

## Europe's Top Twenty Power Industry Players 2016

June 2016

*This is a profile of the top twenty European power industry players, ranked by power sales in 2015. It covers power sales volumes, financial performance indicators and drivers, generation volumes, energy mixes, CO<sub>2</sub> emissions, natural gas sales, and customer and employee numbers.*

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## 1 Power Sales Ranking

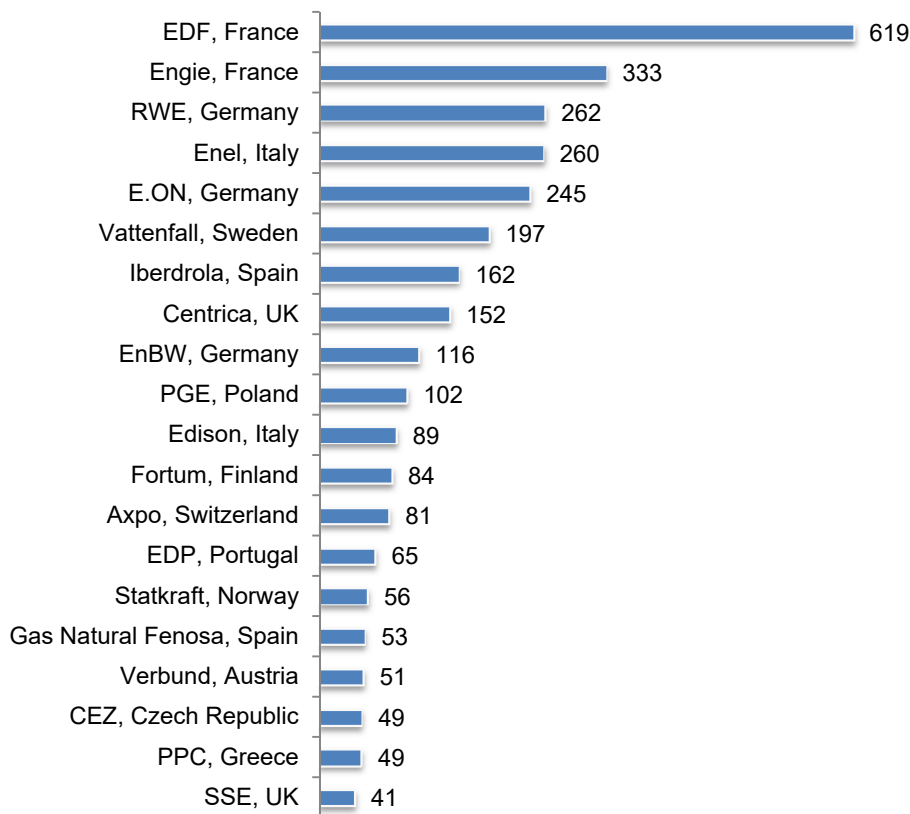
EDF of France is the top industry player and towers over its rivals. Although it does not reveal power sales at the group level, its total generation can be used as an indicative indicator. In 2015 it was 619 TWh.

Engie of France, formerly GDF Suez, comes second. It too does not reveal sales but its total generation volumes were 333 TWh in 2015.

RWE of Germany ranks third with sales of 262 TWh in 2015, closely followed by Italy's Enel with 260 TWh and German group E.ON with 245 TWh.

**Chart 1 Power Sales Volumes in 2015**

*Volumes in TWh*



*These figures include wholesale sales, an important segment for companies which generate more than their own end user customers need. They exclude high trading volumes reported by a few companies as these figures are not comparable with most company reporting.*

Source: companies / Prospex Research

## 2 Group Revenue Ranking

Group revenue figures illustrate the vast scale of the top companies.

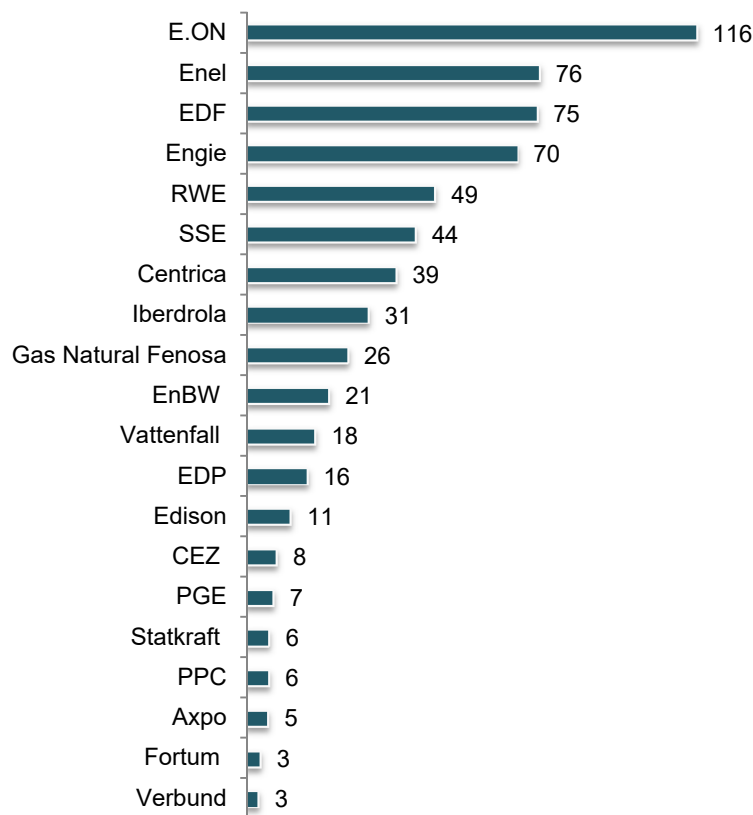
E.ON is the clear leader by this criterion. It reported revenues of €116 bn in 2015. The other top tier groups were Enel, EDF and Engie.

As a group, the top 20 booked revenues of €628 bn in 2015.

Note that these numbers take in all operations, including big natural gas businesses in some groups.

**Chart 2 Group Revenues in 2015**

*Total revenues, € bn*



Source: companies / Prospex Research

Non-euro currency amounts in this section and elsewhere in this report have been translated to euros using average exchange rates for 2015, as reported by the European Central Bank.

### 3 Profits Fall Sharply

Tough market conditions are hitting European power companies hard. This can be seen clearly in company financial results.

In 2015 no fewer than 11 of the top 20 reported net losses, up from five in 2014 and three in 2013.

As a group, the top 20 lost €7.8 bn in 2015 after booking net income of €10.4 bn in 2014.

E.ON reported the biggest loss of €7 bn. It was followed by Engie with a loss of €4.6 bn. Vattenfall lost €1.8 bn, Centrica and Edison €1 bn, and Axpo €0.9 bn.

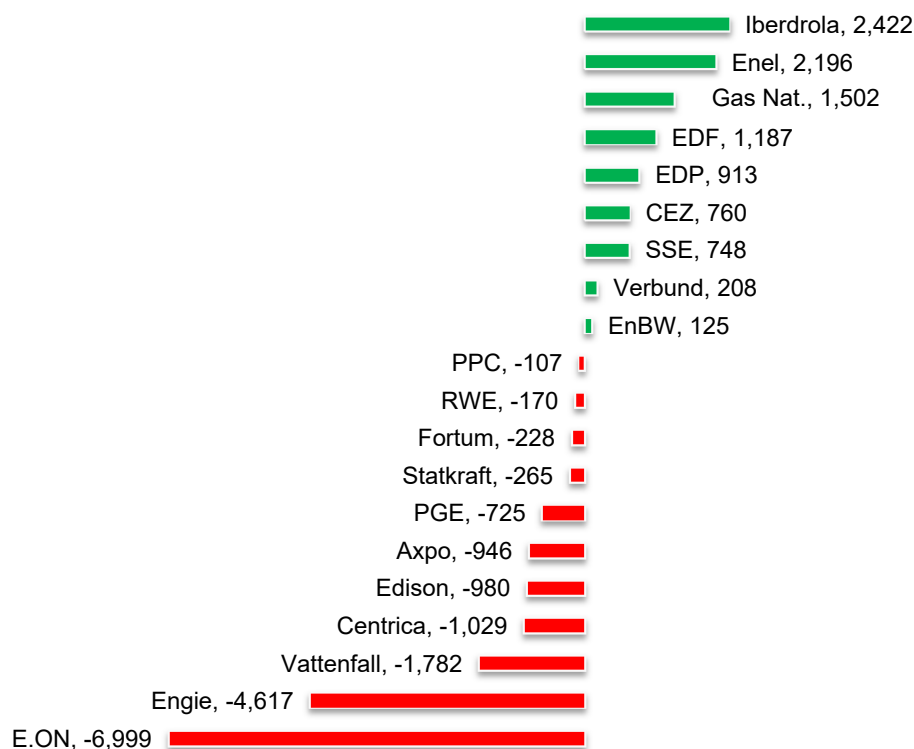
Among the nine profitable companies, Iberdrola topped the ranking in 2015. However, its net profit of €2.4 bn was up by only 4% on the year.

Enel came second. It bounced back from a poor year in 2014 but its net profit of €2.2 bn was still below the €3.2 bn reported in 2013. Gas Natural Fenosa ranked third with €1.5 bn, just 3% higher on the year.

Some other companies were profitable but reported declines on the year. French giant EDF's net income tumbled by 68%. EDP booked a decline of 12% while CEZ reported a fall of 7%.

**Chart 3 Net Profits and Losses in 2015**

*The figures show net profit or loss attributable to shareholders in € mn*



Source: companies / Prospex Research

A whirlwind of negative factors is behind these figures.

Above all, in recent times wholesale power prices in Europe's major power markets have crashed to lows not seen for a decade.

On the supply side, fuel and EU emissions allowance prices have been low compared to historical levels. This helps to bring prices down when conventional thermal plants are key contributors to generation.

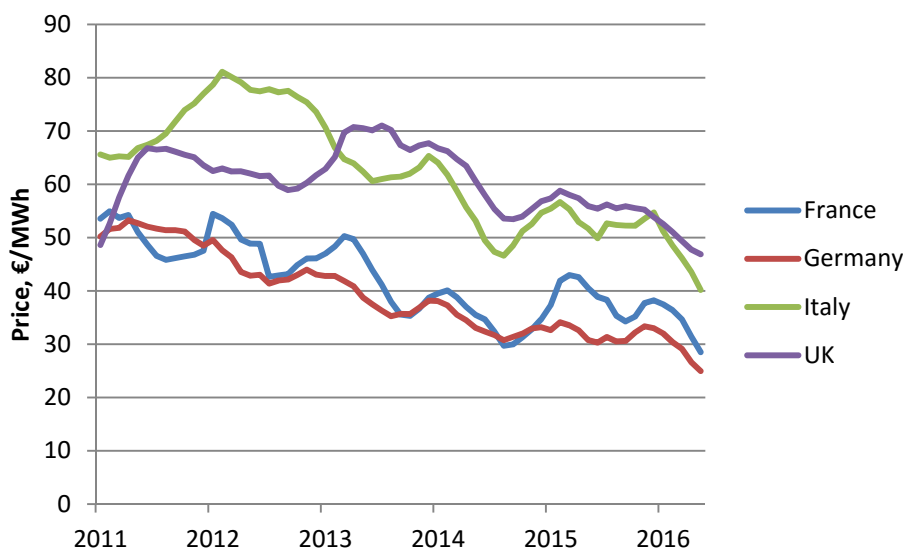
On the demand side, consumption has been subdued, so there is little volume support. This hurts when systems have excess capacity and power plant owners compete hard for business.

In addition, renewable output supported by policy and generally shielded from the full and direct impact of wholesale market pressures is surging. This development crowds out some of the conventional plants which are the backbone of many major company systems.

European market integration has also helped to drive prices down. There are still distinct national markets with specific drivers, but cross-border transmission capacity is now managed very closely to reduce prices in high price markets.

The outcome can be seen in the chart below. It shows six month rolling average wholesale prices in Europe's biggest power markets by consumption. Prices have dropped for years now and the declines have continued into 2016.

**Chart 4 Selected Wholesale Power Price Trends, 2011 – May 2016**



Source: market operators / Prospex Research

There are financial pressures as well. Several companies have taken large impairment charges on key assets which have lost value in today's markets. Debts taken on in headier days of expansion are now burdens which must be reduced. Divestments are urgently needed in some cases and when assets are sold they may fetch low prices.

Policy and regulation add to the troubles.

Western European utilities must surrender EU emissions allowances to cover the vast majority of their CO<sub>2</sub> output and no longer benefit from generous free allowance allocations, as they did up to 2012. Allowance prices may well be historically low, as noted above, but the costs are still significant for heavy emitters.

In wholesale business, companies face a deluge of onerous EU trading regulations. Compliance costs have soared, from new IT systems to burgeoning regulatory staff payrolls, while commercial flexibility has arguably been reduced.

There are serious challenges at the national level too in some cases. They include environmental surcharges, tax policies, closer supervision of nuclear power leading to higher costs, and intensifying commercial regulation to promote competition and help consumers.

## 4 Dividends Tumble

Traditionally, investors in the utility sector looked forward to plump and often rising dividends from companies generating large amounts of cash.

In these straitened times, by contrast, the rewards are decidedly meagre.

In 2015 five companies paid no dividend at all. They were Axpo, Edison, PPC, RWE and Vattenfall.

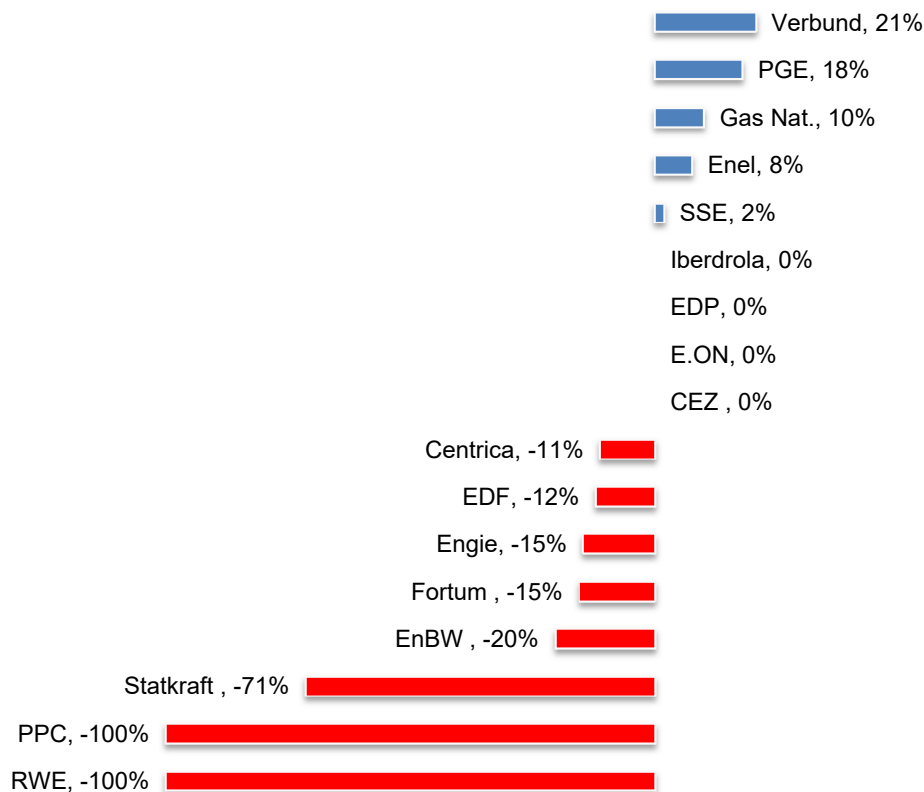
Six did make a payout but it was reduced compared to 2014. This group included Centrica, EDF, EnBW, Engie, Fortum, and Statkraft.

Dividend payments were unchanged on the year at CEZ, E.ON, EDP, and Iberdrola.

Only five companies raised dividends - Enel, Gas Natural Fenosa, PGE, Verbund and SSE.

**Chart 5 Dividend Payment Changes, 2015 versus 2014**

*% change from 2014*



*Axpo, Edison, and Vattenfall are not shown here because they did not pay any dividends in 2014 and 2015.*

Source: companies / Prospex Research

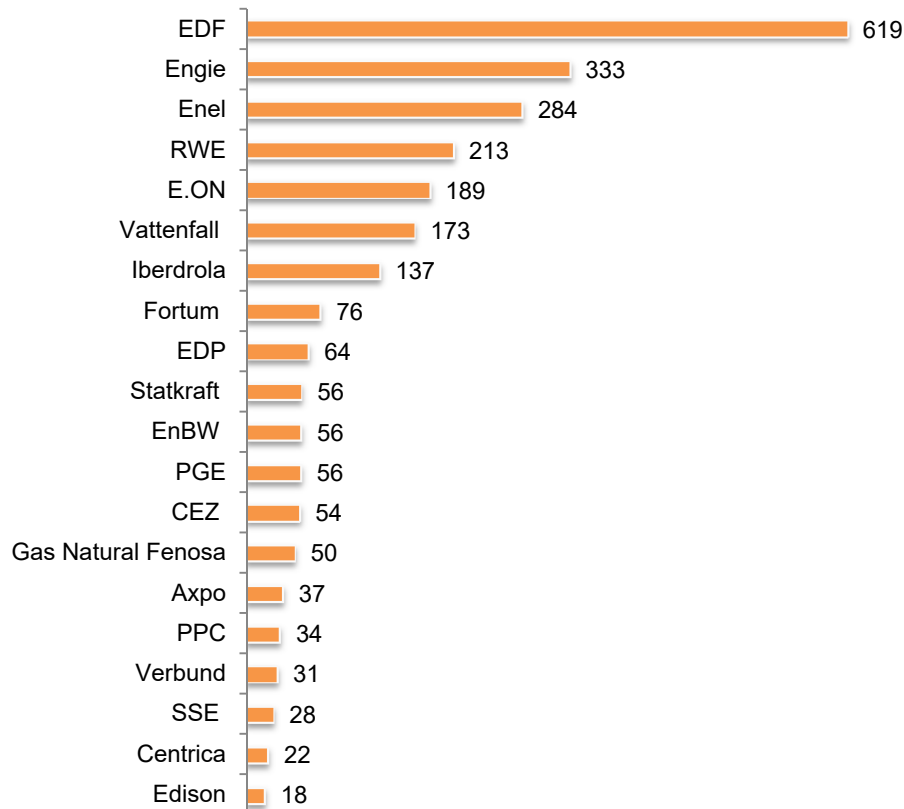
## 5 Power Generation Volumes

The generation ranking is broadly in line with the sales ranking. EDF, Engie, Enel, RWE, E.ON, and Vattenfall are the biggest players. Collectively, their output in 2015 made up no less than 72% of all generation by the top 20.

Significant middle tier groups include Iberdrola, Fortum and EDP.

**Chart 6 Power Generation Volumes in 2015**

**Generation, TWh**



Source: companies / Prospex Research

The energy mix is diverse and varies widely by company.

Nuclear power is the single biggest power source for the top 20 as a group. It provided 32% of their output in 2015.

EDF leads companies with high exposures. Nuclear power accounted for no less than 78% of its total output in 2015. The nuclear share was also significant for Axpo at 58%, Centrica at 55%, EnBW at 45%, and CEZ at 44%.

At the other end of the scale, the companies with no nuclear interests are Edison, PGE, PPC, SSE, Statkraft, and Verbund.

The top 20 also rely heavily on conventional thermal power sources. Natural gas is the leading fuel with a share of 22% of their total generation in 2015. It is followed by thermal coal with a share of 14% and lignite with 8%.



PGE stands out - it procures almost all of its power from conventional thermal plants. Edison, Gas Natural Fenosa, PPC, and RWE use thermal plants for three quarters or more of their output. The only companies with very low thermal exposures are EDF and Verbund with 7% each and Statkraft with just 1% in 2015.

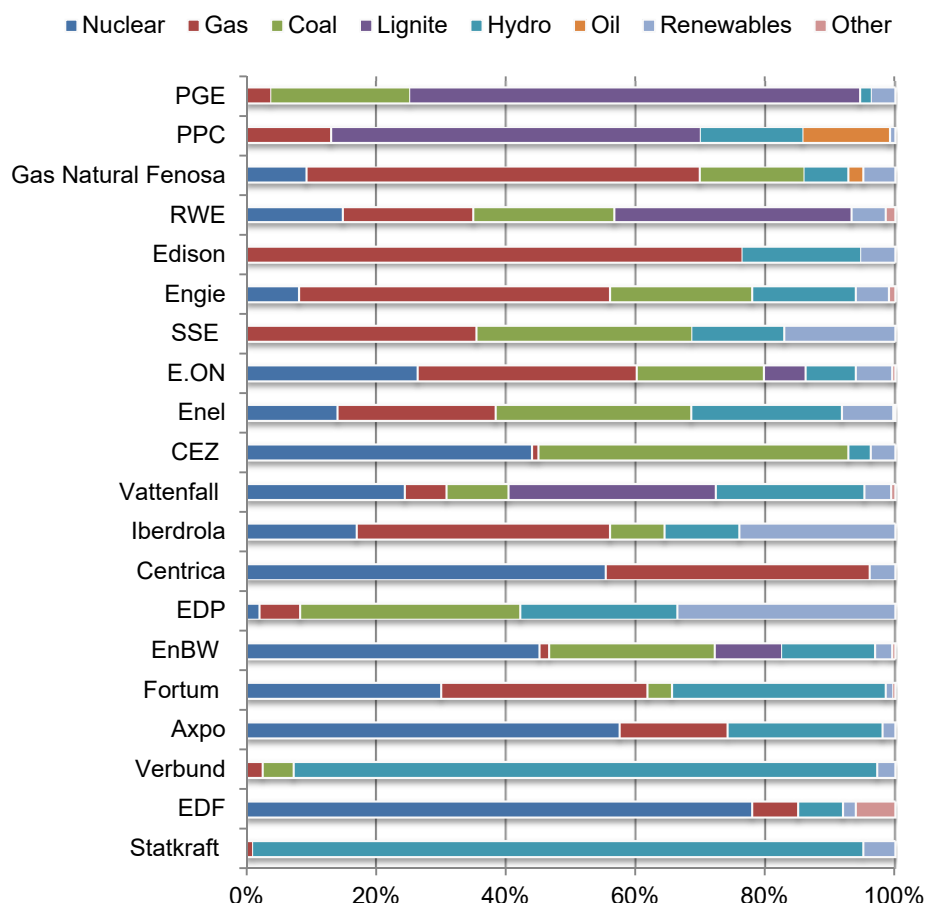
Hydro power's contribution is limited by resources, which are concentrated in a few regions. It provides almost all output for Statkraft and Verbund and around a third for Fortum but only a quarter or less for all other companies.

Renewables made up only 6% of total top 20 generation in 2015, well below the renewables share of around 15% in the EU as a whole. Three companies are far ahead of the pack. Renewables led by wind accounted for 34% of output for EDP, 24% for Iberdrola, and 17% for SSE. The renewables share was 8% or less for all other companies.

This chart ranks companies by the share of conventional thermal output in 2015.

**Chart 7 Power Generation Mix in 2015**

*% of output, ranked by conventional thermal share*



Source: companies / Prospex Research

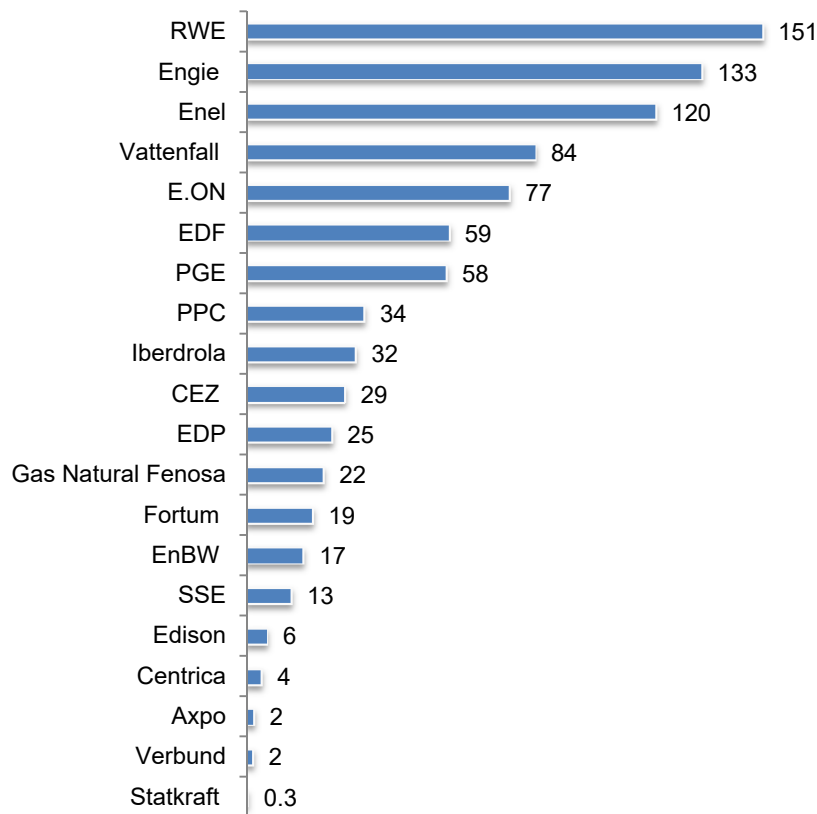
## 6 Emissions Positions

Some of the top 20 are major CO<sub>2</sub> emitters. RWE tops this ranking with emissions of 151 Mt in 2015. The other high volume companies are Engie, Enel, Vattenfall and E.ON.

Even though emissions allowance prices are historically low, high volumes make for significant costs. Using the average price in 2015 of €7.68 on an indicative basis, the notional value of RWE's position was €1,158 mn.

**Chart 8 CO2 Emissions in 2015**

### *Emissions in Mt*



*European power only for Engie.*

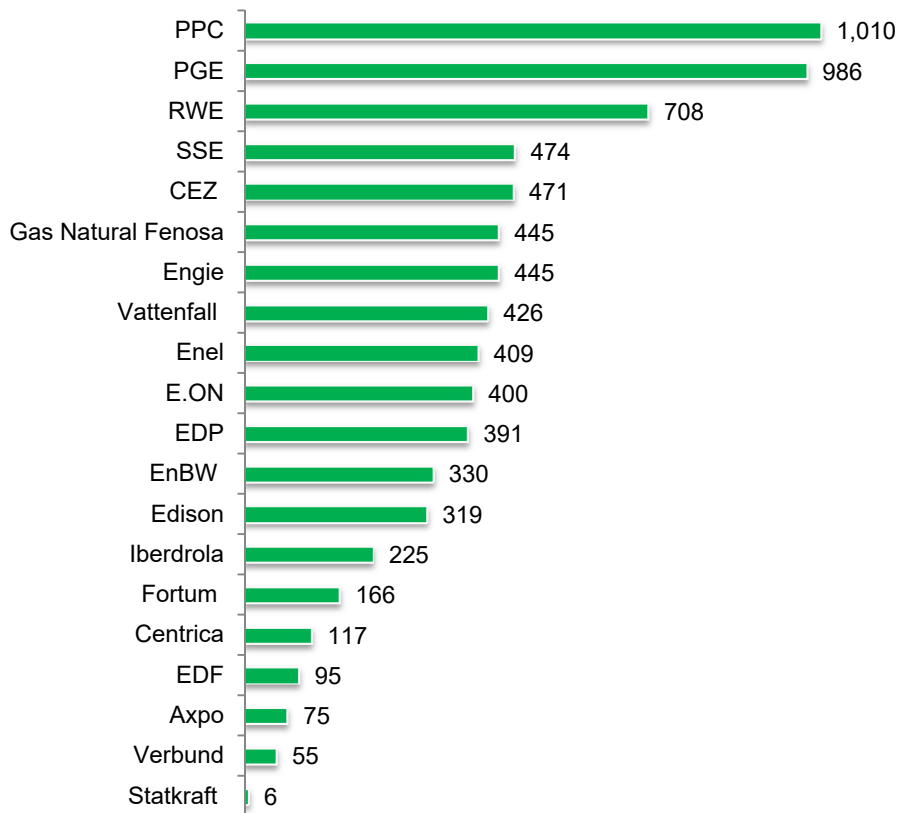
Source: companies / Prospex Research

“Carbon intensity” measures emissions per unit of power produced. By this measure, PPC is the worst polluter, emitting 1,010 g/kWh in 2015. Intensity was almost as high at PGE at 986 g/kWh. RWE came third with 708 g/kWh.

Some big companies can boast strikingly low intensity thanks to their extensive hydro and nuclear assets. Statkraft is the cleanest with a tiny figure of 6 g/kWh. Verbund, Axpo, EDF and Centrica also have small carbon footprints.

**Chart 9 Carbon Intensity in 2015**

*CO<sub>2</sub>, g/kWh*



*European power only for Engie.*

*Source: companies / Prospex Research*

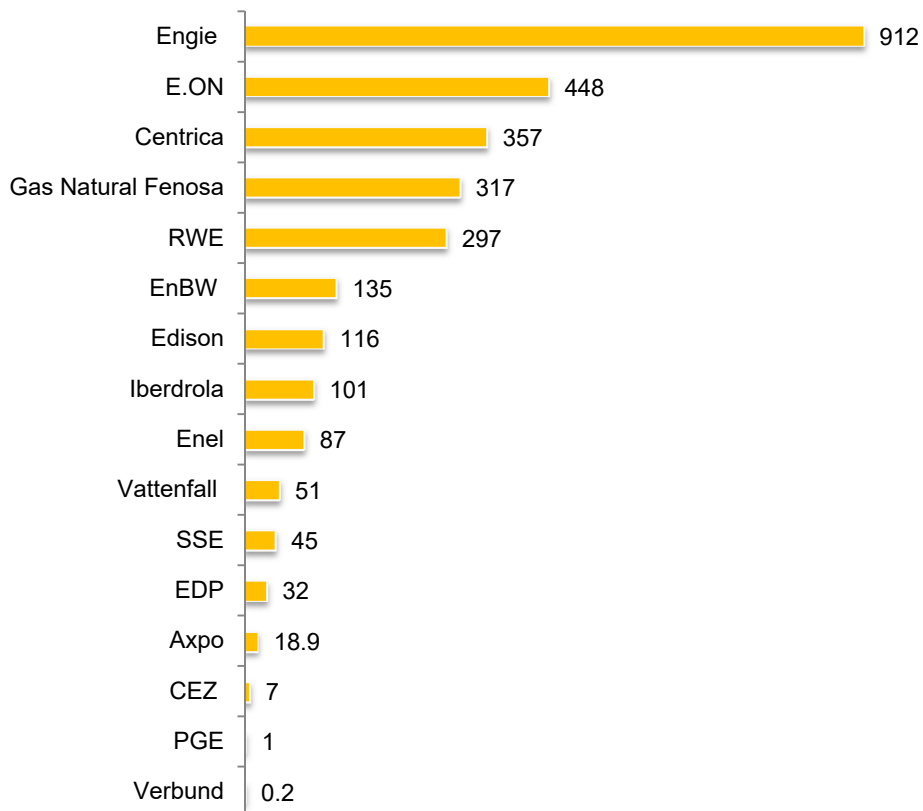
## 7 Natural Gas Sales Ranking

Many leading players run substantial gas sales operations alongside their power businesses.

Engie is the clear leader with sales of 912 TWh in 2015, or more than twice as much as second-placed E.ON. The other big players which report sales are Centrica, Gas Natural Fenosa, and RWE. EDF is also an important group but it does not reveal total gas sales.

**Chart 10 Natural Gas Sales Volumes in 2015**

**Sales, TWh**



*These figures include wholesale sales but exclude high trading volumes reported by a few companies when these figures are not comparable with most company reporting.*

Source: companies / Prospex Research

## 8 Stakeholders – Customers and Employees

The top 20 have vast numbers of stakeholders.

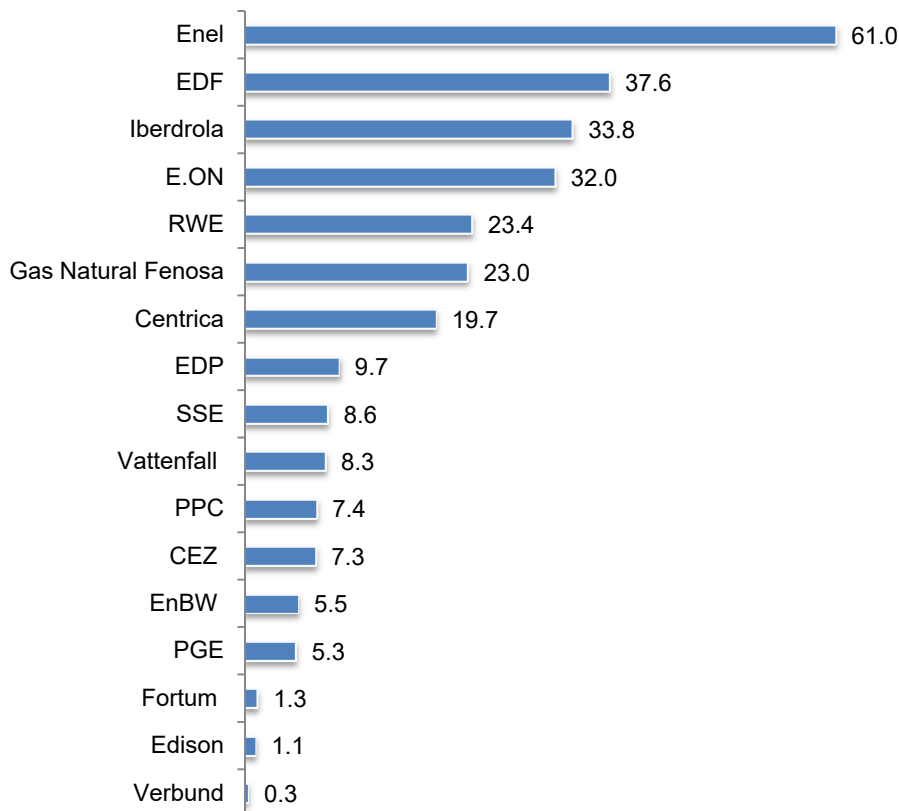
In terms of customers, reported numbers totalled 285 mn in 2015, which is equivalent to around 56% of the whole EU population.

Enel led with 61 mn. It was followed by EDF with 37.6 mn, Iberdrola with 33.8 mn, and E.ON with 32 mn. Engie is an important player too but it does not reveal total customer numbers.

A few companies focus on a relatively small number of high volume wholesale customers and do not have extensive retail portfolios. This group includes Axpo and Statkraft.

**Chart 11 Total Customer Numbers in 2015**

*Reported total number of customers, mn*



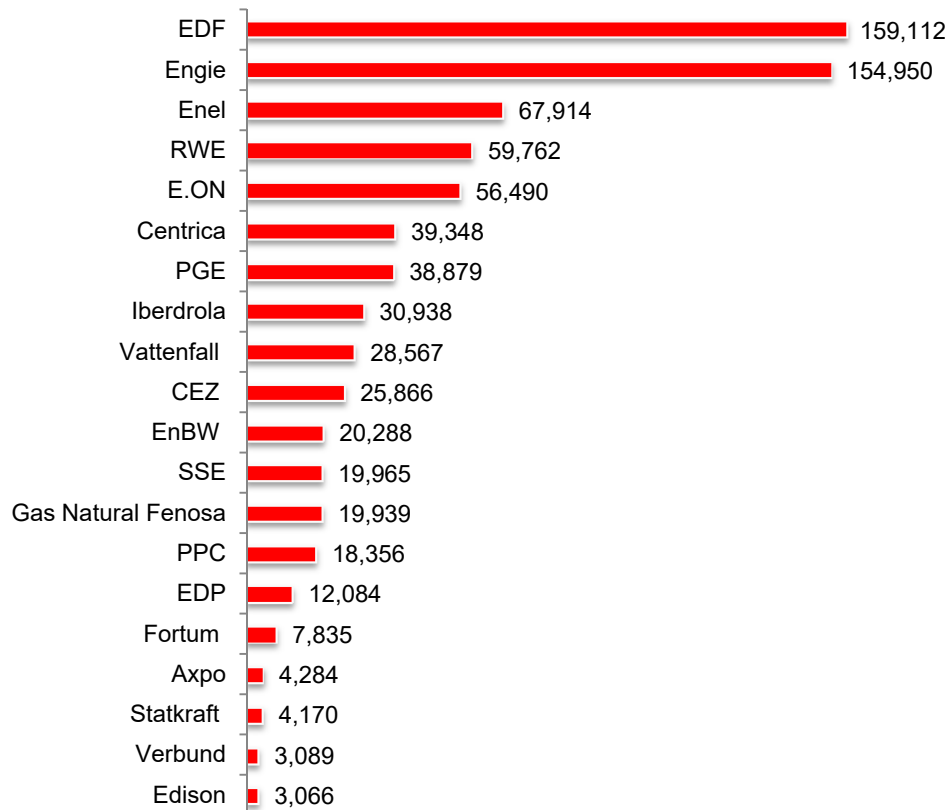
Source: companies / Prospex Research

Payrolls have been reduced since European market liberalisation over a decade ago. In recent years challenging market conditions have prompted many more cuts. Nonetheless, the top 20 remain big employers.

Reported employee numbers totalled around 775,000 in 2015. EDF and Engie had the largest workforces by far.

**Chart 12 Total Employee Numbers in 2015**

*Reported total number of employees*



Source: companies / Prospex Research

## 9 About the Authors



We research and report on Europe's wholesale markets for power, natural gas, coal, and emissions allowances. Our work covers trading volumes, marketplaces, leading players, market fundamentals, and regulatory developments. Our customers include energy traders and producers, exchange and OTC sector service providers, professional advisers, financial institutions, regulators, energy-intensive industry, and trading technology companies.

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#### **European Power Trading 2016 – March 2016**

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Total trading volumes in the major markets rose by 5% on the year in 2015 to 9,566 TWh, the highest growth rate of the last five years. Indicatively assessed by average spot prices during the year, the market's notional value was €348 bn.

This 191 page report offers a comprehensive analysis of the European power trading market. It covers power trading volume trends, EU energy trading regulations, the emissions trading factor in the power business, the leading western and eastern European power exchanges, major brokers, top trading players, power industry fundamentals, and power company rankings. Market characteristics and developments are illustrated in 40 tables and 61 charts.

#### **European Coal Trading 2016 – January 2016**

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The financial coal trading business has surged while the global coal industry plummeted into crisis. We estimate financial coal trading volumes in the main markets jumped by 44% on the year in 2015 to a record high above 5,300 Mt.

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#### **European Gas Trading 2015 – September 2015**

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We estimate that in 2014 the total volume of gas traded at European hubs grew by 25% to reach just over 40,000 TWh. This is a new record and a very substantial rebound after the 5% decline in annual trading volume seen in 2013. The overall growth in European gas trading has continued into 1H 2015 and we estimate that total trading volume is up around 10% on the same period in 2014.

This 235 page report offers a comprehensive analysis of the trading market, the brokers and exchanges, EU competition and environmental policy factors, top industry players, and more. The market's dimensions and trends are profiled in 53 tables and 45 charts.