The Advantages of Hybrid Power
Typical Generator Load Profile

% Load Capacity

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

<table>
<thead>
<tr>
<th>Green</th>
<th>Total kW load out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>Gen kW</td>
</tr>
<tr>
<td>Pink</td>
<td>ESM kW</td>
</tr>
<tr>
<td>Olive</td>
<td>Pack Current</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>Generator</td>
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<td>-------------------</td>
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<tr>
<td>Silent watch</td>
<td>Off</td>
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</tr>
<tr>
<td>Hybrid Mode</td>
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</tbody>
</table>

- **“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
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

HybridGen 0-350kW 0.125 seconds

22L 0-350kW 7.5 seconds
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.
HybridGen Applications

Critical Power Sites

Military FOB’s

Grid Services

O&G

Entertainment and Events

Construction Sites

FEMA

Remote Outposts

Renewable Integration

Peak Shaving

Microgrid Support

Hybrid EV Charging
Hybrid Generator Solutions

- Reduced emissions by as much as 50%
- Superior power quality and power delivery
- Improved efficiency
- Enhanced resiliency