

Nils Klippenberg: Buildings Are Becoming Power Players

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Part of Gridlocked? Put Demand Where It Works



Nils Klippenberg
CEO, Siemens

Buildings should share data and flex their load to help the grid

Nils Klippenberg, CEO of Siemens, argued that buildings should move from passive consumers to active players in the power system. His slides, citing DNV ETO Norway, said buildings in Norway use more than 40% of power production, and that the share is growing. The power system is in balance today, but new demand from the Paris agreement, transport and new industries including data centres puts it under pressure; his chart set today's 150 TWh of production against a possible future demand of 328 TWh. Doubling the system's capability means digitalizing the grid to use existing assets better, flexibility and load management, new substations and lines, and new renewable production. With real-time, two-way data, a building can run at reduced load or off the grid when the grid is saturated, and earn new revenue in a flexibility marketplace.

KEY TAKEAWAYS

- Buildings use more than 40% of Norway's power production, and the share is growing.
- Data centres, transport and new industries add demand to a power system that is in balance today.
- Doubling capacity needs a digitalized grid, flexibility, new substations and lines, and new renewable production.
- Digital twins and AI control on top of existing systems, across vendors, enable predictive and prescriptive maintenance.
- When the grid is saturated, buildings can cut load or disconnect, and earn from flexibility markets.

>40%

share of Norway's power production used by buildings