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The Impact of Transmission Pricing in Network Industries

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Abstract

The allocation of scarce transmission resources has a considerable impact on investment incentives in network industries. We study the long term effects of two common network management regimes on investment in production and transmission facilities. In one case transmission constraints are directly taken into account through locationally differentiated market prices (simultaneous market clearing). In the other case, a uniform market price is implemented and transmission constraints are resolved in a subsequent congestion market (sequential market clearing). While simultaneous market clearing produces the efficient outcome, sequential market clearing leads to overinvestment in generation and transmission capacity, as we show. These findings contribute to the debate on electricity transmission pricing.

Keywords

Transmission Investment, Generation Investment, Market Design, Locational Marginal Pricing, Redispatch, Fluctuating Demand, Scarcity Rents

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