



GLOBAL ELECTRICITY TSO PROFILES AND BENCHMARKING REPORT 2023

The fifth edition of the Global Transmission TSO Profiles and Benchmarking Report provides detailed profiles of around 202 transmission system operators (TSOs) and developers operating in 95 countries in six regions — North America, Latin America, Asia, Europe, the Middle East and Africa.

The report has seven distinct sections.

Part 1 provides the executive summary of the report.

Part 2 of the report discusses the key trends in the global electricity transmission sector. It analyses the past growth in network, evaluate the operational and financial performance of TSOs and examines past and future trends in capital expenditure.

Part 3 of the report compares the growth in transmission line length and transformer capacity of leading TSOs from 2017 to 2021. This section also analyses the future trends in network expansion from 2023 to 2027 for these TSOs.

Part 4 of the report compares the operational and financial performance of leading TSOs. The operational performance of TSOs is compared on parameters such as transmission losses, T-SAIFI and T-SAIDI. The financial performance of the TSO is compared on parameters such as revenue, net profit, return of equity, debt equity ratio, and profit margin.

Part 5 of the report analyses the past and future capital expenditure programmes of leading TSOs.

Part 6 of the report comprises of leading 202 TSOs and developers operating in over 95 countries in six regions — North America, Latin America, Asia, Europe, the Middle East and Africa.

Each TSO profile has information and data on:

- Size and growth in the transmission network, 2017-21
 - Line length, by voltage
 - Substation capacity, by voltage
 - Number of substations/transformers, by voltage
- Operational indicators, 2017-21
 - Annual transmitted electricity
 - Total unserved power transmission per year

- Network availability
- Transmission losses
- Average interruption time
- T-SAIFI
- T-SAIDI
- Financial indicators, 2017-21
 - Revenue
 - Net income
 - Capex/Investment in the transmission network
 - Operational expenditure
 - Return on equity
 - Debt to equity ratio
 - Profit margin
- Future plans and investment, 2023-27
 - Expected trends in network expansion
 - Expected capex/investment
 - Key planned projects
- Recent contract awards
- Key contacts

Part 7 of the report comprises the appendix and has a note on the research methodology along with citation of sources. It provides a list of acronyms and also includes profile of Russia's Transmission System Operator Rosseti Federal Grid Company of Unified Energy System (Rosseti FGC UES). A note on key definitions has also been included in this section.

The report will be indispensable for any organisation interested in the global electricity transmission industry – utilities, system operators, equipment manufacturers and suppliers, EPC contractors, service and technology providers, investors/lenders, research organisations, industry consultants, regulatory agencies, development institutions, etc.

The report is available in PDF format and database in Excel.

The report is priced at USD5,000. There is a special "early bird" discount. The price of the report is USD 3,750 (25 per cent discount) for orders and payments received on or before March 10, 2023 and USD 4,375 (12.5 per cent discount) for orders and payments received on or before April 5, 2023.

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The data in the report will be provided in both PPT and excel formats.

Sources and Methodology

Global Transmission Research's industry analysts have utilised various primary and secondary research sources in preparing this report. Primary sources include data and statistics obtained through telephone and email questionnaires sent to various utilities, transmission companies, transmission system operators and industry regulators. Extensive secondary research has been conducted by our analysts and research associates. These secondary sources include, but are not limited to, websites of utilities; annual reports and financial reports of utilities; investor presentations; analyst reports; government documents, plans and statistical databases; websites of relevant ministries and regulators; websites of relevant industry associations; internal and external proprietary databases; news articles; and press reports. Wherever applicable, all research sources are appropriately cited within this report.

These primary and secondary research sources, combined with our industry expertise, have been synthesised into the qualitative and quantitative analysis which has been presented in this report. The data and statistics for years 2017 to 2021 are actual figures obtained from the concerned utilities and ministries. In a few cases, where this data was not available, we have used estimates based on information obtained from press/analyst reports or those based on past growth trends. For analysis of the expected network addition and planned investment, we have extensively researched the plan documents of various utilities and governments. Wherever these plans were not available, we have derived the projections based on past growth trends or based on projects planned by the utilities.

The future capital expenditure investment numbers include investments on both new build and renovation and modernisation projects. Also, in several countries, updated transmission plans were released in 2021 and 2022 with revised investment figures. Hence the expected investment numbers mentioned in this report may vary from investment numbers mentioned in our previous reports.

To ensure comparability of financial ratios across TSOs, we have adopted specific formulae for estimating these ratios for all utilities. Hence, the financial ratios estimated in the report may not match with those mentioned by utilities in their annual/financial reports. In some cases, totals may not match due to data being rounded off.

Great care has been taken to ensure that all analysis is well supported by facts. Where facts are not available and assumptions are made, we have explained our assumptions and our methods of estimation.

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