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(57) Abstract :

**METHOD AND SYSTEM FOR ENERGY TRADING IN NETWORKED MICROGRIDS USING MATCHING THEORY**

**ABSTRACT** This method suggests a novel cooperative strategy to be followed between the micro-grids (e.g., solar panels, wind turbines, PHEVs, etc.) of a distribution network that is connected to the main grid, for the internal energy trade while ensuring the profits of participant microgrids. The cooperative strategy is designed from the Gale - Shapley matching theory and formulates the preference matrices based on the trading prices which includes the operational and virtual cost terms. The preference-based trading between the networked microgrids ensures the maximum profit and minimum losses. The comparative study made with the conventional trading method validates the effectiveness of the proposed theory. [Fig. 1]

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