Data Science at Stem

Philomathia Forum on Energy and Environment, UC Berkeley, 2017

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About Stem
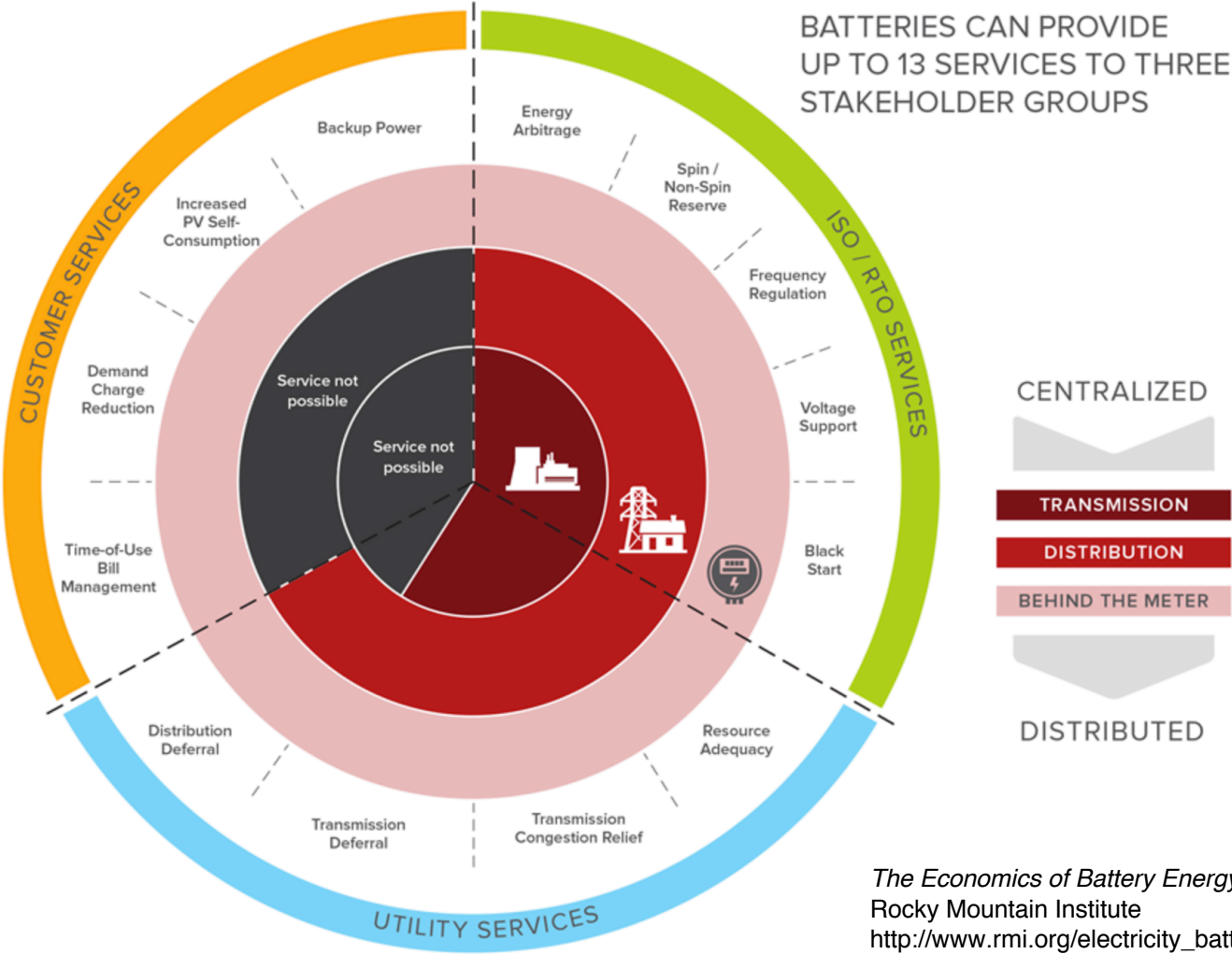
Intelligent energy storage company operating in the commercial and industrial customer space.
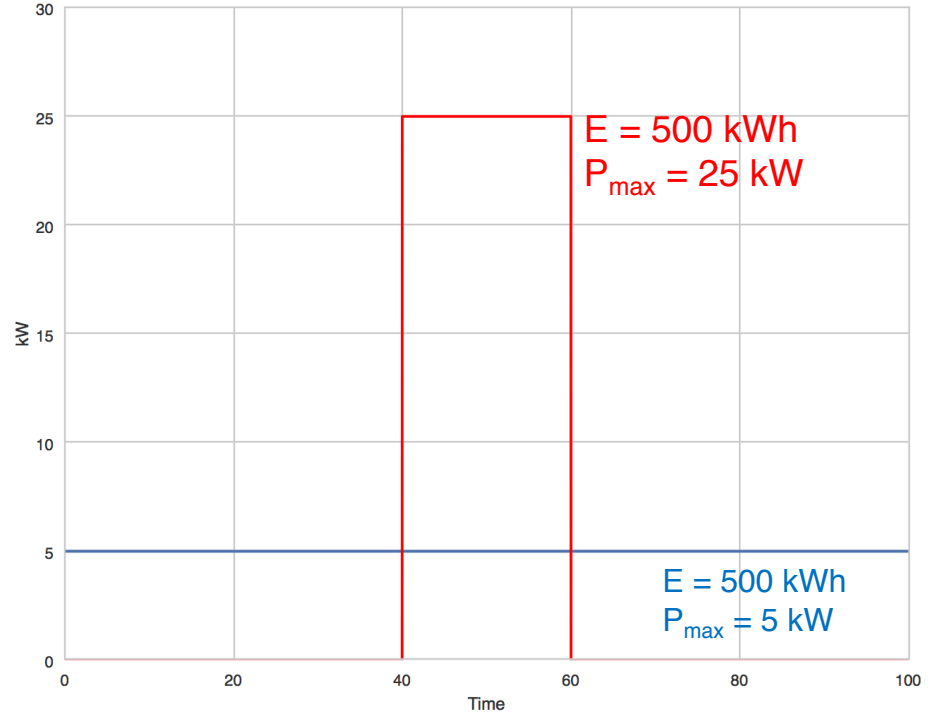

1.3MW 2.5MWH
LBA Park Place

Largest Indoor System

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BATTERIES CAN PROVIDE UP TO 13 SERVICES TO THREE STAKEHOLDER GROUPS

The Economics of Battery Energy Storage
Rocky Mountain Institute
http://www.rmi.org/electricity_battery_value
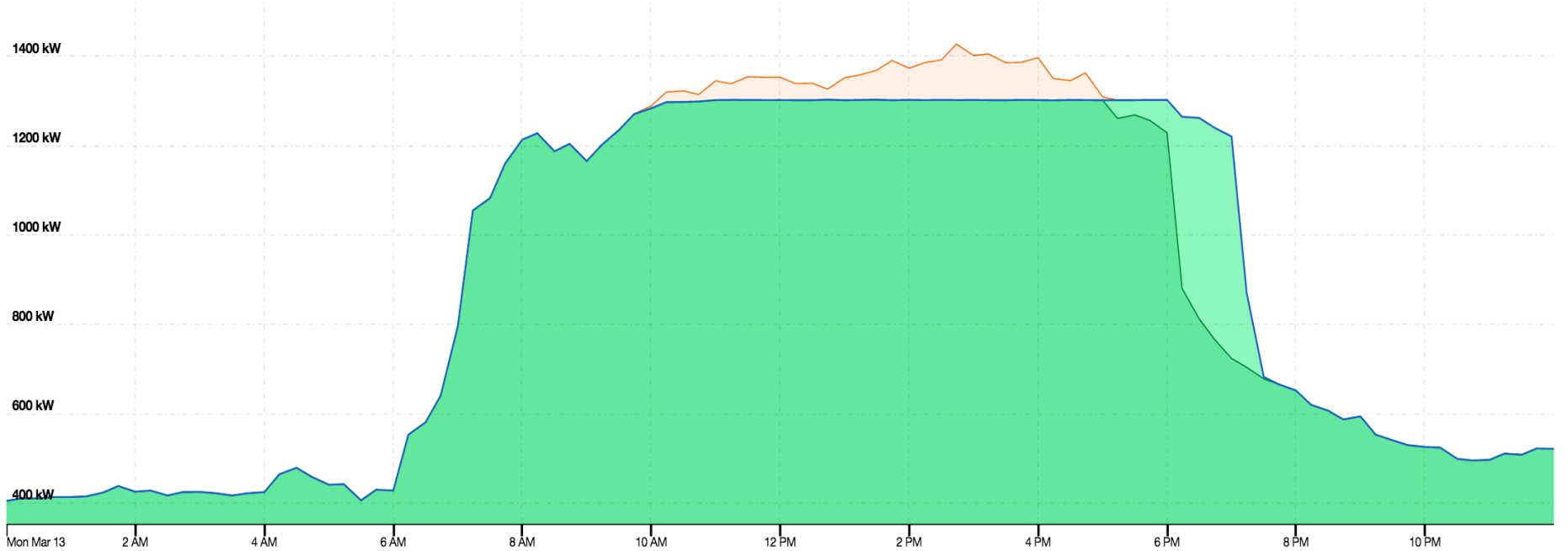
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Demand Charges 101

- C & I Customers pay for Energy *and* Demand
  - Peak Demand Charge
    - Cost per unit (kW) of power
    - Calculated at the period of highest demand (peak)
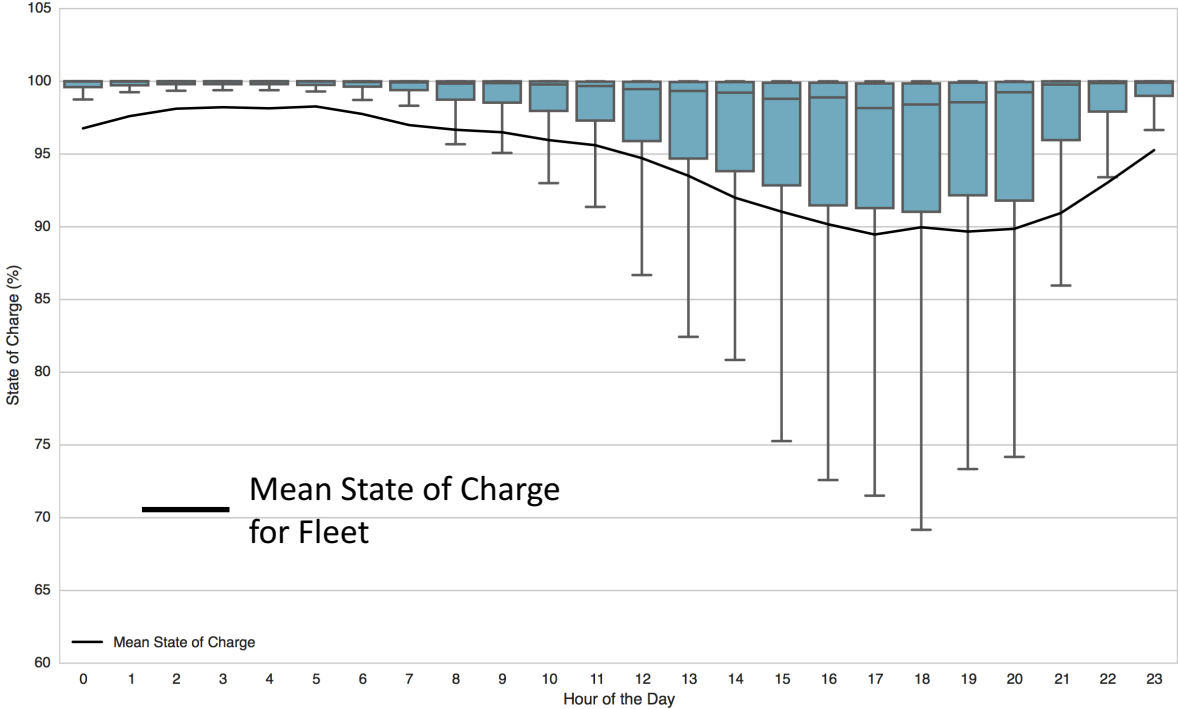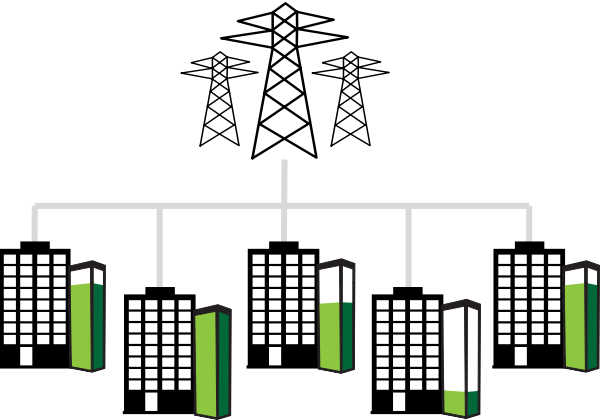- "How much" and "when" both matter

E = 500 kWh
P_{max} = 25 kW

E = 500 kWh
P_{max} = 5 kW

Demand Management

Behind the Meter Storage: On demand resource for the Grid

Aggregation acts as a Virtual Power Plant (VPP) for grid operators during periods of high demand

Stem: On demand resource for the Grid