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

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

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