Long-term electricity load forecasting: Current and future trends

Long-term power-system planning and operation, build on expectations concerning future electricity demand and future transmission/generation capacities. This paper reviews current methodologies for forecasting long-term hourly electricity demand on an aggregate scale (regional or nationally), for 10–50 years ahead. We discuss the challenges of these methodologies in a future energy system featuring more renewable energy sources and tighter coupling between the power sector and the building and transport sectors. Finally, we conclude with some recommendations on aspects to be taken into account regarding long-term load forecasts in a changing power system.

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