# Joint energy and capacity equilibrium model for centralized and behind-the-meter distributed generation

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**Abstract-**

**This paper presents a conjectured-price-response equilibrium approach for modeling both centralized generation (CG) and behind-the-meter equilibrium conditions enable to represent different degrees of oligopoly using conjectural variations in both the energy and capacity markets. This work proves that such an equilibrium problem can be solved through an equivalent, yet simpler-to-solve, quadratic system peak demand, whenever the weight of the power-based term of the access tariff is not extremely high.**

**Index Terms- Generation expansion; Distributed generation; Energy and capacity markets; Capacity payments; Nash equilibrium**

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