WBA Electric Utilities Benchmark 2020 – Data Availability

The Electric Utilities Benchmark for 2020 assesses the most reliable, latest available public and verifiable data - with future oriented analysis. The most recent reporting year for which a complete set of data was available across all 50 keystone companies assessed is 2018. Wherever possible, collected data points are five years historic up to reporting year – so for some, as far back as 2013. ACT seeks to provide a forward-looking long-term oriented assessment of company alignment with low-carbon transition. For the quantitative indicators assessment it uses a dataset of five years continuous data preceding the reporting year, with a preference for verifiable data – this can mean the most complete data year is used as a start point rather than the most recent calendar year. For other parts of the assessment, data published up to the date of the assessment may be considered where relevant. As a forward-looking assessment the concept of a reporting period is less relevant than for an assessment of historic performance; what is important is that the data respects the ACT principles of relevance and verifiability.

The benchmarked pathway for the company was calculated from the International Energy Agency (IEA) Energy Technology Perspectives Beyond 2°C Scenario Pathway (B2DS) following the Sectoral Decarbonisation Approach (SDA) and applying the convergence allocation mechanism with geographical weighting.

The main source of asset level information was GlobalData. Assumptions were applied on asset lifetimes and efficiencies as well as regional generation per generation type. The RepRisk information platform was consulted to inform the narrative part of the assessment.

Companies were also invited to directly participate in the data validation process by both reviewing data collected to date, and submitting additional information as required during a three-week period, tailored to the date from which the company was contacted with its pre-populated data file, between April and May 2020. Companies are informed that additional data will not be accepted after the three-week window has passed unless explicitly agreed in advance.

1	Ørsted
2	ENGIE
3	EDP Energias de Portugal
4	Iberdrola
5	Électricité de France (EDF)
6	SSE
7	Vattenfall
8	Xcel Energy
9	E.ON
10	Enel

11	AES Corporation
12	Exelon Corporation
13	CLP Holdings(中電集團)
14	Dominion Energy
15	CEZ Group
16	Vistra Energy Corp
17	Eletrobras
18	Tohoku Electric Power
19	State Power Investment Corporation (SPIC) (国家电力投资集团)
20	American Electric Power (AEP)
21	RWE
22	Kyushu Electric Power
23	Kansai Electric Power Company (KEPCO)
24	Southern Co
25	Uniper
26	Origin Energy
27	Duke Energy
28	Perusahaan Listrik Negara (PLN)
29	Tenaga Nasional
30	Chugoku Electric Power Company
31	EnBW Energie Baden-Württemberg
32	Chubu Electric Power
33	NextEra Energy
34	Pacific Gas and Electric (PG&E)
35	Fortum
36	AGL Energy
37	Tokyo Electric Power Company (TEPCO)
38	Taiwan Power Company (台灣電力公司)
39 (=)	Korea Electric Power Corporation (KEPCO/Hanjeon)
39 (=)	NTPC
41	Eskom Holdings

42	Inter RAO
43	Comision Federal de Electricidad (CFE)
44	China Three Gorges Corp (中国长江三峡集团)
45	Saudi Electricity Company (SEC)
46	China Huaneng Group (中国华能集团)
47	China Datang Corp (中国大唐集团)
48	China Energy Investment Group (CHN Energy) (国家能源投资集团)
49	China Huadian Corporation (中国华电集团)
50	Egyptian Electricity Holding Company (EEHC)

1	Ørsted Ørsted's engagement with the data validation process was limited. For transparency reasons, Ørsted provided confirmation on several points included in the assessment. The company's generation and emissions data came from annual reports (2018-2013). Qualitative information was sourced from a combination of Ørsted's 2019 annual report and its response to the 2019 CDP Climate Change Questionnaire.
2	ENGIE Engie did not respond to the data validation process. The company's generation and emissions data came from appendices to the financial statements. Qualitative information was sourced from a combination of Engie's integrated reports, investor presentations, 2018 annual report and its response to the 2019 CDP Climate Change Questionnaire.
3	EDP Energias de Portugal EDP engaged with the company data validation process. The feedback integrated related to the company's targets, intangible investments, management & business models. The company's generation and emissions data came from sustainability reports (2018-2013). Qualitative information was sourced from a combination of EDP's 2018 annual and sustainability report and its response to the 2019 CDP Climate Change Questionnaire.

4	Iberdrola Quantitative and qualitative data for the 2018 reporting year and the five previous years was collected from reports shared via the company's website as well as from the company's 2019 CDP Climate Change Questionnaire response. The company engaged in a data validation process to confirm that representative data had been collected and also shared some information on its generating assets.
5	Électricité de France (EDF) Data for the assessment was primarily sourced from material available via the company's website and from its 2019 CDP Climate Change Questionnaire response. Details on EDF's newer non-generation business models were not identified which limited assessment for the business model module. The company engaged in the data validation process but without sharing a detailed overview of expected asset decommissioning and new commissioning. The company released new target information after the completion of the original data collection. The overall aim for carbon neutrality by 2050 was applied for the target assessment. It should be noted that the company has recently committed to setting an SBTi approved 1.5-degree target within the next 24 months.
6	SSE SSE has published details on its climate performance and low-carbon transition plan in its annual reports, sustainability reports, publicly available scenario analysis and a detailed CDP response. Only capacity and generation data including purchased power was found for this assessment. There was no engagement during the data validation process. SSE publicly announced it had set well-below 2-degree aligned targets, both for emissions intensity and absolute emissions, through the Science-Based Target initiative on June 17th 2020, however, these were announced too late to be considered in this assessment.
7	Vattenfall Vattenfall engaged with the data validation process for this assessment. Feedback relating to the company's updated targets and recently released 2019 annual report were integrated into the assessment. The company's generation and emissions data came from annual reports (2018-2013). Qualitative information was sourced from a combination of Vattenfall's 2018 & 2019 annual reports and its response to the 2019 CDP Climate Change Questionnaire.

8	Xcel Energy Xcel Energy Inc did not respond to the data validation process. Data used to complete the assessment came from annual reports, the company website, the "Building a Carbon-free Future" report along with the supporting work in the "Xcel Energy carbon emissions targets and limiting warming to less than 2 degrees C" report. Disclosure around environmental reporting has improved over recent years.
9	E.ON E.ON engaged with the data validation process. The company's generation and emissions data came from annual reports (2018-2016). Generation figures for the years 2013-2015 were not used due to the Uniper spin-off which caused a significant boundary change across 2016-2015. Qualitative information was sourced from a combination of E.ON's 2018 annual & sustainability reports and its response to the 2019 CDP Climate Change Questionnaire.
10	Enel Data for the assessment was primarily sourced from material available via Enel's website and from its 2019 CDP Climate Change Questionnaire response. The company engaged with the data validation process, referring to its 2019 sustainability report released after the completion of the original data collection. This new information was taken into account, if it resulted in changes to the maturity matrix selections applied to assess performance.
11	AES Corporation AES Corporation did not respond to the data validation process. Data for the assessment was primarily sourced from annual & sustainability reports, its Climate Scenario Report and other material available via AES's website and from its 2019 CDP Climate Change Questionnaire response. For the reporting years 2018 & 2017, AES Corporation does not provide a breakdown of capacity or generation across fuel types. This information was available for the years 2016 and earlier but the approach was not continued in 2017/2018.
12	Exelon Corporation Exelon Corporation did not respond to the data validation process. Data used to complete the assessment came from sustainability reports and the company website. Exelon does not report on multiple years for generation, capacity and emissions which makes comparisons over time more difficult.

13	CLP Holdings (中電集團) CLP publishes annual reports and sustainability reports. These provide generation, capacity and emissions data per fuel type. It has provided a breakdown of own generation, versus own generation and energy purchase since 2015. CLP has also responded to the CDP Climate Change Questionnaire for many years and has a low-carbon transition plan called Climate Vision 2050. CLP engaged in the data validation process for this assessment. CLP has shifted to including long-term capacity and energy purchase (often referred to as purchased power agreements) in its climate targets, however, this assessment has only included generation by the company itself and not long-term capacity and energy purchase in its calculations of emissions intensity. This is in order to remain consistent with the other assessments in this benchmark, which use own generation data only wherever possible.
14	Dominion Energy Quantitative and qualitative data for the 2018 reporting year and the five previous years was collected from reports shared via the company's website as well as from the company's 2019 CDP Climate Change Questionnaire response. The company was invited to provide feedback on the data collected for the performance assessment but did not engage.
15	CEZ Group Generation, capacity and emissions data was available in annual and sustainability reports. No breakdown of capacity per generation type was found for the year 2013. The company's low-carbon transition plan is incorporated into the company's strategy and extra detail is provided in the company's “Investment story” presentation for investors. Research and development expenditure is reported by segment, but there is no breakdown of expenditure invested in low-carbon technologies. CEZ Group engaged in the data validation process for this assessment.
16	Vistra Energy Corp Vistra Energy Corporation responded to the data validation process. Data for this assessment was obtained from annual financial and other reports and the company website.

17	Eletrobras Eletrobras did not respond to the data validation process. The company's generation and emissions data came from annual reports (2018-2013). Qualitative information was sourced from a combination of Eletrobras's 2019 annual report, the company website and its response to the 2019 CDP Climate Change Questionnaire.
18	Tohoku Electric Power Tohoku did not engage with the data validation process. The company's generation and emissions data came from its 2019 Factbook. Qualitative information was sourced from a combination of Tohoku's 2019 Integrated Report, its Environmental Action Report and its response to the 2019 CDP Climate Change Questionnaire.
19	State Power Investment Corporation (SPIC) (国家电力投资集团) SPIC did not engage with the data validation process. The company's generation and emissions data came from annual reports (2018-2013). Qualitative information was sourced from SPIC's annual reports.
20	American Electric Power (AEP) AEP responded to the data validation process. The company's generation and emissions data came from annual reports (2018-2013). Qualitative information was sourced from a combination of annual reports, the Strategic Vision document, the company website and its response to the 2019 CDP Climate Change Questionnaire. AEP's data is at a very summary level and misses a number of key, useful pieces of information such as emissions intensity data. Its 2019 EEI ESG/Sustainability Report is weaker than the pilot version which included a useful quantitative data table.
21	RWE RWE engaged with the data validation process. Feedback relating to the company's updated targets, strategy and recently released 2019 annual report were integrated into the assessment. The company's generation and emissions data came from annual reports (2018-2013). Qualitative information was sourced from a combination of RWE's 2018 & 2019 annual reports and its response to the 2019 CDP Climate Change Questionnaire.

22	Kyushu Electric Power Generation, capacity and emissions data was available through annual reports and company factbooks. The company does not provide a breakdown of own generated and purchased power, possibly in part because it is a vertically integrated utility in Kyushu. The company does not have a clear low-carbon transition plan in one place, but relevant information is across its 2018 Environmental Report, Group Management Vision, 2019 Annual Report and website. While the company responded to the CDP Climate Change Questionnaire in 2018, it did not respond to the 2019 CDP Climate Change Questionnaire. Consequently, some data was collected from its 2018 response. Kyushu Electric Power did not engage in the data validation process for this assessment.
23	Kansai Electric Power Company (KEPCO) Data for the assessment was sourced from the company's 2019 CDP Climate Change Questionnaire response and from materials available on the company's website. However, it was not always clear which year was being referred to in the reporting of power generation, capacity and emissions intensity. Country generation trends were applied to estimate forward-looking emissions in the absence of clear asset level decommissioning and new commissioning dates in the GlobalData dataset. The company was invited to validate data collected for the performance assessment but did not provide feedback.
24	Southern Co Southern Company did not respond to the data validation process. Data used to complete this assessment came from Southern Company's annual reports, the "Planning for a low-carbon future" document, SEC filings and the company website.
25	Uniper Uniper did not engage with the data validation process. The company's generation and emissions data came from annual reports (2018-2016). Qualitative information was sourced from a combination of Uniper's 2018 and 2019 annual reports and its response to the 2019 CDP Climate Change Questionnaire.
26	Origin Energy Origin responded to the data validation process. The company's generation and emissions data came from annual reports (2018-2013). Qualitative information was sourced from a combination of Origin's annual sustainability and financial reports, its Scenario analysis report and its response to the 2019 CDP Climate Change Questionnaire.

27	Duke Energy Most of the data for this assessment was collected during the first quarter of 2020, i.e. before the release of the company's latest 2020 Climate Report. Quantitative and qualitative data for the 2018 reporting year and the five previous years was collected from reports shared via the company's website as well as from the company's 2019 CDP Climate Change Questionnaire response. The company was invited to provide feedback on the data collected for the performance assessment but did not engage.
28	Perusahaan Listrik Negara (PLN) PLN has annual and sustainability reports in English and Indonesian. There is a low-carbon transition plan within the 2018 Sustainability Report (p.133-140). It has generation (own generation, as well as own plus purchased) data by fuel type for 2013 to 2018. It has total capacity data (own and own plus purchased) for 2013 to 2018, though no clear split by type. Emissions data per fuel type was only found for 2016 to 2018. The company does not yet disclose to CDP but did engage in the data validation process for this assessment.
29	Tenaga Nasional Tenaga Nasional Berhad (TNB) reports its generation and capacity breakdown by fuel type its annual reports. It also has been measuring and reporting its emissions by fuel type since 2016. It has improved at reporting the geographical distribution of generation and capacity. The company's low-carbon transition plan is integrated into its sustainability reports. TNB does not disclose to CDP and did not respond to the data validation process.
30	Chugoku Electric Power Company Chugoku did not engage with the company data validation process. The company's generation and emissions data came from annual reports (2018-2013). Qualitative information was sourced from a combination of Chugoku's 2019 annual report and its response to the 2019 CDP Climate Change Questionnaire.

31	EnBW Energie Baden-Württemberg Company specific data for this assessment was collected from the company's 2019 CDP Climate Change Questionnaire response and from materials available publicly from its website. Data on asset mix and projected (de)commissioning dates was sourced from GlobalData. The company was invited to validate data collected for the performance assessment but did not provide feedback.
32	Chubu Electric Power Chubu did not engage with the company data validation process. Generation and emissions data came mainly from the 2019 annual report with older data from the relevant annual report. Qualitative information was sourced from a combination of recent annual reports and its response to the 2019 CDP Climate Change Questionnaire.
33	NextEra Energy Data used to complete this assessment came from NextEra Energy's annual reports, SEC filings and the company website. The company has easily accessible generation, capacity and emissions data on its website for the years 2018-2014. It was not possible to identify these data points for 2013. The company did not engage with the data validation process.
34	Pacific Gas and Electric (PG&E) Data used to complete this assessment came from PG&E's sustainability reports, proxy statements, 2019 CDP Climate Change Questionnaire response and the company website. The company did not engage with the data validation process.
35	Fortum Fortum provides generation, capacity and emissions data in its annual and sustainability reports. Its low-carbon transition plan is integrated into its sustainability reports. It is a CDP responder - data used to complete the assessment came from its 2019 CDP Climate Change Questionnaire - and it engaged in the data validation process.

36	AGL Energy AGL Energy Ltd responded to the data validation process. The company has a data centre on its website which contains most of the quantitative data required for this assessment. Other qualitative data was sourced from annual reports, climate change mitigation scenario reports and its response to the 2019 CDP Climate Change Questionnaire.
37	Tokyo Electric Power Company (TEPCO) TEPCO did not engage with the data validation process. The company's generation and emissions data came from company factbooks, integrated and annual reports (2018-2013). Qualitative information was sourced from a combination of TEPCO's 2019 Integrated Report and its response to the 2019 CDP Climate Change Questionnaire.
38	Taiwan Power Company (台灣電力公司) Taiwan Power (Taipower) discloses own and purchased generation and capacity publicly through its sustainability reports. It also reports absolute emissions and provides an emissions intensity figure. Please note the emissions intensity figure provided by Taipower in its public reports is higher than the intensity figures used in this assessment because Taipower's calculation did not include nuclear generation, whilst this assessment did include nuclear generation in its emissions intensity calculation. Additionally, in 2019 the company published its "White Paper on the Environment" which includes additional details on its low-carbon transition plan to those found in its sustainability reports. Taipower has established an emissions target, but only for its thermal units, meaning it could not be considered in this assessment, as discussed in the company's scorecard. Taipower does not report to CDP and did not engage during the data validation process.
39 (=)	Korea Electric Power Corporation (KEPCO/Hanjeon) KEPCO did not engage with the data validation process. The company's generation and emissions data came from 20-F reports (2018-2013). Qualitative information was sourced from a combination of KEPCO's 2018 20-F report, its 2019 Sustainability Report and its response to the 2019 CDP Climate Change Questionnaire.
39 (=)	NTPC NTPC publishes annual reports and sustainability reports which provide emissions, generation and capacity data. It also responded to the CDP Climate Change Questionnaire in 2019 for the first time. NTPC did not engage in the data validation process.

41	Eskom Holdings The company was invited to provide feedback on the data collected for the performance assessment but did not engage. Lack of data transparency was a major issue hampering assessment of Eskom's progress on low-carbon transition. The company did respond to the 2019 CDP Climate Change Questionnaire but many of the answers lacked the required detail. Quantitative data for the 2018 reporting year and the five previous years was collected from reports shared via the company's website but few specific details on low-carbon transition planning were found in these reports. The RepRisk information platform was consulted to inform the narrative part of the assessment. However, it should be noted that the company's adoption of the King IV™ corporate governance code has resulted in information on reputational risk already being available from its 2019 Integrated Report.
42	Inter RAO The company did not engage in the data validation process for this assessment but responded to CDP's Climate Change Questionnaire in 2019, 2018 and 2017. Inter RAO's 2013-2015 annual reports are difficult to extract information from. Total figures per fuel type are not provided, instead they are reported by operating regions which requires capturing information from multiple areas in the report to compile into a total figure. The summed total across regions are often out by the total figure reported by Inter RAO by ~0.1%. Reports for the years 2016-2018 do not have this problem – the company reports group totals per fuel type.
43	Comision Federal de Electricidad (CFE) CFE did not engage with the data validation process. The company does not respond to the CDP Climate Change Questionnaire. Generation and capacity data came from the company's 2018-2013 annual reports. Qualitative information came from its 2018 annual report.
44	China Three Gorges Corp (中国长江三峡集团) China Three Gorges did not engage with the data validation process. Information to complete this assessment came from the company's website, annual and sustainability reports (2018-2013).

45	Saudi Electricity Company (SEC) Saudi Electricity did not engage with the data validation process. The company's generation and emissions data came from sustainability reports (2018-2013). Qualitative information was sourced from Saudi Electricity's 2018 annual reports, the company website and company presentations.
46	China Huaneng Group (中国华能集团) Huaneng did not engage with the data validation process. Information to complete this assessment came from the company's website, annual and sustainability reports (2018-2013).
47	China Datang Corp (中国大唐集团) Datang did not engage with the data validation process. The company's generation and emissions data came from annual reports (2018-2013). Qualitative information was sourced from Datang's annual reports.
48	China Energy Investment Group (CHN Energy) (国家能源投资集团) CHN did not engage with the data validation process. Information to complete this assessment came from the company's website, annual and sustainability reports (2018-2013).
49	China Huadian Corporation (中国华电集团) Huadian did not engage with the data validation process. Information to complete this assessment came from the company's website, annual and sustainability reports (2018-2013).
50	Egyptian Electricity Holding Company (EEHC) Egyptian Electricity did not respond to the data validation process. Quantitative and qualitative data was obtained from annual reports.