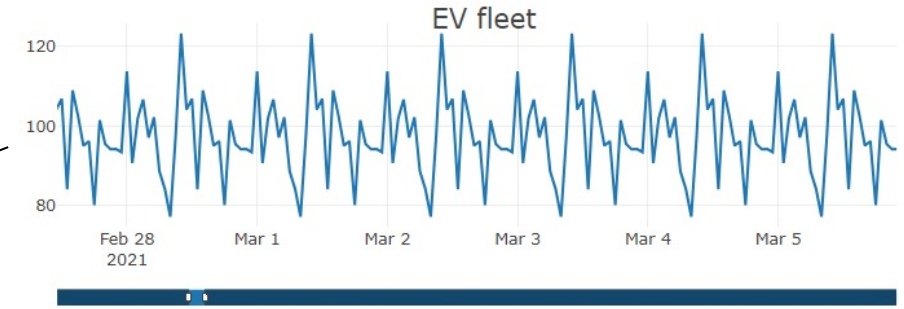
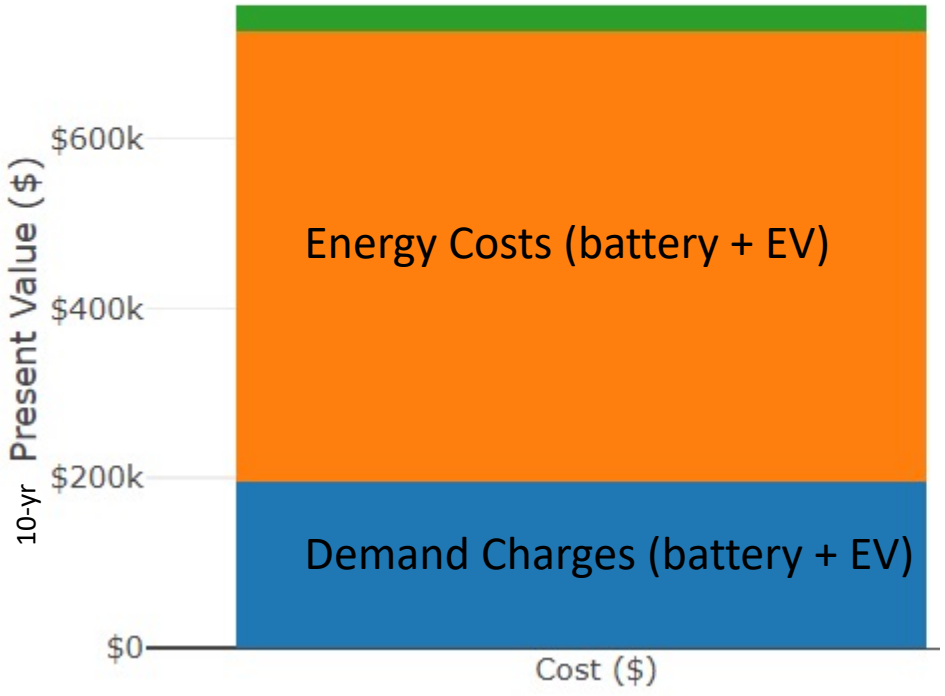
EV Battery Sizing

Case Introduction

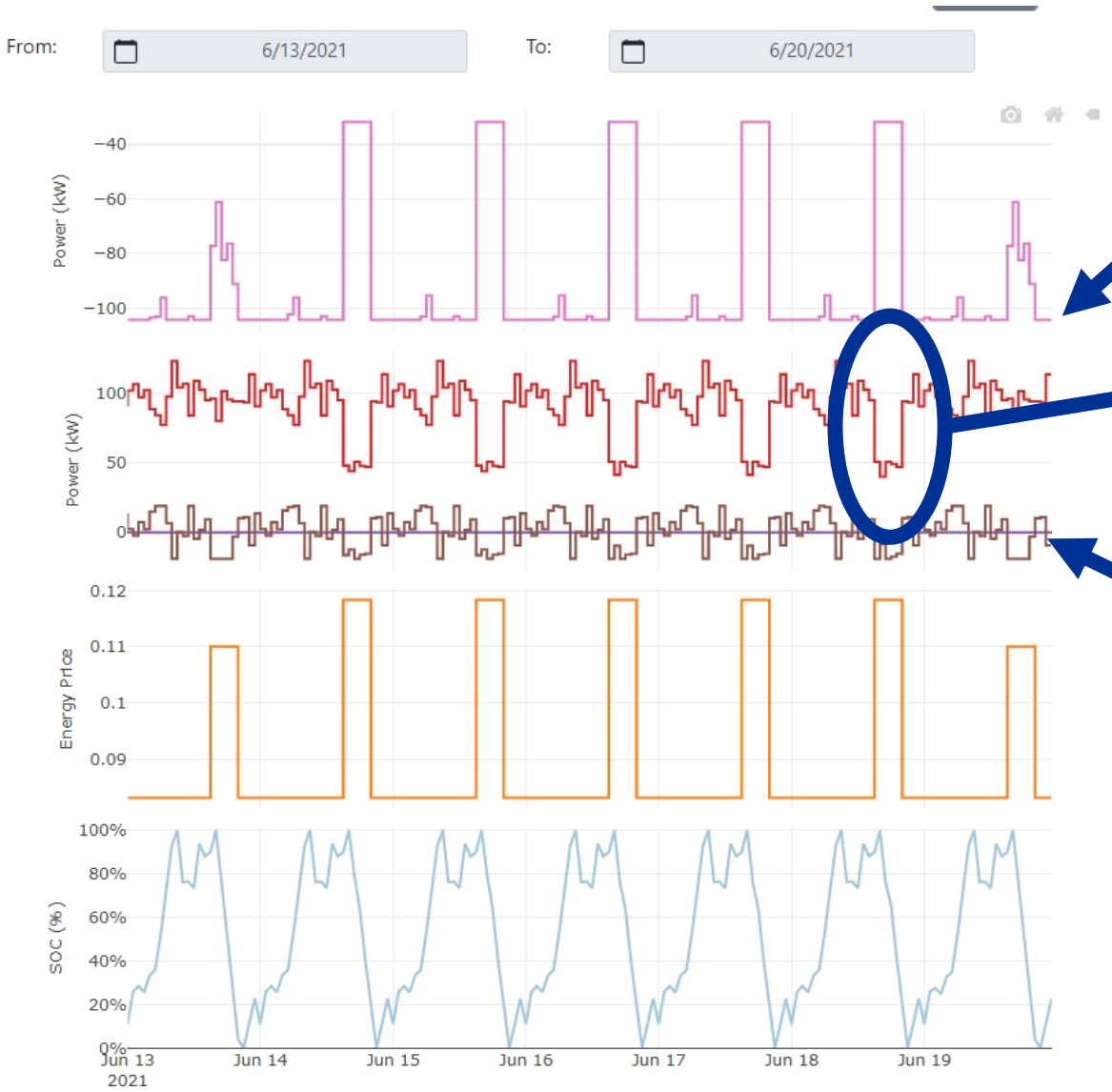
- Co-optimize
  - The size and operation of a stationary battery system
  - Fleet EV charge management
- Reduce Retail demand and energy charges
- Fleet EV charging profile repeats every day
- EV charging curtailment penalty set at $3/kWh (cost of lost load) to prevent over-curtailment while still allowing curtailment to minimize demand charges
- EV charging can be curtailed up to 50%



Results



Results



Net load (with charge management and battery) is fairly flat except for on-peak hours

Weekday on-peak EV charging curtailment

Battery smooths EV charging power to minimize demand charges