

(Inverse) Stackelberg Game in an Energy Market Problem

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Abstract

We formulate a noncooperative game between energy producers on the one side and energy markets on the other. This game is dynamic, i.e., evolves in time, and can be recognized to be an (inverse) Stackelberg game with the energy producers as leaders and the energy markets as followers. Since the leaders and the followers can both be cooperative and noncooperative among themselves, different scenarios of this game are formulated and solved. The analytical solution is found for small-scale scenarios, while large-scale problems are solved numerically.

Keywords: (inverse) Stackelberg games, energy market, liberalization of energy markets.