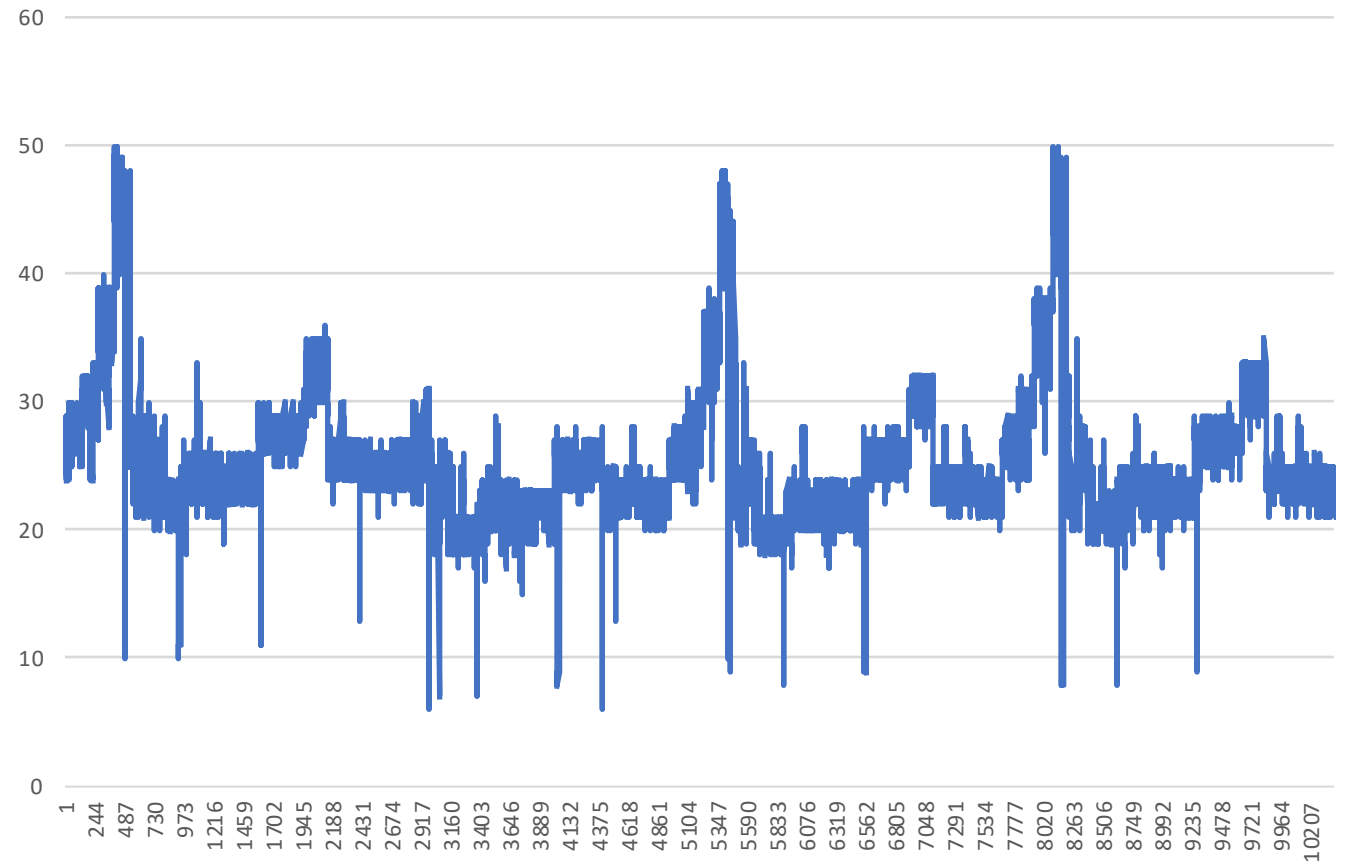




The Advantages of Hybrid Power

Operational
Energy
Profiles
Favor Hybrid
Technology

Typical Generator Load Profile
% Load Capacity



Generator capacity can be reduced by 50% with
battery providing peak demands

Confidential



Moser Energy Systems HybridGen

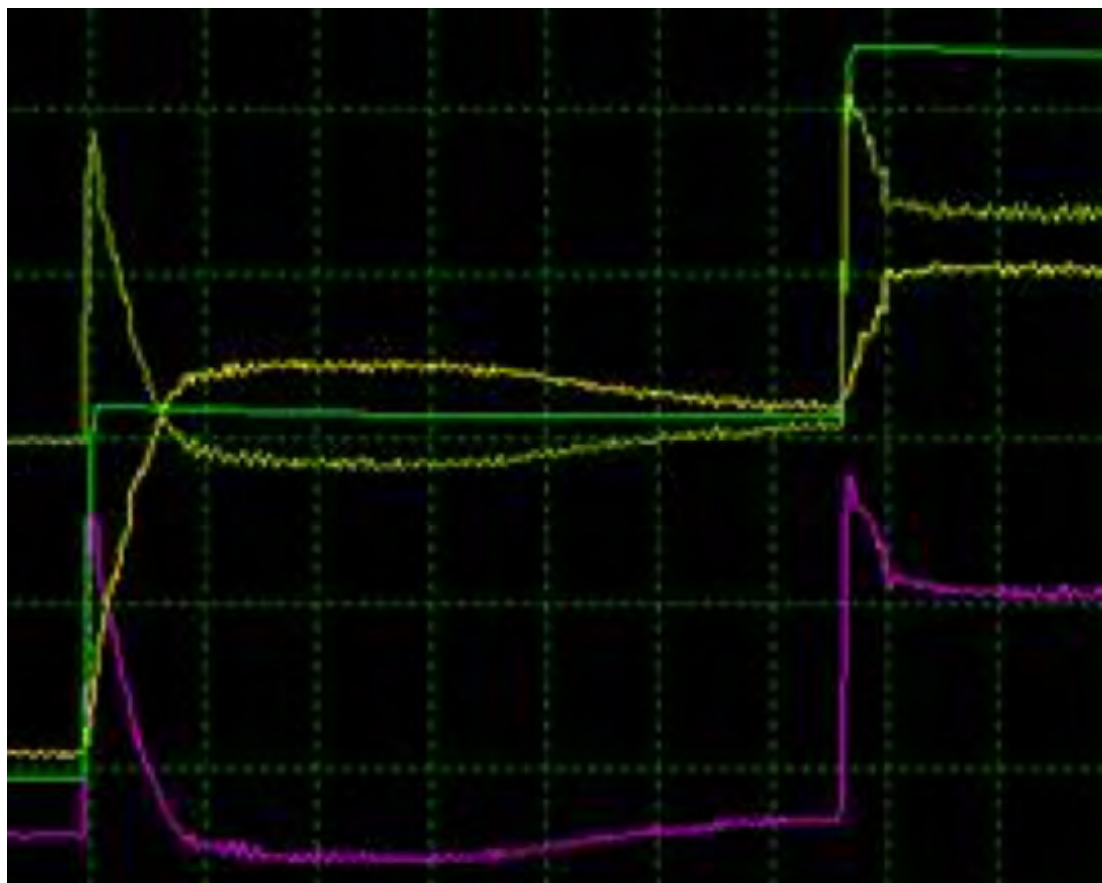
- 500kVA bi-directional ruggedized inverter
- 120kWh 2C Li-ion battery (3C peak)
- Integrated proprietary controls
- Power distribution
- Generator integration (AC-coupled)
- Extreme-duty enclosure
- Onboard HVAC
- On-board fire suppression

HYBRID GEN CAPABILITY

- Provides Plug-In Integration of:
 - ✓ Expandable energy storage
 - ✓ Renewable energy resources
 - ✓ Engine-driven generators
 - ✓ Commercial utility or shore power



Seamless Integration of Generator and BES



Green	Total kW load out
Yellow	Gen kW
Pink	ESM kW
Olive	Pack Current

Mode of Operation	Generator	Inverter	Battery
Silent watch	Off	Active	Charged
Silent run	Off	Powering	Discharging
Gen Mode	Powering	Active	Recharging
Hybrid Mode	Powering	Powering	Discharging

- **“Silent Watch”** – ready to provide instantaneous power
- **“Silent Run”** – power provided by the battery and inverter only
- **“Gen Mode”** – generator supports load and charges battery
- **“Hybrid Mode”** – generator and inverter combine to provide peak power

HybridGen Modes of Operation

Problems Solved with HybridGen

REDUCED EMISSIONS BY
AS MUCH AS 50%

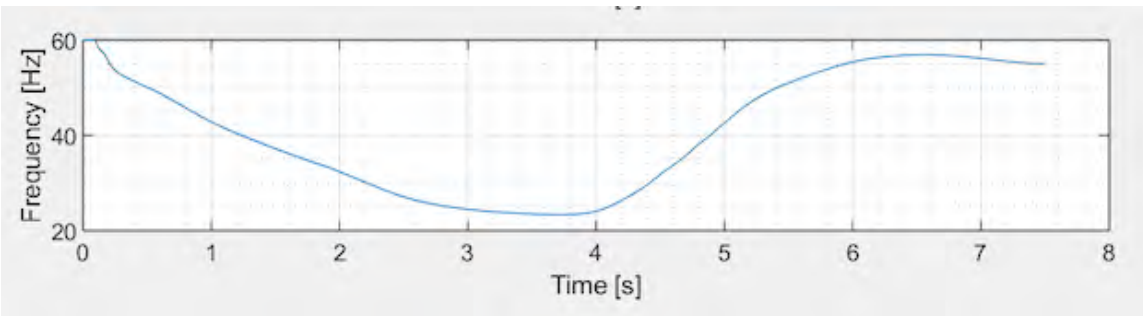
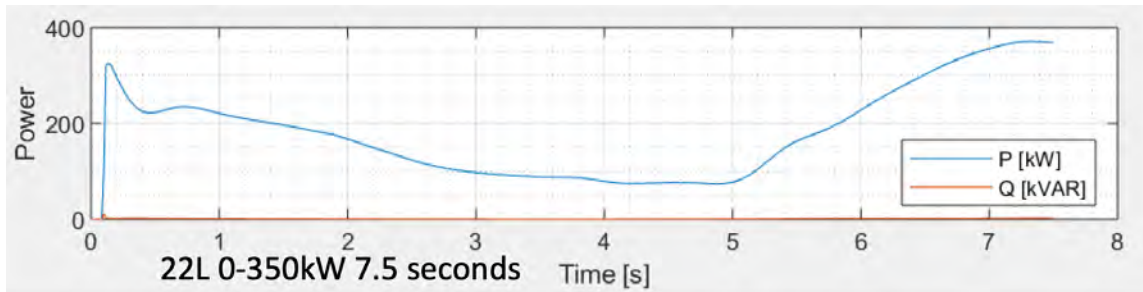
SUPERIOR POWER QUALITY
AND POWER DELIVERY

IMPROVED EFFICIENCY

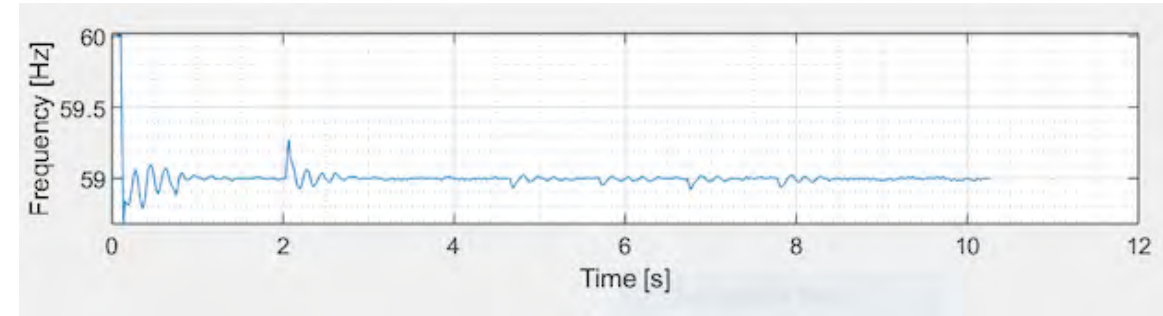
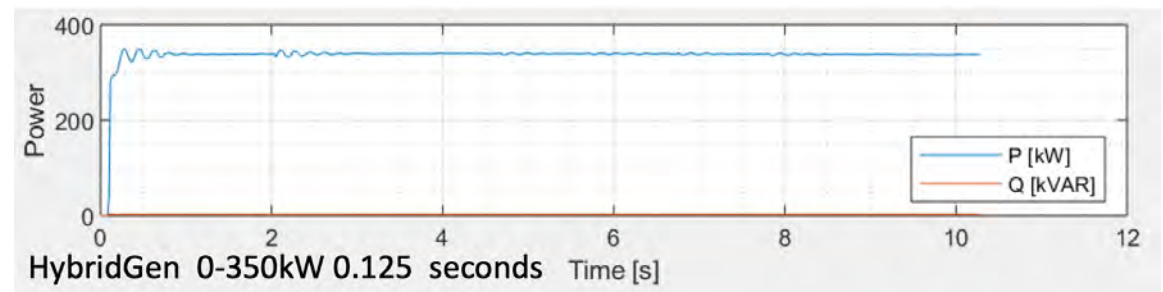
ENHANCED RESILIENCY

0-350kW Performance Power Comparison

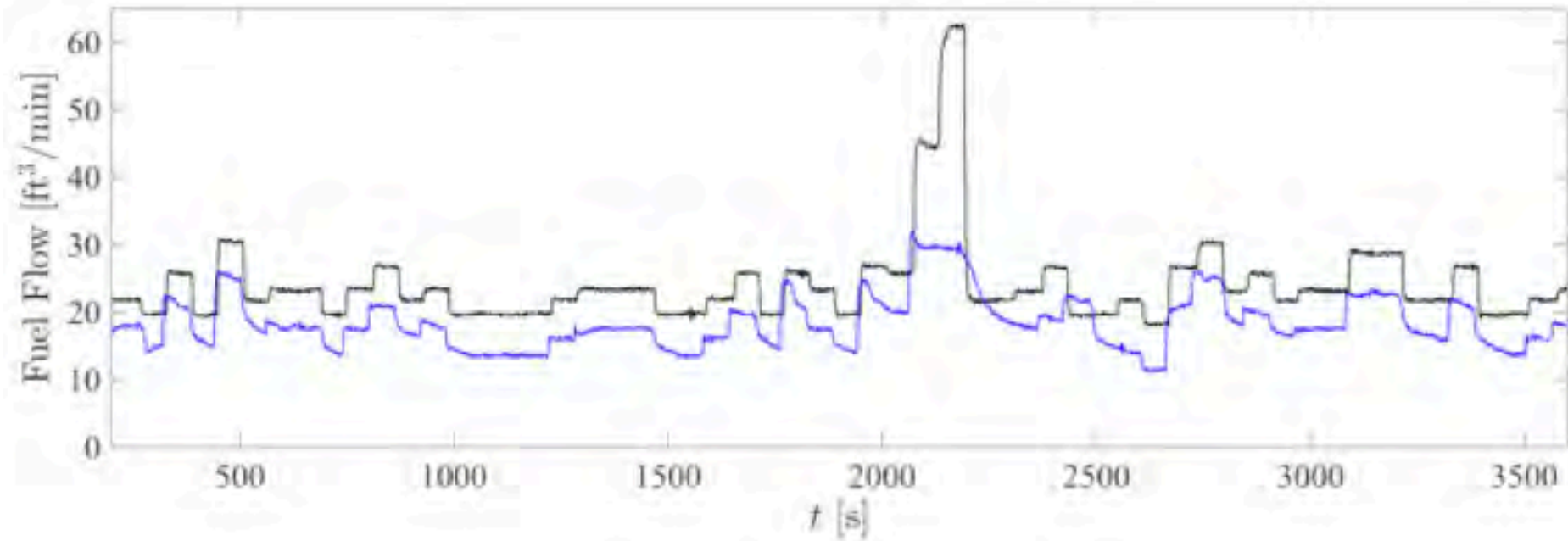
22L Conventional Gen



11L HybridGen



40% Improvement In Fuel Efficiency Over Random Load Test

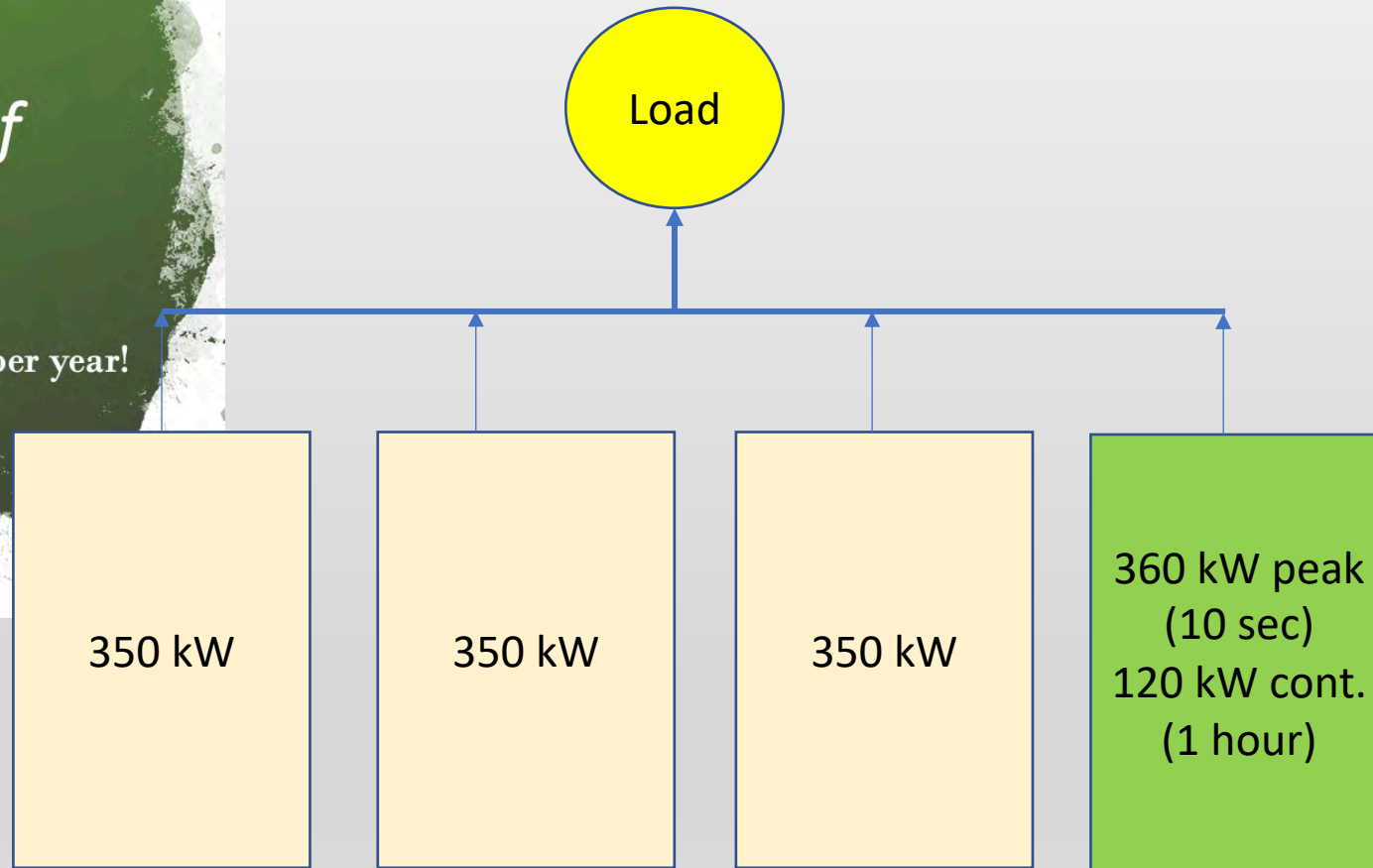


22L – Black line showing fuel flow of NG

11L HybridGen – Blue line showing fuel flow of NG

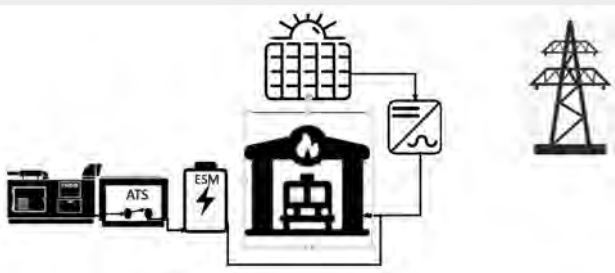
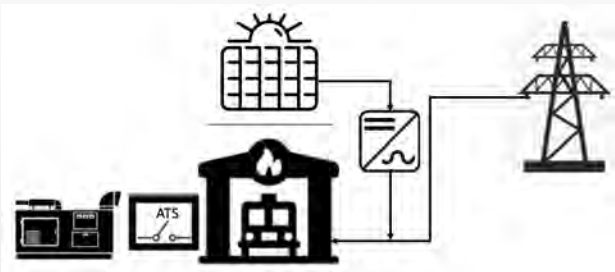
Less Emissions -
*by reducing
number or size of
generators on a
given site*

Up to 20 tons of GHG reduction per year!

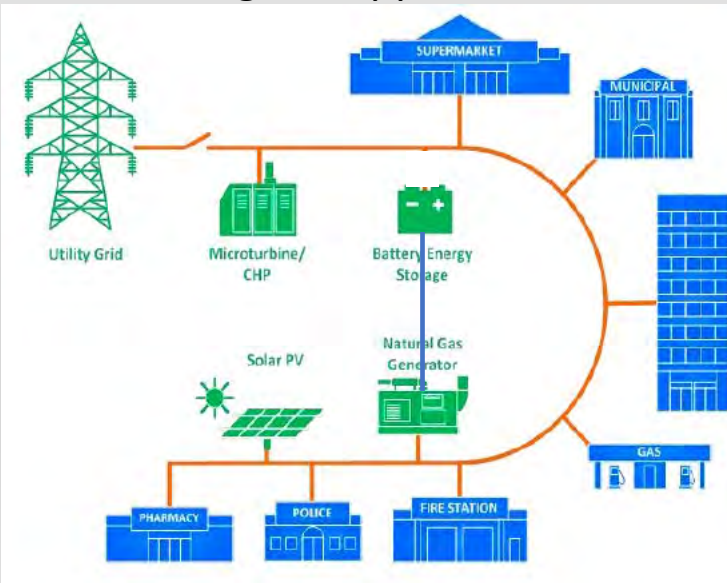


Complete generator is replaced with a hybrid module reducing emissions and enhancing power delivery and power quality.

Critical Power Sites



Microgrid Support



HybridGen Applications

Military FOB's

Grid Services

O&G

Entertainment and Events



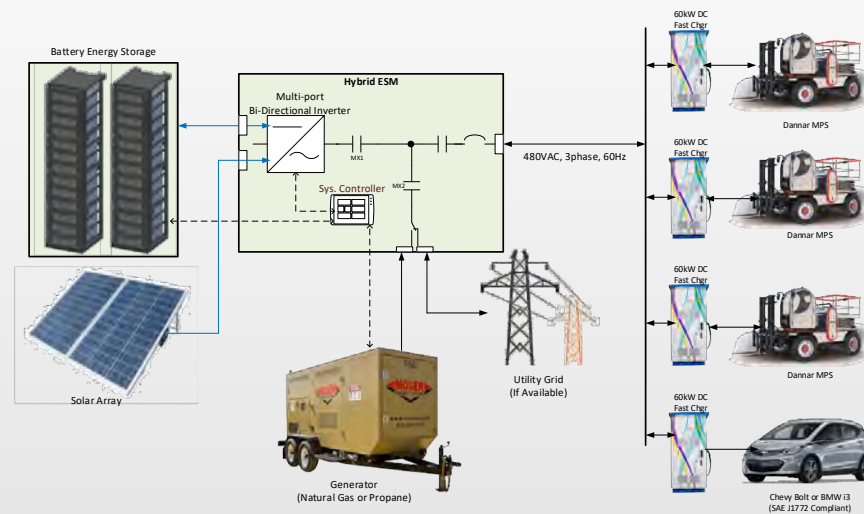
Construction Sites

FEMA

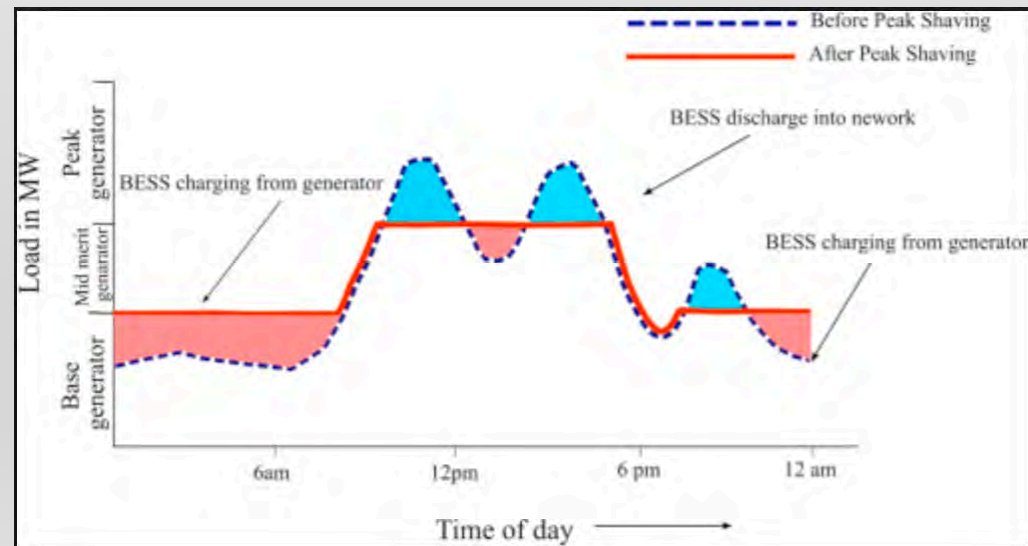
Remote Outposts

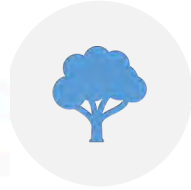
Renewable Integration

Hybrid EV Charging



Peak Shaving





Reduced emissions
by as much as 50%



Superior power
quality and power
delivery



Improved efficiency



Enhanced resiliency



Hybrid Generator Solutions