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Data & AI

Data Literacy for Energy & Utilities Operations and Planning Playbook

Planning capacity and demand on data rigorous enough to avoid both blackouts and wasted investment

- Practitioner
- Intermediate
- Template Included

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- 23 May 2019
- 4 minute(s)

Overview

A framework for building data literacy within energy and utilities operations and planning teams — demand forecasting critical reading, understanding forecast uncertainty for capacity planning, and appropriately weighing historical patterns against emerging structural shifts (electrification, distributed generation) that break historical trend continuity.

Utilities have decades of demand forecasting experience — what's

the specific data literacy gap now? Historical forecasting approaches were often built assuming relatively stable, predictable demand growth patterns. Structural shifts (electrification of transport and heating, distributed generation, changing consumption patterns) are breaking historical trend continuity in ways that require updated literacy about when historical patterns can and can't be extrapolated reliably.

What's the risk of getting capacity planning forecasts wrong in

either direction? Underestimating demand risks reliability problems and blackouts; overestimating risks substantial wasted capital investment in unnecessary capacity — both are costly, making forecast uncertainty literacy genuinely high-stakes for utilities planning teams.

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