

When to charge demand? Refinancing capacity remuneration mechanisms

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Extended Abstract

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Abstract Summary

While extensive research has examined how capacity markets address the missing-money problem in electricity markets, less attention has been devoted to how the costs of capacity markets are distributed to consumers. Here, we analyze the design options and implications of demand charges for refinancing electricity capacity markets. We compare a flat demand charge with time-of-use and dynamic charges, which more accurately reflect the costs of building capacity to cover demand during periods of scarcity. We show that more cost-reflective demand charges induce efficient substitution of demand response for capacity procured in the capacity market compared to a flat charge. Furthermore, demand increases when capacity is abundant, as no distortive charges are applied. As a result, more cost-reflective charges increase consumer surplus and welfare, and drive the investment mix towards renewable energy sources.

Presenting Author Biography

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Ongoing Research

- **When to charge demand? Refinancing capacity remuneration mechanisms**, joint with Diana Krainer, Stefan Strömer, Oliver Ruhnau; work in progress.
- **Demand Response to scarcity prices in the Finnish electricity market**, joint with Frederike Fitza, Oliver Ruhnau; work in progress.

