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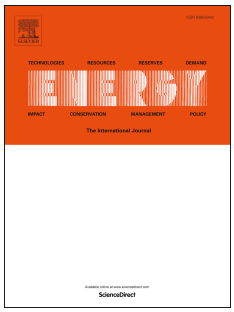

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Stochastic dominant-subordinate-interactive scheduling optimization for interconnected microgrids with considering wind-photovoltaic-based distributed generations under uncertainty

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Abstract: This study develops a dominant-subordinate-interactive stochastic programming (DSISP) model for the wind-photovoltaic-based distributed energy resource systems in Lize Financial Business District of Beijing, China. During the synergistic optimization process with 24-h prediction outputs of solar and wind power as constraints, the dominant level puts more emphasis on renewable energy utilization, while the minimization both of pollutant emissions and system cost are modeled as a multi-objective programming (MOP) problem placed at the subordinate level. Results indicate that: (a) renewable energy technologies would exert an increasing paramount