thailand	1200	1200
Uniper SE	Germany	1100	1100
Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd (UPRVUNL)	India	4290	5940
Vietnam Electricity Corporation (EVN)	Vietnam	7142	9262
Vietnam National Coal Mineral Industries Holding Corporation Limited (Vinacomin)	Vietnam	3510	4910
Vietnam Oil and Gas Group (PetroVietnam)	Vietnam	3600	3600
Yildirim Energy Holding Inc	Turkey	2840	2840