Charged or static

Which European electric utilities are prepared for a low carbon transition?
Executive Summary

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Linking emissions-related metrics to earnings for European electric utilities

This report updates CDP's research and League Table for European electric utilities, first published in May 2015. It ranks 14 of the largest publicly listed power generators in Europe on readiness for a low carbon transition.

Electric utilities are among the largest contributors to global greenhouse gas emissions, and as an energy supply sector are key to other sectors' ability to decarbonize. Deep decarbonization and near zero net emissions are required from EU utilities by 2050 to achieve below 2°C of warming.

There are four key areas assessed in the League Table, which have been aligned with topic area recommendations for company reporting from the G20 Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD):

Transition risks: We assess companies' current share of generation from fossil fuels, their emissions profiles and current carbon costs under the EU ETS, and introduce a model to measure locked-in emissions between 2015-2050 from current fossil fuel assets against companies' implied carbon budgets to achieve a 2°C transition.

Physical risks: We map facility-specific water stress risks for today and for 2030 using WRI's Aqueduct Water Risk Atlas, and compare this with companies' water risk management measures.

Transition opportunities: We assess companies' progress and strategy in shifting towards renewable energy assets, as well as smart energy solutions, and assess their CAPEX plans and capital flexibility.

Climate governance and strategy: We assess emissions reduction targets, identify alignment of governance and remuneration structures with low carbon objectives, and actions taken in supporting or opposing policies to achieve a low carbon transition.

Key findings

- Though progress is being made in decarbonizing EU power generation, significant additional actions will be required to keep the sector in line with the objectives of the Paris Agreement. The companies in this report are estimated to exceed their implied 2°C carbon budget by 14% or 1.3 billion tonnes CO_2e in aggregate between 2015 and 2050. This raises concerns that accelerated retirement of existing assets could be required. Figure 2 overleaf illustrates the locked-in emissions analysis from which these results are sourced.

- Renewable energy and other new business models involving energy services are gaining ground, but some companies have been much faster to exploit these opportunities while others risk being left behind. The share of non-hydro renewable generation ranges between 1% and 34% among companies assessed. The percentage of planned future CAPEX allocated to renewables ranges from 0% to 54%.

- By 2030, 51% of company thermal generation capacity is projected to be in high or extremely high water stress areas, creating risks to continuity of operations.

- Boards could improve climate governance structures and further incentivize executives to manage climate-related risks. Only a minority of EU utilities have disclosed specific targets for climate change in CEO remuneration, or have identified board-level climate experts.

- Highest ranked companies overall are Verbund, Iberdrola, Fortum and Enel.

- Lowest ranked companies are RWE, CEZ, Endesa and EnBW.

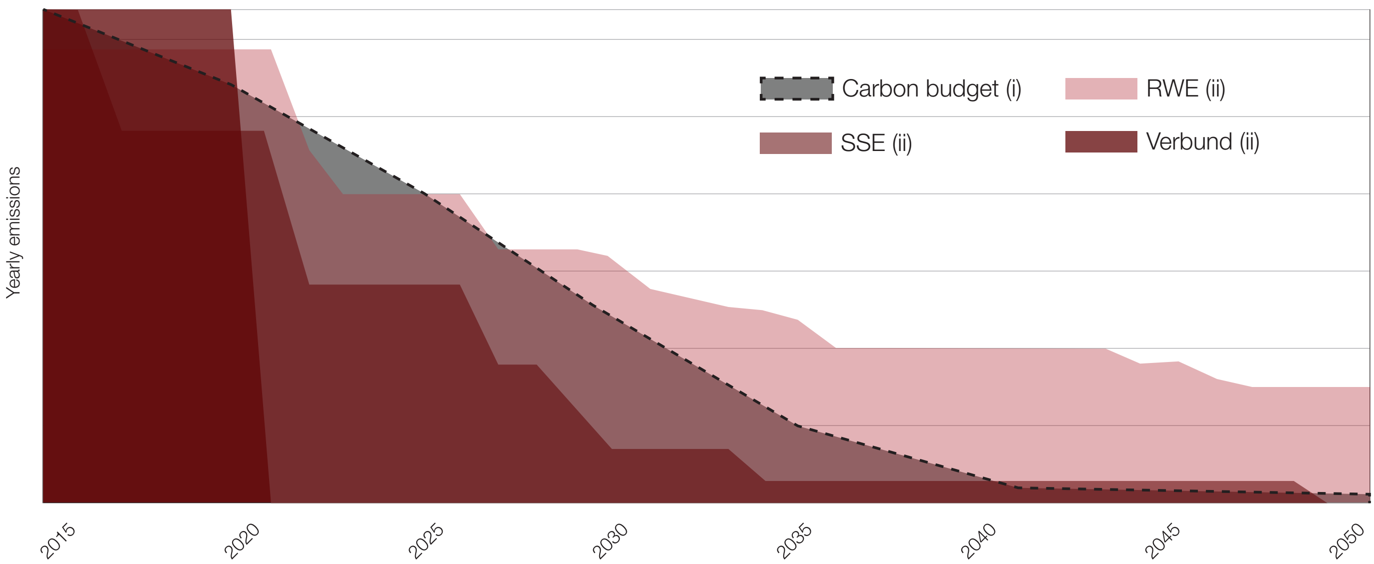
The summary League Table below presents headline company findings. It is based on detailed analysis across a range of carbon and water-related indicators which could have a material impact on company performance. The League Table is designed to serve as a proxy for business readiness in an industry which will undergo significant change as governments increase efforts to implement the Paris Agreement. Companies placed towards the bottom are deemed less prepared for a low carbon transition.

Figure 1: League Table summary

League Table rank	2015 League Table rank	Company	Country	Average market cap 2016 (€bn)	European market share in 2015 (i)	League Table score	Managing transition risks	Managing physical risks	Transition opportunities	Climate governance & strategy
1	3	Verbund	Austria	5	1.0%	3.78	A	A	A	B
2	1	Iberdrola	Spain	40	2.4%	5.35	B	E	A	A
3	7	Fortum	Finland	13	1.5%	6.45	B	B	B	D
4	4	Enel(ii)	Italy	37	3.9%	6.48	C	E	A	B
5	11	SSE	UK	20	0.9%	6.51	C	B	C	C
6	2	Centrica	UK	15	0.6%	6.65	B	C	D	C
7	6	EDF	France	23	18.4%	6.68	B	C	E	B
8	5	EDP	Portugal	11	1.4%	6.72	D	D	A	B
9	9	E.ON(ii)	Germany	17	2.7%	7.13	C	C	B	C
10	8	ENGIE	France	34	4.0%	7.98	C	C	D	C
11	12	EnBW	Germany	6	1.7%	8.22	E	C	C	C
12	10	Endesa	Spain	20	2.4%	8.66	D	D	C	D
13	-	CEZ	Czech Republic	9	1.9%	9.44	D	D	D	E
14	13	RWE(ii)	Germany	7	6.5%	10.89	E	C	E	E
Weighting for each key area							**35%**	**10%**	**30%**	**25%**

(i) Relative to total gross electricity generation (GWh) for EU.
(ii) E.ON analysis includes 46.65% share of Uniper, RWE analysis includes 76.8% share of Innogy, Enel analysis includes 70.14% share of Endesa
Source: CDP

Figure 2: Estimated locked-in emissions vs. implied carbon budget for selected companies



(i) Carbon budgets are calculated based on company specific convergence pathways necessary for the decarbonization of the EU electric utility sector, in accordance with the IEA 2DS scenario.
(ii) Vertical axis scaled for visual comparison - see all 14 company locked-in emissions trajectories in Appendix II on page 44.
Source: CDP, GlobalData, IEA 2DS scenario, company reports

Accessing the full report

The full report is available only to CDP investor signatories. Signatories can access the full report from https://www.cdp.net/en/dashboards/investor. Please contact your CDP account manager or investor@cdp.net if you are not able to log in.

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