



Battery System Designs & Applications:

1. Grid Backup
2. Peak Load Shaving
3. Time of Use



Grid Backup

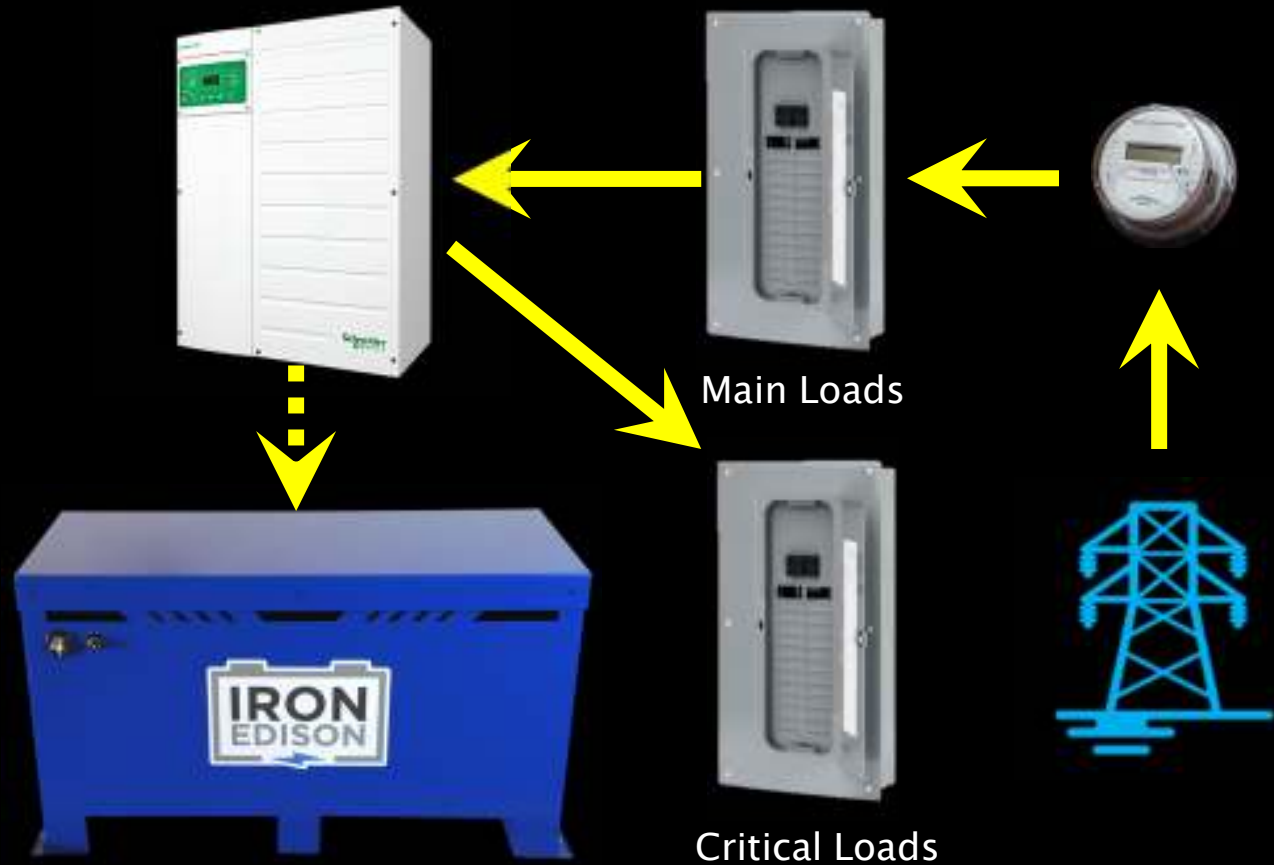
Battery Backup to protect critical loads from grid outage.

Uninterruptable Power Supply.



Grid Backup

(Normal Operation)





Grid Backup

(Grid Outage)



Iron Edison Battery Company

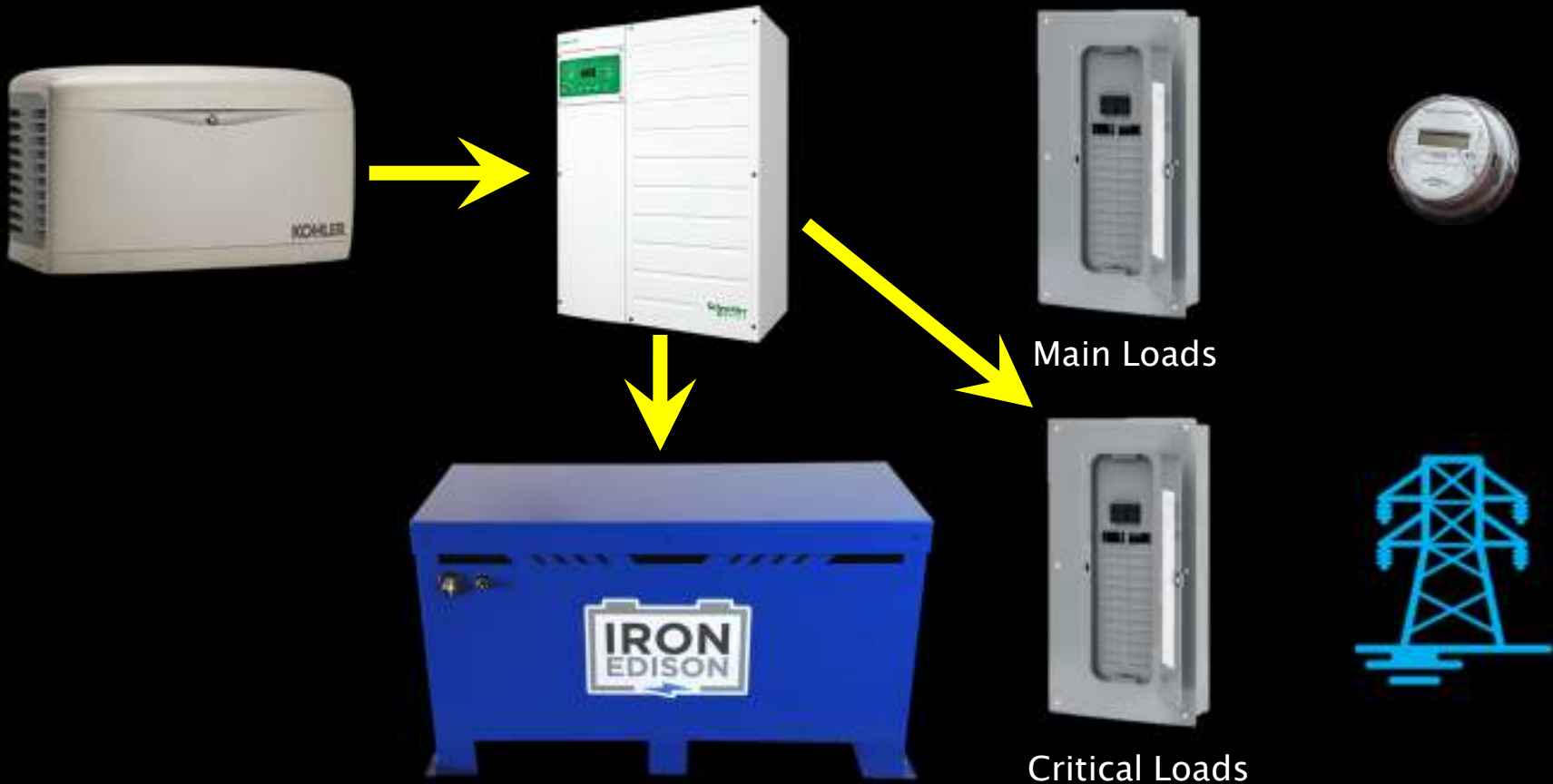
(720) 432-6433

www.IronEdison.com



Grid Backup

(Extended Grid Outage)



Iron Edison Battery Company

(720) 432-6433

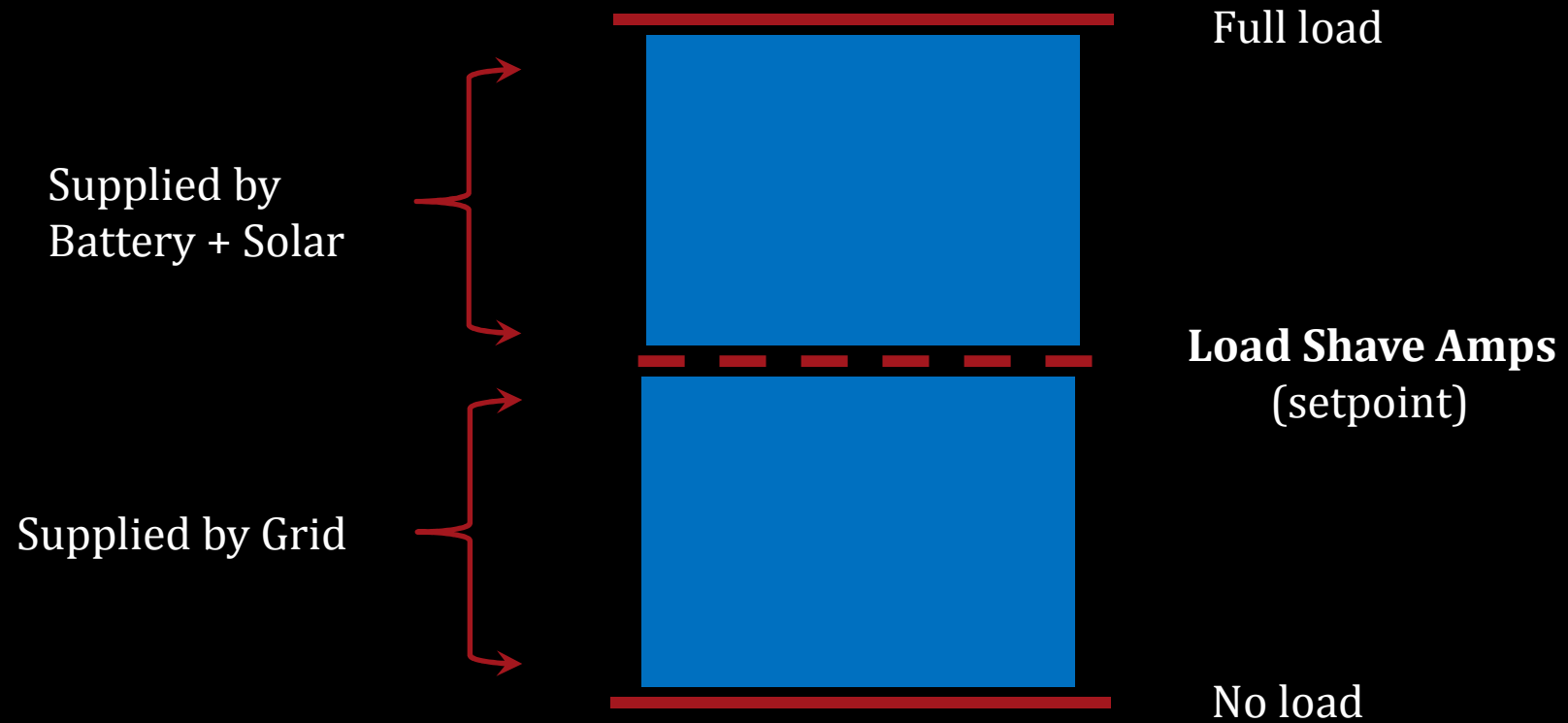
www.IronEdison.com



Peak Load Shaving

Reduce **Demand Charges**
by limiting power used from the grid.

Peak Load Shaving





Peak Load Shaving

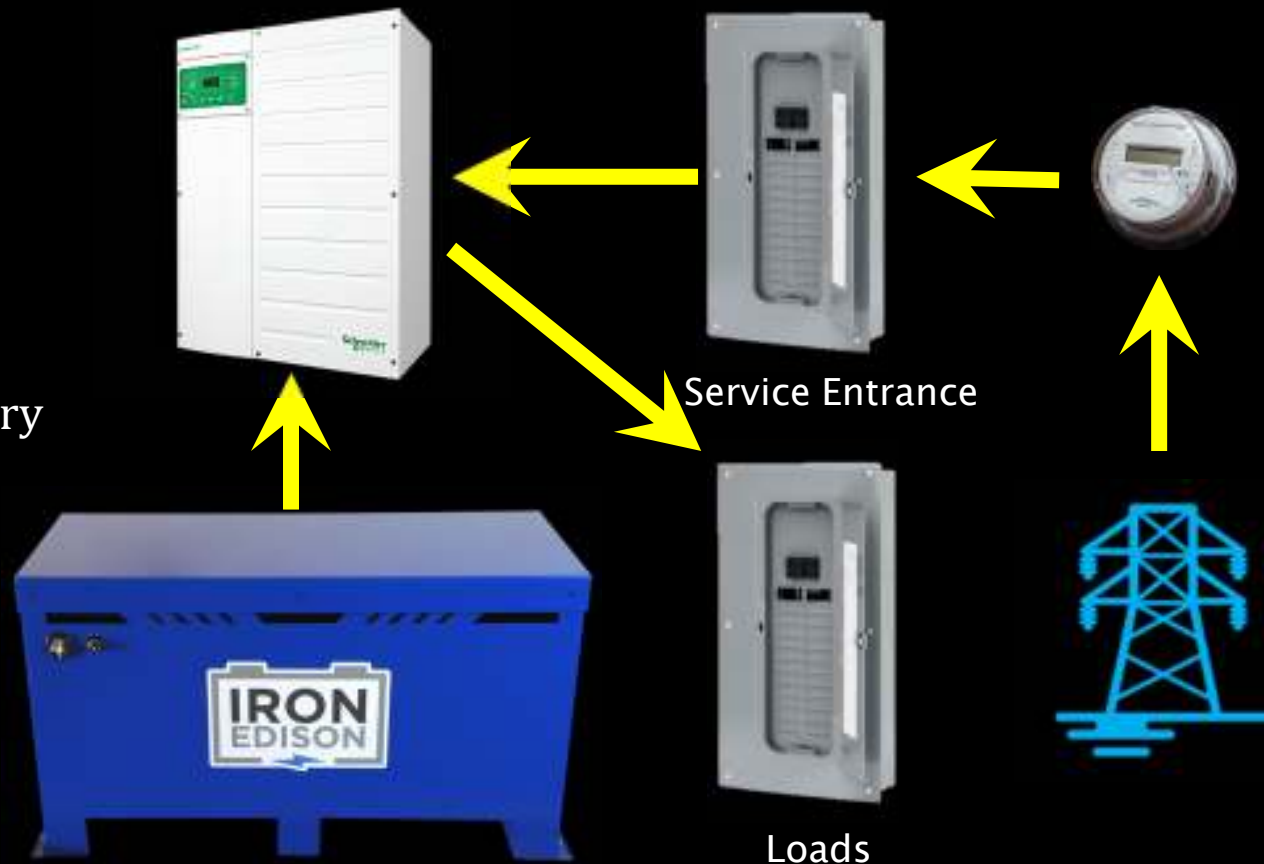
(Peak loads, grid powers up to X amps, battery powers the rest)



EXAMPLE:
Load Shave Amps = 30

45 Amp Load:

- 30 Amps from Grid
- 15 Amps from Battery





Peak Load Shaving

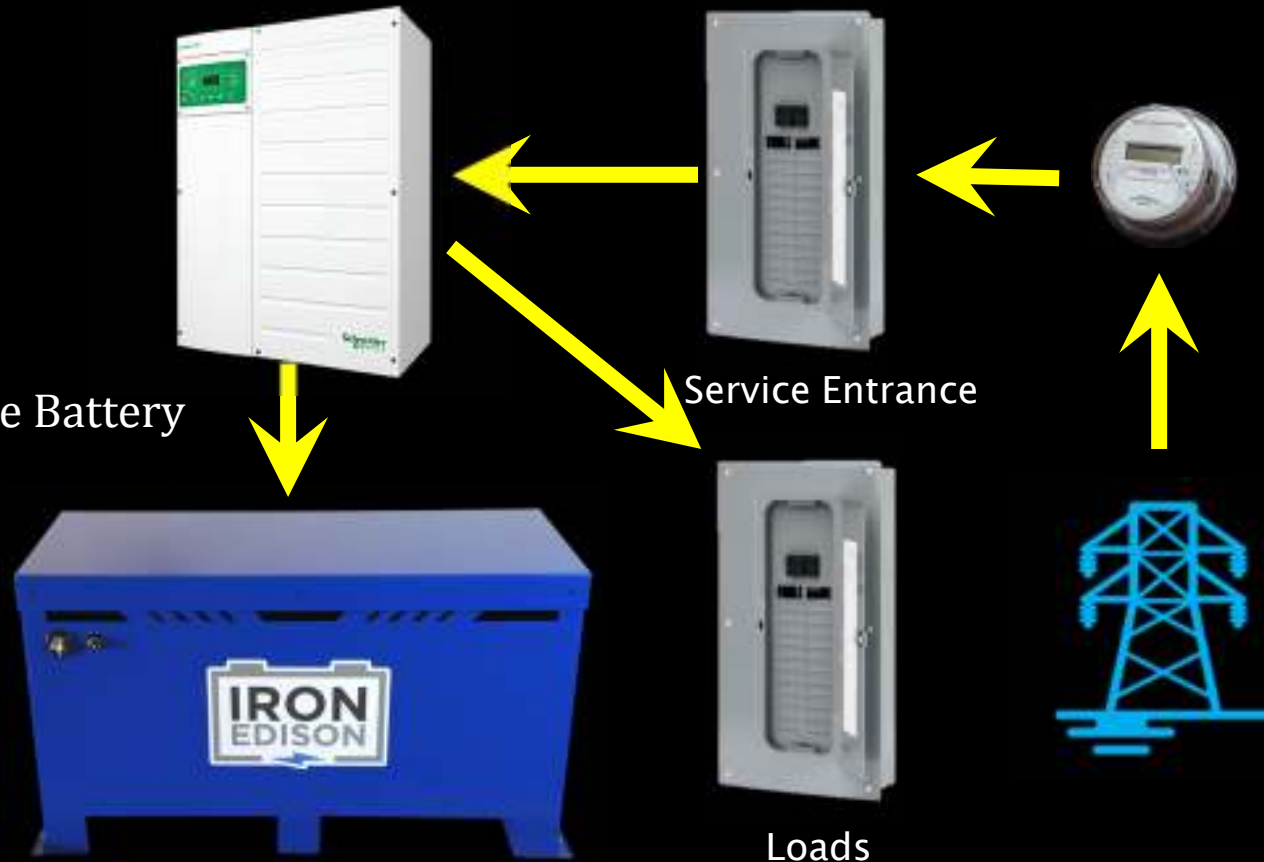
(Peak loads, grid powers up to X amps, battery powers the rest)



EXAMPLE:
Load Shave Amps = 30

15 Amp Load:

- 30 Amps from Grid
- 15 Amps to Recharge Battery





Peak Load Shaving

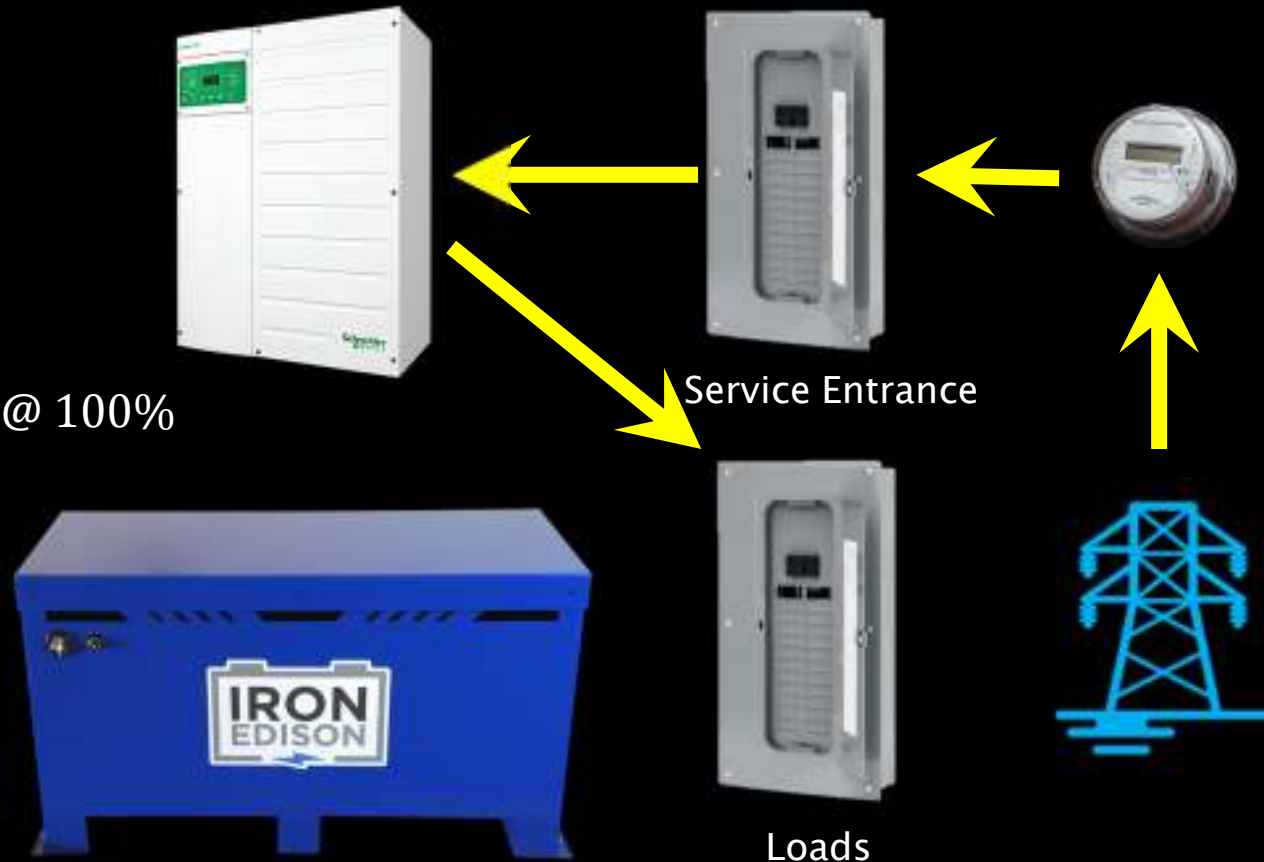
(Peak loads, grid powers up to X amps, battery powers the rest)



EXAMPLE:
Load Shave Amps = 30

15 Amp Load:

- 15 Amps from Grid
- Battery standing by @ 100%





Time-Of-Use

Reduce energy costs by avoiding Peak utility rates.

Charge the battery during off-peak rates,
then power the loads from the battery instead of the grid
during peak rates.



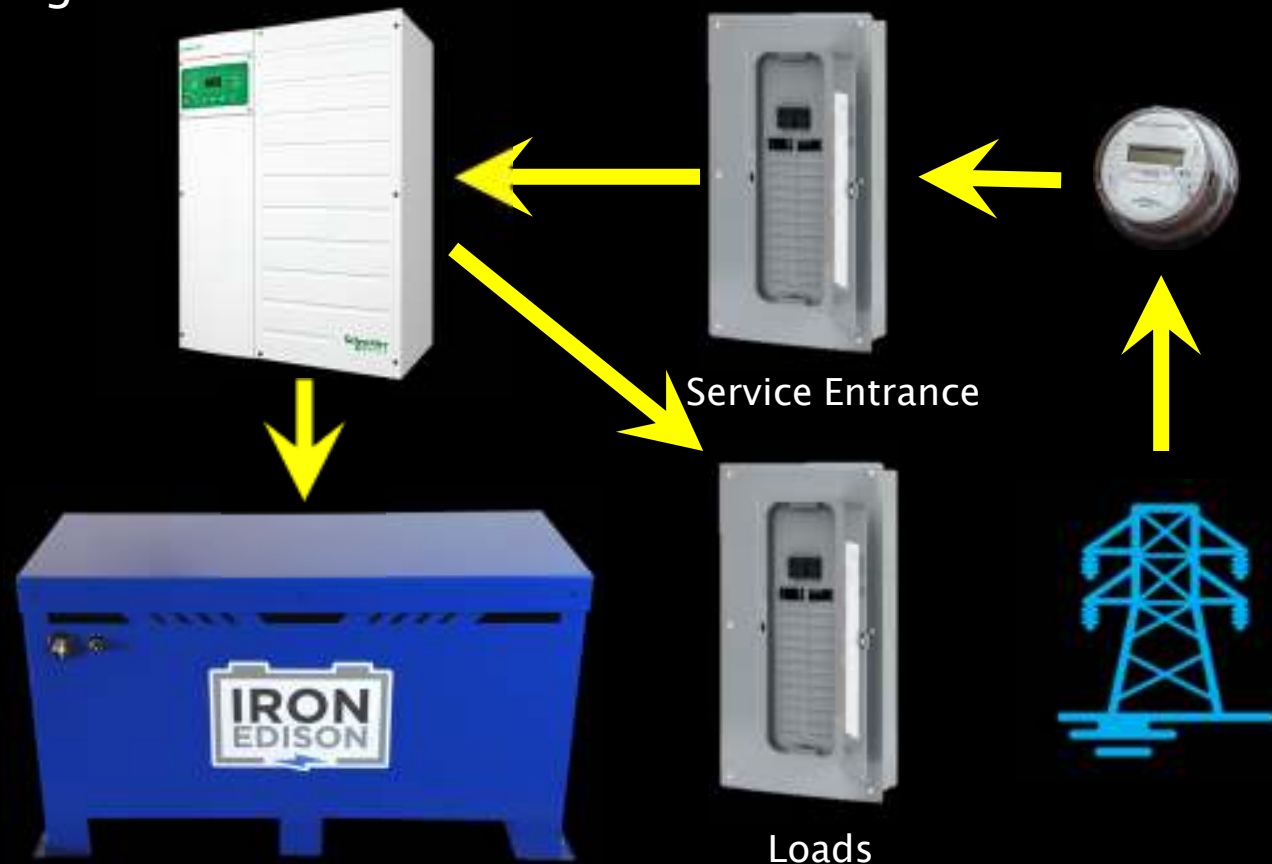
Time-Of-Use

(Off-Peak Rate)



Charge battery during off peak rates.

(i.e.: \$0.08 / kWh)





Time-Of-Use

(Peak Rates)



Battery powers loads instead of the grid during peak rates.

\$0.08 / kWh Off-Peak

\$0.18 / kWh Peak

\$0.10 / kWh SAVINGS





Time-Of-Use

(Avoid Peak Energy Rates)



BONUS:
Battery Backup in the event of a grid outage.

