Supply chain decisions for an adaptive, decentralized renewable energy system

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Propositions

Supply chain decisions for an adaptive, decentralized renewable energy system

1. Biogas transportation in tubes by trucks in repetitive schedules is most efficient when the number of available tubes at each farm exceeds the vehicle capacity (This thesis, Ch. 2).

2. In making repetitive biogas transportation schedules, vehicles should make single uncombined tours if the level of storage capacity at each farm enables doing so (This thesis, Ch. 2).

3. In matching electricity supply and demand for local communities, both constant and variable energy sources complement each other and play an important role in reducing storage requirements (This thesis, Ch. 4).

4. For self-sufficient communities, high levels of installed production capacity lead to low storage requirements and much excess-produced energy, whereas low production capacity leads to high storage requirements (This thesis, Ch. 4).

5. Profit-maximizing storage operation strategies of grid-connected storage may lead to opportunistic buying and selling, which leads to volatile interactions with the grid (This thesis, Ch. 5).

6. Expanding the grid capacity can potentially increase congestion when it is combined with profit-maximizing storage operations, due to more opportunistic trading (This thesis, Ch. 6).

7. An energy saving lamp only saves energy when it is on. When it is off, it is just like any other lamp.

8. Receiving feedback on your thesis is like a simulation model, it requires many iterations before convergence.

9. It is easier to navigate the seas in a sailboat then to navigate the endless sea of literature.

10. Writing a PhD is like playing jazz: unpredictable, explorative, and it consists of tension and release.