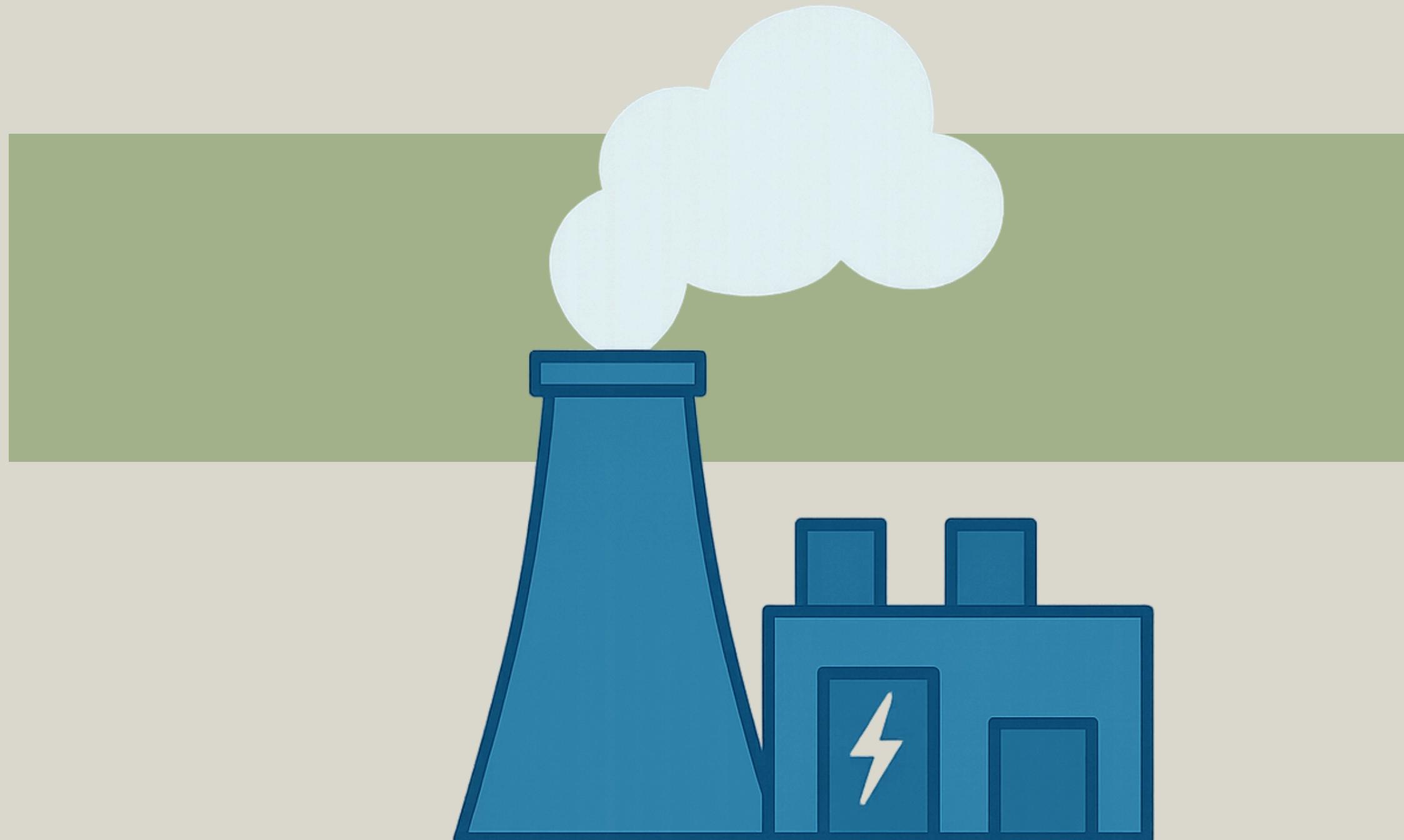


Virtual Power

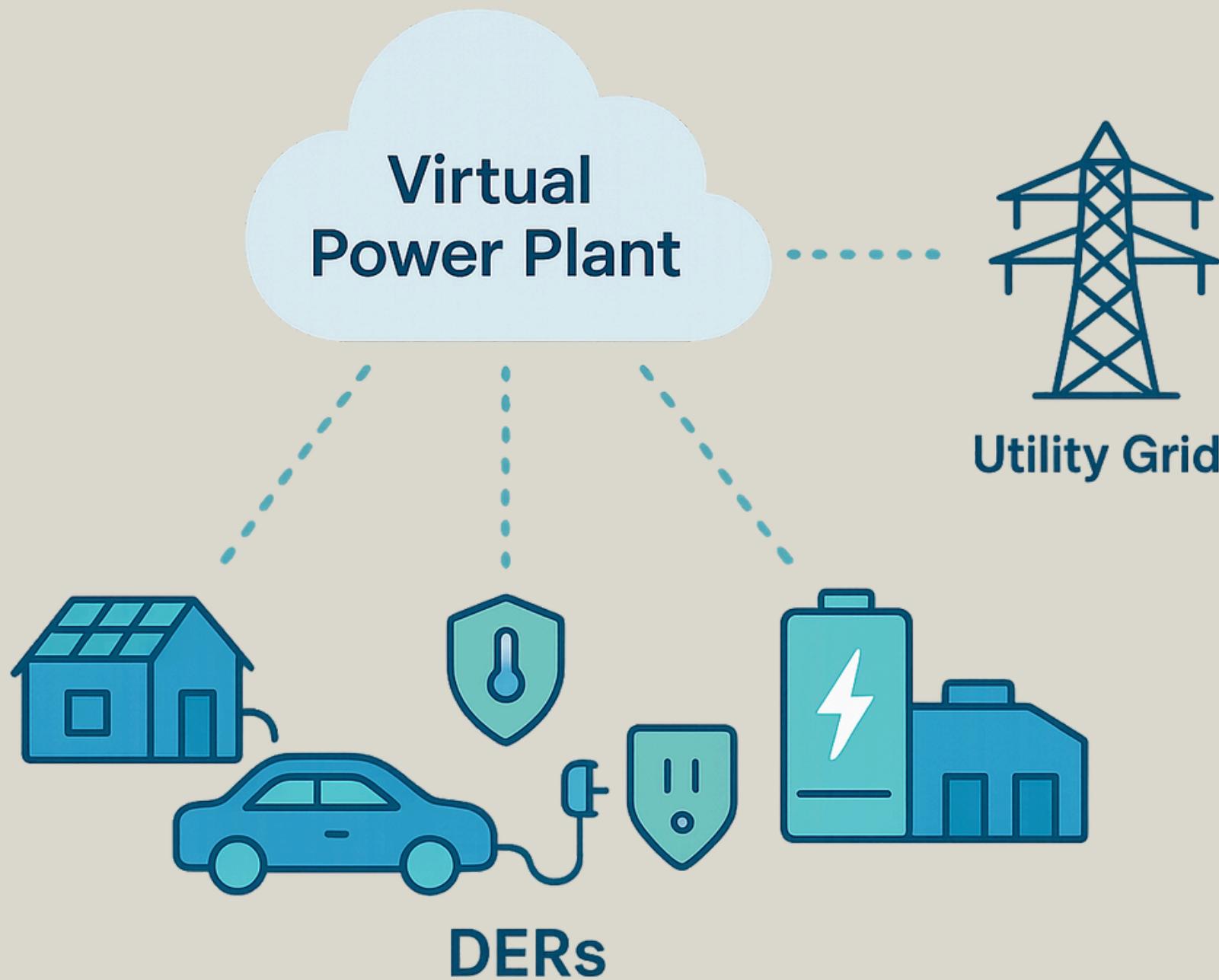
Plants

Aditya Kanteti

October 21st 2025

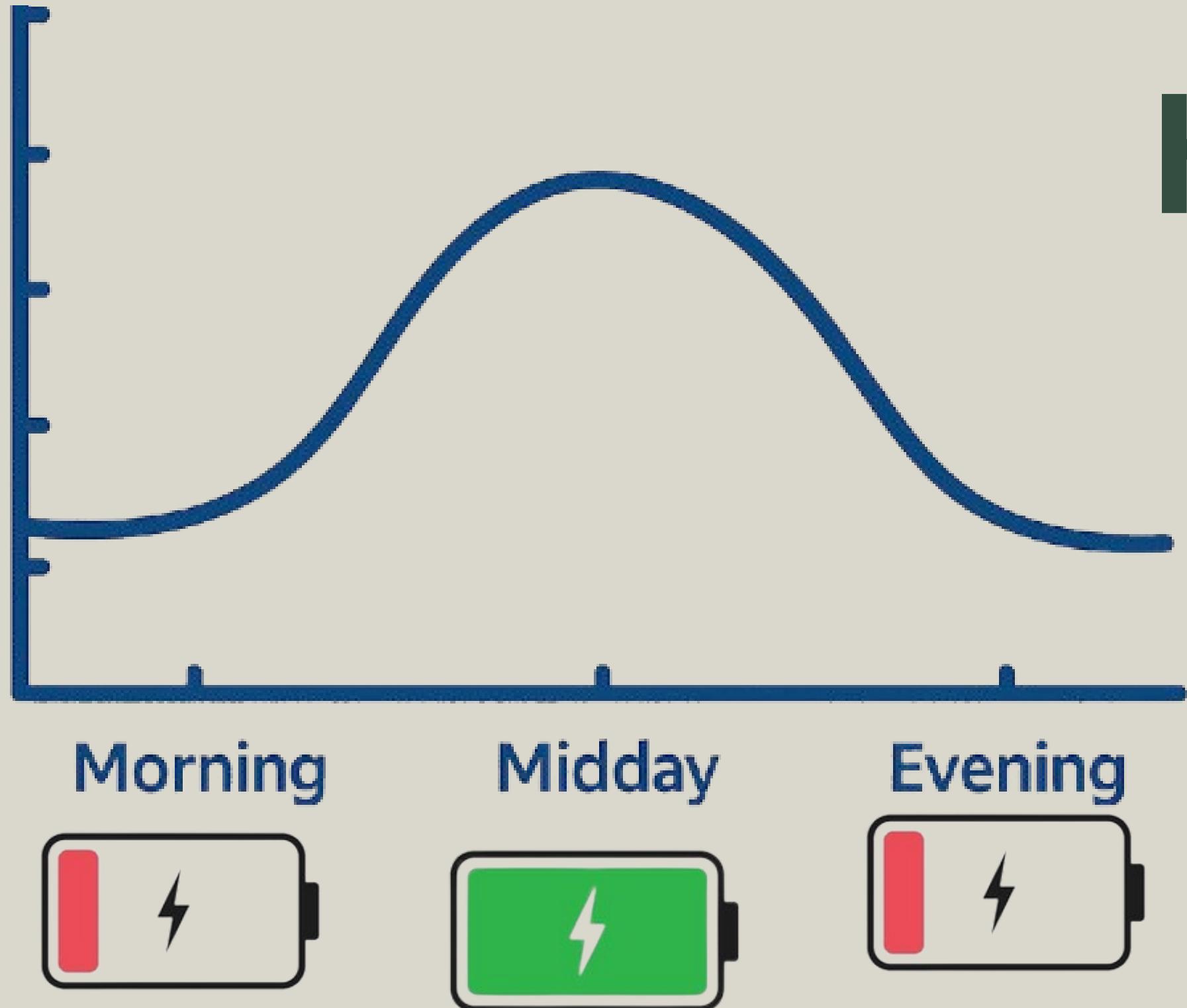


What are Virtual Power Plants?



Distributed Energy Resources (DERs) = batteries, EV Chargers, smart thermostats, water heaters, rooftop solar, etc

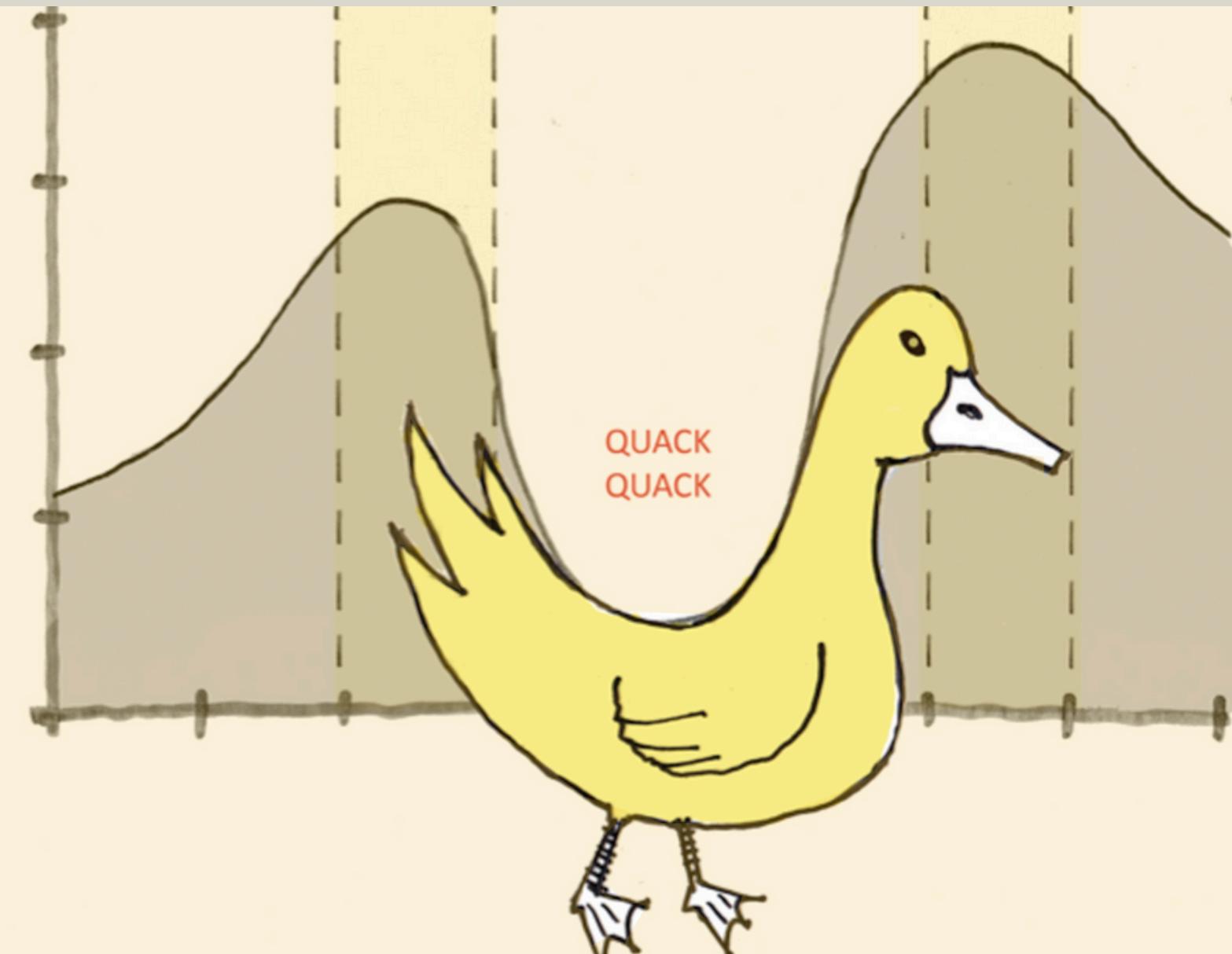
How does it work?



- Distributed Energy Resource = Battery

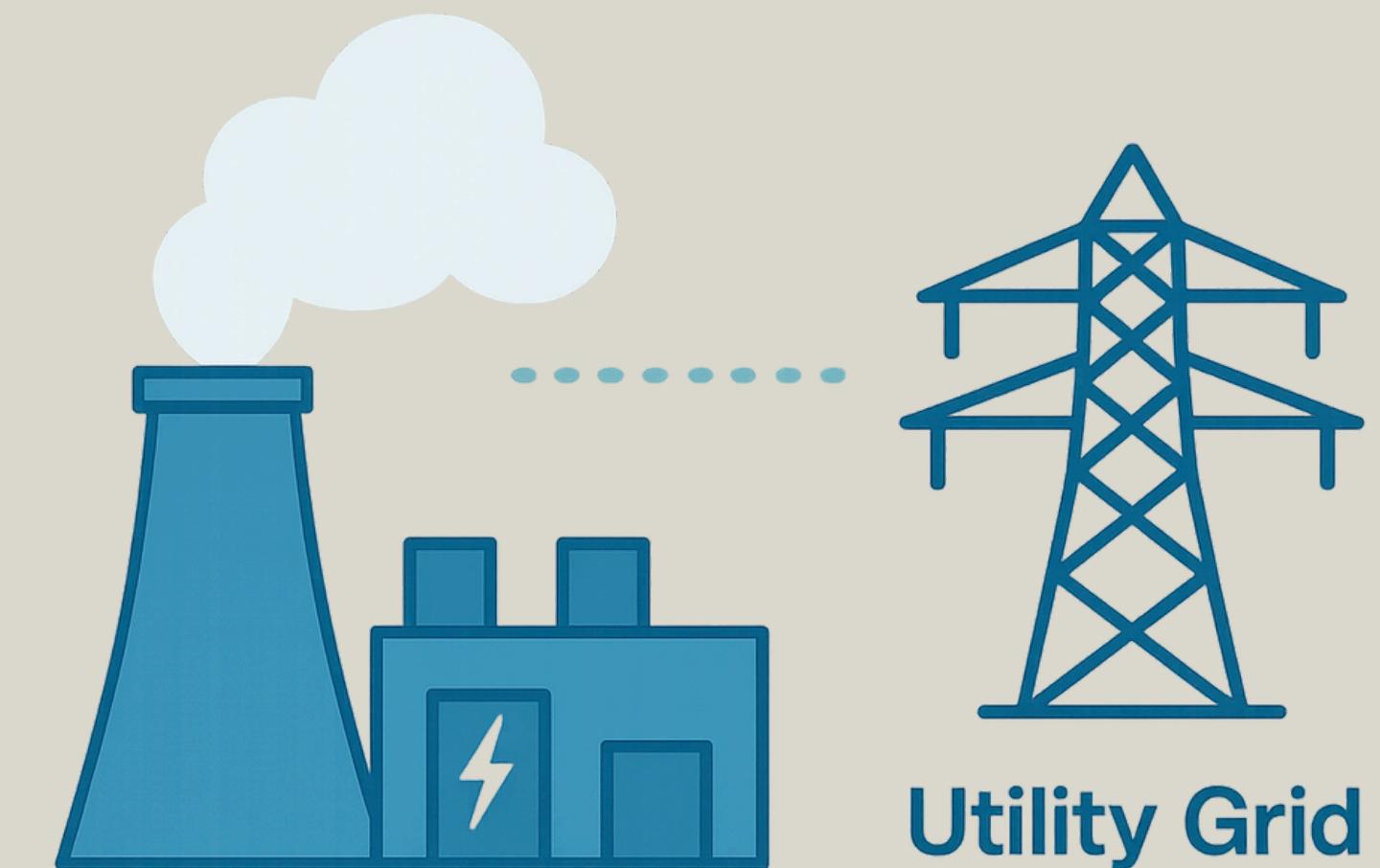
- At scale increasing current VPP capacity could save \$10B in annual grid costs

Why do we need VPPs?



Peaker Plant Cost = \$950/kW
Typical Rates = \$0.30/kWh

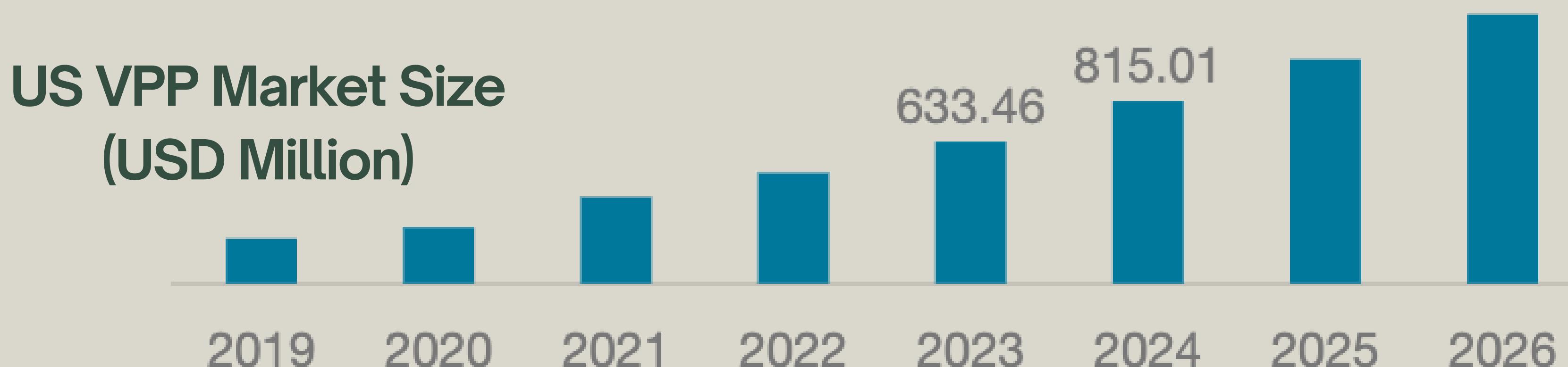
Net Load = Total Demand -
Variable Generation



Power Plant

Market and Policy Incentives

- FERC Order 2222 = Allowed smaller distributed resources to aggregate and bid in wholesale markets



Sources

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