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A Primer on Capacity Mechanisms

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Abstract A simple model is built up to capture the key drivers of investment and pricing incentives in electricity markets. The focus is put on the interaction between market power and investment incentives, and the trade-off it introduces when designing the optimal regulatory instruments. In contrast to the energy-only market paradigm that assumes perfect competition, our model demonstrates that in the presence of market power scarcity prices do not promote efficient investments, even among risk-neutral investors. Combining price caps and capacity payments allows to disentangle the two-fold objective of inducing the right investment incentives while mitigating market power. Bundling capacity payments with financial obligations further mitigates market power as long as strike prices are set sufficiently close to marginal costs.

Keywords scarcity pricing, market power, capacity markets, reliability options.

JEL Classification L13, L51, L94

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