

# Energy production

## Capital investments worldwide

January 2016- November 2018

Buy the detailed data:

The data used here is extracted from the Industries & Strategies Database. All subscribers can access the entire content of the database, updated weekly (between 100 and 200 new capital investment added each week). Readers interested by details of the following content can alternatively buy the data (1 718 investment projects) in an .xls file, for € 1,500.



# Energy production

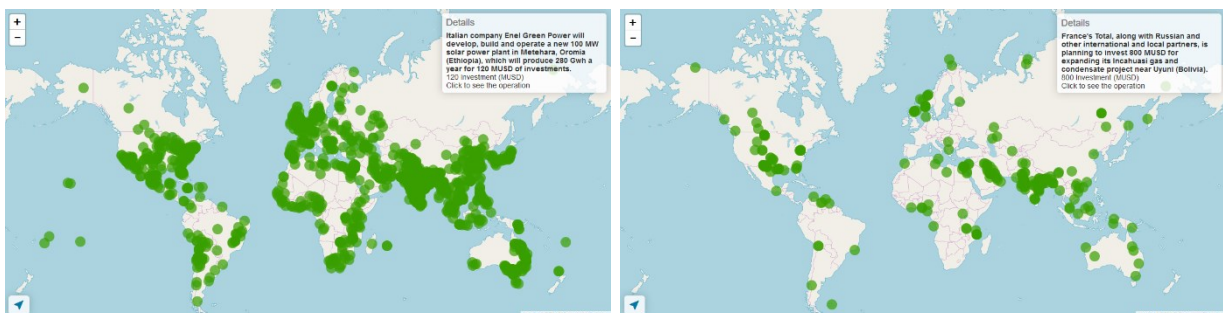
January 2016 - November 2018

1,718 projects announced

\$ 1,206 billions

502,590 MW

64,998 jobs



Left: energy production projects, 2016-2018, Industries & Strategies Database

Right: mining and quarrying projects linked to energy production (coal, gas, oil, uranium...), 2016-2018, Industries & Strategies Database

The Industries & Strategies Database tracks, since 2016, every industrial investment (Manufacturing, Energy, Logistics, R&D) announced worldwide (over 30 MUSD or 50 jobs). Each investment project is classified by product, sector, company, country, and a qualitative score (*factories of the future* score). Since January 2016, 10,208 investments have been tracked, among them 1,718 in the energy sector (*energy production* and *mining and quarrying* projects linked to energy production - coal, gas, oil, uranium...). Since the database is updated weekly, our users benefit from a more detailed information, including cancelled investments, factories of the future score details, capacity...

## Table of content

1. Energy projects worldwide.....	4
A. Breakdown by continent .....	4
B. Breakdown by country .....	5
C. Production capacities, breakdown by energy .....	6
2. Investment by country of origin .....	7
3. Investment by company .....	8
4. Sectors and activities.....	9
5. Largest investments .....	10
6. Qualitative scores .....	11
7. Project description example.....	13
8. Contact .....	14
10. Sponsors .....	14

In the database, each information is described precisely across 30 quantitative and qualitative fields. The tables below synthesize the available data alongside different criteria.

# 1. Energy projects worldwide

## A. Breakdown by continent

Asia receives 45% of the amounts invested in energy projects, and 54% of the number of projects tracked. Among those projects, there is a higher proportion of power generation projects than in other continents. By the total amount of investment received, Europe, Africa and the Americas get slightly more than Asia (\$620 billion against \$548 billion). In all our database, including R&D, Logistics, Manufacturing and Energy, the average investment is \$311 million. For Energy only, the average investment is \$702 million (\$517 million for Power generation projects and \$3,800 million for mining and quarrying projects).

Continents	M\$	%	Nb of projects	%	Average M\$
<b>Asia</b>	<b>547,720</b>	<b>45.4%</b>	<b>917</b>	<b>53.4%</b>	<b>597</b>
Power generation and/or distribution	398,189	33.0%	796	46.3%	500
Mining and quarrying	149,531	12.4%	121	7.0%	1,236
<b>Europe</b>	<b>243,620</b>	<b>20.2%</b>	<b>225</b>	<b>13.1%</b>	<b>1,083</b>
Power generation and/or distribution	142,997	11.8%	195	11.4%	733
Mining and quarrying	100,623	8.3%	30	1.7%	3,354
<b>Africa</b>	<b>217,198</b>	<b>18.0%</b>	<b>153</b>	<b>8.9%</b>	<b>1,420</b>
Power generation and/or distribution	116,410	9.6%	129	7.5%	902
Mining and quarrying	100,788	8.4%	24	1.4%	4,200
<b>Americas</b>	<b>159,066</b>	<b>13.2%</b>	<b>330</b>	<b>19.2%</b>	<b>482</b>
Power generation and/or distribution	88,755	7.4%	264	15.4%	336
Mining and quarrying	70,311	5.8%	66	3.8%	1,065
<b>Oceania</b>	<b>39,203</b>	<b>3.2%</b>	<b>93</b>	<b>5.4%</b>	<b>422</b>
Power generation and/or distribution	13,324	1.1%	86	5.0%	155
Mining and quarrying	25,879	2.1%	7	0.4%	3,697
<b>World</b>	<b>1,206,807</b>	<b>100%</b>	<b>1,718</b>	<b>100%</b>	<b>702</b>
Power generation and/or distribution	759,675	62.9%	1,470	85.6%	517
Mining and quarrying	447,132	37.1%	248	14.4%	1,803

*Continents by number of projects received and investment received in M\$, 2016-2018  
Last column: average amount invested by project*

## B. Breakdown by country

India, the United States and China receive collectively 41% of the number of projects tracked, and 22% of the amount invested. The China's share of total amount invested is lower than its share in the number of projects. This is mainly due to an average amount invested of \$161 million, far lower than the global average of \$702 million for Energy projects. In fact, we did not track any project over \$3.5 billion in China, whereas India, the United States or other countries received 62 projects over \$3.5 billion, with a maximum of \$37 billion for the extension of an oil field by Chevron, in Kazakhstan.

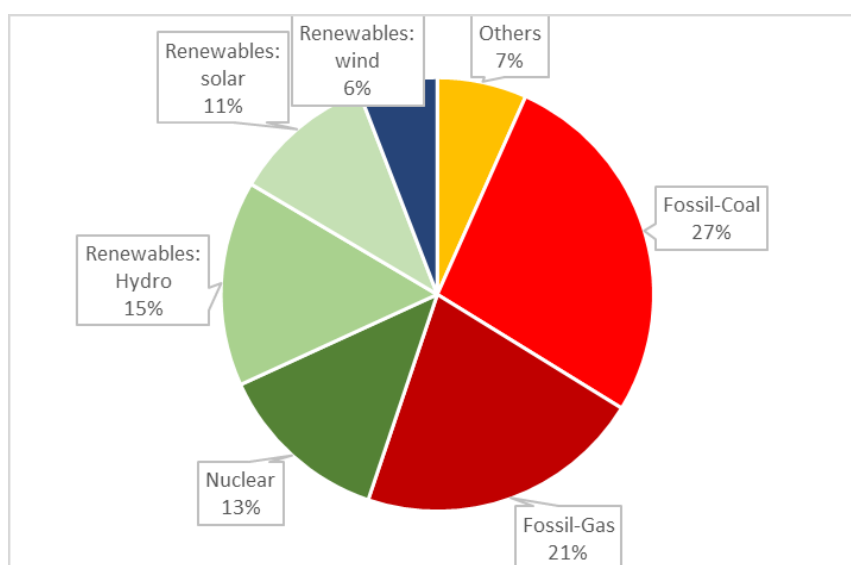
Country	Projects	%	M\$	%
1 India	375	21.8%	156,192	12.9%
2 United States	212	12.3%	96,052	8.0%
3 China	120	7.0%	19,372	1.6%
4 Australia	80	4.7%	37,865	3.1%
5 Bangladesh	72	4.2%	41,055	3.4%
6 United Kingdom	69	4.0%	115,389	9.6%
7 Pakistan	46	2.7%	49,764	4.1%
8 Vietnam	36	2.1%	22,678	1.9%
9 Iran	27	1.6%	25,767	2.1%
10 Russia	25	1.5%	53,674	4.4%
11 Indonesia	25	1.5%	46,813	3.9%
12 Egypt	19	1.1%	42,711	3.5%
13 South Africa	18	1.0%	31,447	2.6%
14 Nigeria	13	0.8%	48,426	4.0%
15 Norway	12	0.7%	41,602	3.4%
16 Saudi Arabia	11	0.6%	30,700	2.5%
17 Tanzania	11	0.6%	21,074	1.7%
18 Mozambique	7	0.4%	30,247	2.5%
19 Turkey	5	0.3%	44,000	3.6%
20 Kazakhstan	5	0.3%	37,400	3.1%
<b>Top 20</b>	<b>1,188</b>	<b>69.2%</b>	<b>992,228</b>	<b>82.2%</b>
<b>107 others</b>	<b>530</b>	<b>30.8%</b>	<b>214,579</b>	<b>17.8%</b>
<b>Sum</b>	<b>1,718</b>	<b>100%</b>	<b>1,206,807</b>	<b>100%</b>

*Investments in Energy projects, by country, 2016-2018, tracked by Trendeo, by number of projects and amounts invested.*

### C. Production capacities, breakdown by energy

Production capacities, in MW, are known for 70% of the investment projects we tracked in the energy sector. Sometimes we have an information about capacity expressed in terms that we did not convert in MW: “barrels/day”, “m<sup>3</sup> processed” or others. The energy output, in GWh, is known for 20% of the projects.

The graph below shows the main energy sources we found. The table adds some details. Some energy sources have been included in the *other* category, such as tidal power, cryogenic energy storage or other infrequent types of projects. With less than three years of data it is too soon to comment on trends, but, as a starting point, we can conclude that fossil fuels represent half of the potential output.



**Breakdown of power production potential, by energy source, for projects tracked 2016-2018. Based on 1256 projects.**

Product	MW installed	%	Nb of projects	%	M\$	%
<b>Fossil-fuel power plant</b>	<b>256,057</b>	<b>50.9%</b>	<b>346</b>	<b>27.5%</b>	<b>230,548</b>	<b>32.3%</b>
Coal power	136,141	27.1%	131	10.4%	152,944	21.4%
Gas-fired combined cycle power	56,635	11.3%	81	6.4%	37,083	5.2%
Gas based power	46,853	9.3%	68	5.4%	29,924	4.2%
Gas-fired combined heat and power plant (CHP)	4,081	0.8%	10	0.8%	2,809	0.4%
Other fossil fuels	12,348	2.5%	56	4.5%	7,788	1.1%
<b>Renewable energy power plant</b>	<b>173,580</b>	<b>34.5%</b>	<b>791</b>	<b>63.0%</b>	<b>248,112</b>	<b>34.7%</b>
Hydroelectricity	77,010	15.3%	140	11.1%	118,125	16.5%
Solar power	53,369	10.6%	393	31.3%	63,120	8.8%
Wind power	29,570	5.9%	157	12.5%	32,839	4.6%
Offshore wind power	7,009	1.4%	23	1.8%	23,638	3.3%
Biomass Electricity	2,533	0.5%	31	2.5%	3,113	0.4%
Other renewables	4,089	0.8%	47	3.7%	7,277	1.0%
<b>Nuclear power plant</b>	<b>65,293</b>	<b>13.0%</b>	<b>27</b>	<b>2.1%</b>	<b>224,259</b>	<b>31.4%</b>
<b>Production and distribution of steam</b>	<b>2,868</b>	<b>0.6%</b>	<b>6</b>	<b>0.5%</b>	<b>1,274</b>	<b>0.2%</b>
<b>Energy storage</b>	<b>2,272</b>	<b>0.5%</b>	<b>18</b>	<b>1.4%</b>	<b>2,713</b>	<b>0.4%</b>
<b>Waste-to-energy</b>	<b>1,375</b>	<b>0.3%</b>	<b>53</b>	<b>4.2%</b>	<b>7,195</b>	<b>1.0%</b>
<b>Others</b>	<b>1,145</b>	<b>0.2%</b>	<b>15</b>	<b>1.2%</b>	<b>388</b>	<b>0.1%</b>
<b>Sum</b>	<b>502,590</b>	<b>100%</b>	<b>1,256</b>	<b>100%</b>	<b>714,489</b>	<b>100%</b>

**Potential output, in MW, number of projects and amounts invested, 2016-2018**

## 2. Investment by country of origin

By country of origin, foreign direct investment makes slightly less than one third of projects and amount invested, 44% of jobs created and 26% of amounts invested. The main foreign investors are, by far, the United States, followed by Japan, China, India, South Korea, Australia, Canada and Russia, and some neighbouring countries, members of the European Free Trade Association: Norway and Switzerland.

Country of origin	M\$	%	Projects	%
1 India	187 635	15,5%	378	22,0%
2 United States	174 809	14,5%	233	13,6%
3 Japan	98 058	8,1%	38	2,2%
4 China	89 180	7,4%	181	10,5%
5 France	66 228	5,5%	65	3,8%
6 Russia	56 969	4,7%	31	1,8%
7 Pakistan	46 931	3,9%	38	2,2%
8 Norway	42 303	3,5%	17	1,0%
9 Egypt	37 163	3,1%	11	0,6%
10 Italy	28 750	2,4%	48	2,8%
11 Bangladesh	26 955	2,2%	47	2,7%
12 South Africa	26 399	2,2%	7	0,4%
13 Saudi Arabia	25 443	2,1%	22	1,3%
14 South Korea	22 739	1,9%	20	1,2%
15 United Kingdom	21 984	1,8%	67	3,9%
16 Tanzania	20 009	1,7%	7	0,4%
17 Iran	17 792	1,5%	19	1,1%
18 Venezuela	16 968	1,4%	3	0,2%
19 Netherlands	16 715	1,4%	11	0,6%
20 Thailand	16 076	1,3%	18	1,0%
<b>Top 20</b>	<b>1 039 106</b>	<b>86,1%</b>	<b>1 261</b>	<b>73,4%</b>
<b>80 other countries</b>	<b>167 701</b>	<b>13,9%</b>	<b>457</b>	<b>26,6%</b>
<b>Sum</b>	<b>1 206 807</b>	<b>100,0%</b>	<b>1 718</b>	<b>100,0%</b>

*Country of origin of investments announced in the European Union, 2016-2018, tracked by Trendeo, by number of projects, jobs created and amounts invested.*

### 3. Investment by company

BP, Chevron and Royal Dutch Shell are the top three companies in the Energy sector, by amount invested. Together they represent 10% of the total amount of investments tracked by Trendeo. In the top 20, we also find at least<sup>1</sup> five governments (China, India, Pakistan, Russia and Egypt), showing the interest of public authorities for this strategic sector.

Rank	Group	M\$	Projects	Average project
1	BP	77,945	8	9,743
2	Chevron	75,800	3	25,267
3	Royal Dutch Shell	66,121	8	8,265
4	EDF	62,278	13	4,791
5	Statoil	58,583	10	5,858
6	Government of China	58,079	20	2,904
7	INPEX	57,000	2	28,500
8	Novatek	52,500	3	17,500
9	Egypt (national government)	38,452	8	4,807
10	Cheniere Energy	38,000	2	19,000
11	Government of Pakistan	37,423	19	1,970
12	Government of India	30,199	17	1,776
13	Anadarko Petroleum	30,000	2	15,000
14	Eni	29,580	13	2,275
15	Southern Company	28,570	5	5,714
16	Saudi Aramco	28,300	9	3,144
17	Gazprom	28,017	6	4,670
18	NTPC	28,008	30	934
19	Russia (national government)	27,950	3	9,317
20	Hitachi Group	27,535	2	13,768

*Top 20 companies announcing investments in the Energy sector, by amount invested, out of 907 companies in the Energy sector, 2016-2018, tracked by Trendeo, amount invested and number of projects.*

<sup>1</sup> Saudi Aramco, Statoil, EDF are also controlled by governmental authorities.



## 4. Sectors and activities

The database characterizes the main type of activity for each project. In the energy sector we have power generation and mining as main activities. Power generation represents two-thirds of the total amount invested, and Mining one third. As shown in the last column of the table below, the most capital intensive sectors are Nuclear power plants, Liquefied natural gas production and Crude oil extraction. There is a large number of projects in the Renewables sector (see table below), almost half of the investments projects tracked by Trendeo.

Sector	Projects	%	M\$	%	Average M\$
<b>Mining and quarrying (for energy)</b>	<b>248</b>	<b>14.4%</b>	<b>447,132</b>	<b>37.1%</b>	<b>1,803</b>
Crude Oil	60	3.5%	169,044	14.0%	2,817
Natural gas	94	5.5%	122,885	10.2%	1,307
Liquefied natural gas	16	0.9%	104,800	8.7%	6,550
Coal	43	2.5%	30,898	2.6%	719
Regasification of LNG	15	0.9%	9,014	0.7%	601
Processing of natural gas for transmission	7	0.4%	6,879	0.6%	983
Uranium	3	0.2%	1,640	0.1%	547
Other mining and quarrying	10	0.6%	1,972	0.2%	197
<b>Power generation and/or distribution</b>	<b>1,470</b>	<b>85.6%</b>	<b>759,675</b>	<b>62.9%</b>	<b>517</b>
Renewable energy power plant	829	48.3%	251,077	20.8%	303
Nuclear power plant	32	1.9%	249,259	20.7%	7,789
Fossil-fuel power plant	371	21.6%	232,228	19.2%	626
Waste-to-energy	142	8.3%	13,945	1.2%	98
Manufacture of syngas	6	0.3%	6,081	0.5%	1,014
Energy storage	19	1.1%	2,718	0.2%	143
Production and distribution of steam	12	0.7%	1,466	0.1%	122
Power-to-gas process	4	0.2%	912	0.1%	228
Gas storage	1	0.1%	881	0.1%	881
Gas supply	29	1.7%	605	0.1%	21
Other power generation	25	1.5%	503	0.0%	20
<b>Sum</b>	<b>1,718</b>	<b>100%</b>	<b>1,206,807</b>	<b>100%</b>	<b>702</b>

*Investments announced in the Energy sector, 2016-2018, tracked by Trendeo, by number of projects and amounts invested. Last column: average amount invested by project.*

In the Power generation activity, Renewable energies, Nuclear and Fossil fuels each represent almost one third of the total amounts invested. The tables below show the breakdown of fossil fuels and renewables by product. For renewables, by amount invested, hydroelectricity adds up to half the total of renewable investments, while solar and wind (adding offshore and onshore) each represent a quarter of amounts invested in renewable projects. For fossil fuels, two thirds of the amounts invested are going to coal power.

Renewable projects, detail	M\$	%	Projects	%	Average M\$
Solar power	64 288	25,6%	404	48,7%	159
Wind power	33 051	13,2%	160	19,3%	207
Hydroelectricity	118 719	47,3%	144	17,4%	824
Biomass Electricity	3 774	1,5%	38	4,6%	99
Offshore wind power	23 638	9,4%	23	2,8%	1 028
Biomass-fired combined heat and power plant (CHP)	1 438	0,6%	13	1,6%	111
Geothermal electricity	2 487	1,0%	9	1,1%	276
Tidal power	2 362	0,9%	8	1,0%	295
Other renewables	1 320	0,5%	30	3,6%	44
<b>Sum</b>	<b>251 077</b>	<b>100%</b>	<b>829</b>	<b>100%</b>	<b>303</b>

*Breakout of renewable energy projects tracked by Trendeo, 2016-2018*

Fossil fuel power plant	M\$	%	Projects	%	Average M\$
Coal power	154 710	66,4%	145	39,0%	1 067
Gas-fired combined cycle power	37 153	15,9%	83	22,3%	448
Gas based power	29 924	12,8%	71	19,1%	421
Oil fired electricity	660	0,3%	20	5,4%	33
Gas-fired combined heat and power plant (CHP)	3 418	1,5%	14	3,8%	244
Diesel fired electricity	464	0,2%	10	2,7%	46
Combined Cycle Power	711	0,3%	7	1,9%	102
Lignite power	1 544	0,7%	4	1,1%	386
Integrated gasification combined cycle power (IGCC)	3 256	1,4%	3	0,8%	1 085
Other fossil fuels	1 153	0,5%	15		77
<b>Sum</b>	<b>232 993</b>	<b>100%</b>	<b>372</b>	<b>100%</b>	<b>626</b>

*Breakout of fossil fuel energy projects tracked by Trendeo, 2016-2018*

## 5. Largest investments

The following table lists the five largest investments announced since January 2016. There are all in the oil, gas and nuclear sectors.

Project description	M\$
Chevron, with other U.S. and international partners, is investing 36,8 bn USD near Qulsary (Kazakhstan) in expansion of Tengiz oil field to increase production capacity to 1 million barrels of oil equivalent a day by 2022.	36 800
U.S.-based Anadarko Petroleum, along with Indian and Japanese partners, is investing around 30 bn USD in a new natural gas field and floating LNG facility at Coral field, Area 1, off the coast of Pemba (Mozambique).	30 000
The Government of Egypt, with Russian loan financing and expertise, is going to invest more than 30 bn USD to set up a new 4 800 MW (4 x 1 200 MW) nuclear power plant at El Dabaa, near Marsa Matruh, Matruh (Egypt).	30 000
Statoil, with several partners, is investing 29 billion dollars in the project of Johan Sverdrup, a new crude oil production facility off the coast of Stavanger (Norway).	29 000
Japan's Hitachi plans to set up a new 3 GW nuclear power plant at Wylfa, Wales (United Kingdom), costing more than 27 bn USD.	27 535

*Largest investments in the Energy sector tracked by Trendeo, 2016-2018.*

## 6. Qualitative scores

Our *factories of the future* score aggregates six components defined with our partners<sup>2</sup>:

- **Flexibility:** the ability to switch from a product to another, enabling made-to-order manufacturing,
- **Digitalization:** the introduction of technologies such as IoT, robotics, automation,
- **Energy efficiency:** every measure taken to lower energy consumption compared with usual norms,
- **Social efforts:** measures undertaken for operations, through working conditions, health and safety concern, training, education and wages...,
- **Efforts towards local communities:** decisions aiming at improving the relations between a production site and local communities and stakeholders, such as favoring local suppliers, funding schools, contributing to local social projects...,
- **Environmental efforts:** reducing carbon footprint and pollution, water preservation...

Each criterion is ranked 0 (no mention in the news describing the investment), 1 (some measures described) or 2 (quantitative objectives defined for the criterion considered or insistence on it). Adding those 0-2 scores over six criteria gives a total Industry of the Future score which varies from 0 to 12.

There are, listed in the following table, the 10 projects with a score of 7 or more. In the Energy sector, the average score is 1.01. In the Industries & Strategies Database, all sectors included, Flexibility and Digitization scores come first. It is not the case for the Energy sector. The criteria which receive the highest scores are environmental efforts (a total score of 606), followed by Energy efficiency efforts, then Community efforts.

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<sup>2</sup> Fives, EDF (Electricité de France) and the Institut de la réindustrialisation.

Description	M\$	Score	Environmental Efforts	Efficiency	Community Efforts	Flexibility	Digitization	Social Efforts
Switzerland's Advanced Power plans to invest 1,1 bn USD in a new 1 150 MW natural gas-fired combined cycle power plant in Wellsville (United States).	1,100	<b>10</b>	2	2	2	2	1	1
Caithness Energy, along with partner Moxie Energy and other U.S. partners, is investing around 800 MUSD in a new 1 029 MW natural gas fired power plant ("Caithness Moxie Freedom Generating Station") near Wilkes-Barre (United States).	800	<b>10</b>	2	2	2	2	1	1
Chevron, with other U.S. and international partners, is investing 36,8 bn USD near Qulsary (Kazakhstan) in expansion of Tengiz oil field to increase production capacity to 1 million barrels of oil equivalent a day by 2022.	36,800	<b>10</b>	2	2	2	0	2	2
British company G J Nature Care and Energy, with help from Indian partners, is going to set up a new 10 MW state-of-the-art power plant ("Brahmapuram") near Cochin (Kerala - India) to convert municipal solid waste to energy.	47	<b>8</b>	1	0	2	2	1	2
Chinese-Sri Lankan company Green Watts (Private) Limited is investing 24 MUSD to set up a new dendro power plant at Kalawaaragama, near Monaragala, Uva (Sri Lanka).	24	<b>8</b>	2	1	2	2	1	0
Amager Ressourcecenter has invested 632 MUSD to set up a new waste-to-energy plant ("Amager Bakke" or "Copenhill") in Copenhagen (Denmark).	632	<b>8</b>	2	2	2	2	0	0
MGT Power is investing 852 MUSD in a new 299MW biomass combined heat and power plant at Teesport (UK), creating 100 new jobs.	852	<b>7</b>	2	1	2	1	1	0
U.S. company Covanta, in partnership with Irish local authorities, is investing 700 MUSD in a new 58 MW waste-to-energy plant at Dublin (Ireland).	700	<b>7</b>	1	2	2	0	2	0
TAIF Group has invested 244 MUSD to add a new 406 MW unit to its gas-fired Kazan Combined Heat and Power Plant-3 in Kazan, Tatarstan (Russia).	244	<b>7</b>	2	2	0	2	1	0
(Updated) Lahti Energia invests around 190 MUSD, with the help of the European Investment Bank and Nordic Investment Bank, in a new combined biomass plant (CHP), dubbed "Kymijärvi III", in Lahti (Finland), generating 50 MW of electricity and 150 MW of urban heating.	191	<b>7</b>	1	2	0	2	2	0
<b>Sum (Energy sector)</b>		<b>1,955</b>	<b>606</b>	<b>580</b>	<b>358</b>	<b>253</b>	<b>123</b>	<b>35</b>

*Top ten investment projects for their factory of the future scores, and sum of scores received for the whole energy sector (last line).*

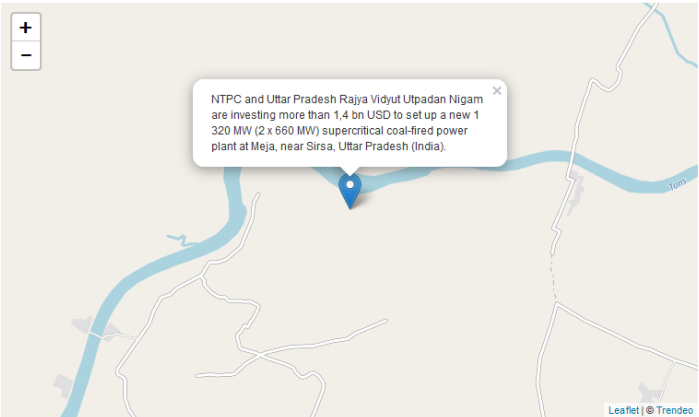
# 7. Project description example

Each investment tracked by Trendeo is described on a dedicated page in the database, including information such as production capacity, completion date, suppliers (when known)...

**NTPC and Uttar Pradesh Rajya Vidyut Utpadan Nigam are investing more than 1,4 bn USD to set up a new 1 320 MW (2 x 660 MW) supercritical coal-fired power plant at Meja, near Sirsa, Uttar Pradesh (India).**

Back to the list
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<p>Company Name : Meja Urja Nigam</p> <p>Date of announcement : 2018-04-02</p> <p>Product : Fossil-fuel power plant</p> <p>Type of product : Coal power</p> <p>Maximum capacity pro... : 1 320 MW</p> <p>Description of the proj... : The company is a joint venture between NTPC, majority owned by the Indian government, and the Uttar Pradesh Rajya Vidyut Utpadan Nigam, wholly owned by the Uttar Pradesh government. South Eastern Coalfields will supply coal to the plant. Toshiba and Toshiba JSW Power Systems are supplying 2 units of 660 MW supercritical steam turbine and generator equipment. 75% of the output power will be supplied to the northern Indian state of Uttar Pradesh, where the plant is located, with the rest to be supplied to remaining northern India.</p> <p>Factories of the future'... : 5</p> <p>Factories of the Future... : Supercritical boiler units are 2% to 3% more efficient than conventional units, and hence lead to lower emissions. The company has been asked to install high-efficiency electrostatic precipitators to ensure that particulate emissions do not exceed 50 mg/N m3 as well as install chimney of 275 metres' height. As per national norms, a green belt shall be established around the plant with a density of 2 500 per hectare and of 50 to 100 metres' width, and a rainwater harvesting system shall be put in place. The company has been asked to make provisions for potable water in surrounding area as well as undertake other regional development activities, such as setting up fruit-bearing orchards.</p> <p>Efficiency : 2</p> <p>Environmental efforts : 1</p> <p>Territorial efforts : 2</p> <p>Link : <a href="http://www.thehindubusinessline.com/companies/.../article23414008.ece">www.thehindubusinessline.com/companies/.../article23414008.ece</a></p> <p>In addition : <a href="http://www.ntpc.co.in/en/.../joint-venture">www.ntpc.co.in/en/.../joint-venture</a>  <a href="http://www.sourcewatch.org/index.php/Meja_Thermal_Power_Project">www.sourcewatch.org/index.php/Meja_Thermal_Power_Project</a>  <a href="http://www.toshiba.co.jp/about/.../pr0901.htm">www.toshiba.co.jp/about/.../pr0901.htm</a>  <a href="http://environmentclearance.nic.in/writereaddata/.../0[...]/SLZ8NReadyForm-1.pdf">environmentclearance.nic.in/writereaddata/.../0[...]/SLZ8NReadyForm-1.pdf</a>  <a href="http://environmentclearance.nic.in/writereaddata/.../1[...]/T5GTECforMejaTPP.pdf">environmentclearance.nic.in/writereaddata/.../1[...]/T5GTECforMejaTPP.pdf</a>  <a href="http://timesofindia.indiatimes.com/city/.../60210725.cms">timesofindia.indiatimes.com/city/.../60210725.cms</a></p> <p>Tags : <span style="background-color: #0070c0; color: white; padding: 2px 5px; border-radius: 3px;">Add a tag</span> <span style="background-color: #ffff00; display: inline-block; width: 20px; height: 15px; vertical-align: middle;"></span></p>	<p><b>The operation</b></p> <p>Number of jobs : <b>ND</b>  Amount of investment : <b>1 427 (MUSD)</b>  Type of operation : <b>New set-up</b>  Beginning of construction : <b>2013 S1</b>  Beginning of commercial operation : <b>2018 S2</b>  Land area (hectares) : <b>146</b>  Building area (m2) : <b>0</b></p> <p><b>Company</b></p> <p>Parent company : <b>NTPC / India (Uttar Pradesh government)</b>  Type of company : <b>Joint-Venture</b>  Country : <b>India</b>  Website : <b>ND</b>  ISIN code : <b>Not listed</b></p> <p><b>Industrial sector</b></p> <p>Type of production : <b>Power generation and/or distribution</b>  Industrial sector : <b>Electricity, gas and steam</b>  ISIC : <b>D3510 Electric power generation, transmission and distribution</b>  Finished good : <b>No</b>  End market : <b>Energy</b></p> <p><b>Geographic details</b></p> <p>City : <b>Sirsa</b>  Region : <b>Uttar Pradesh</b>  Country : <b>India</b></p> <p><b>Related companies</b></p> <p>Finance / shareholders : <b>India (national government)</b>  <b>Uttar Pradesh Rajya Vidyut Utpadan Nigam</b></p> <p>Provider : <b>South Eastern Coalfields</b></p> <p>Construction : <b>Toshiba</b>  <b>Toshiba JSW Power Systems</b></p>
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## 8. Contact

This document is a short synthesis of the data available in the Industries & Strategies Database about investments in the Energy sector. You can learn much more about this database by contacting:

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