再生可能エネルギーの政策分析-RPS 制度と均衡制約をもつ数理計画問題-

Policy Analysis of Renewable Energy: RPS and Mathematical Program with Equilibrium Constraints

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Abstract　We compare optimal renewable portfolio standards (RPS) targets under a benchmark central planning setting with those under deregulated ones with and without market power. The latter two are formulated as mathematical programs with equilibrium constraints (MPEC). We show that the optimal RPS target for an oligopolistic electricity market is greater than that for a centralised electricity industry but lower than that for a perfectively competitive market. Somewhat surprisingly, we demonstrate that social welfare may increase under the potential for exercise of market power.

Keywords　Renewable portfolio standards (RPS), Mathematical program with equilibrium constraints (MPEC), Market power

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