

The next generation of capacity markets in Europe

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European Member States are increasingly introducing national capacity mechanisms (CMs) to address growing adequacy risks. However, current national CMs are inefficient in highly interconnected electricity systems, fail to adequately value demand response and behind-the-meter investments, and are poorly suited to energy-limited resources.

In this talk, I will present a conceptual hybrid centralized–decentralized capacity market design that holds the potential to address these challenges, with a focus on our novel design for a coupled European capacity market based on the principles of flow-based market coupling. We show that existing arrangements for cross-border participation in capacity markets are prone to both under- and overinvestment and do not properly account for the contribution of interconnection capacity to Member States' adequacy targets. The proposed flow-based coupling of capacity markets reduces overall system costs by leveraging available capacity in neighboring market zones while ensuring deliverability under network constraints in all scarcity situations.