



# PM Mobile Electric Power Systems



## Power Portfolio Overview Brief





# PM E2S2 Leadership

## MISSION


Provide integrated, scalable, and affordable expeditionary energy, force sustainment, and contingency basing capabilities that reduce sustainment demand for Warfighters across the range of Joint ops.

## VISION


Serve as the DoD lead for globally responsive operational energy and contingency basing solutions to enhance Warfighter capability.




**PEO CS&CSS**  
**BG Luke Peterson**





PM  
Transportation  
Systems



PM Force  
Projection



JPO JLTV





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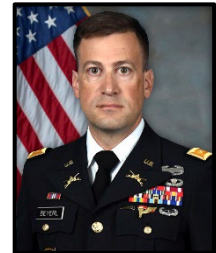
# Mobile Electric Power Systems Portfolio



## Portfolio Lifecycle Status

### Development:

- Small Tactical Electric Power (STEP) Lightweight 2kW (STEP-LW)
- STEP 3kW
- STEP Hybrid Augmentation



LTC Tom Beyerl  
Product Manager

### Production:

- 5-60kW Advanced Medium Mobile Power Sources (AMMPS)
- AMMPS Microgrid
- 3kW Tactical Quiet Generator (TQG)
- Power Distribution Illumination Systems Electrical (PDISE)



AMMPS  
Microgrid

### Sustainment:

- 2kW Military Tactical Generator (MTG)
- 5-60kW Tactical Quiet Generator (TQG)

### Future Capabilities:

- AMMPS Energy Storage
- Universal Power Gateway
- Microgrid Expansion



Advanced Medium Mobile Power Sources (AMMPS)



Small Tactical Electric Power (STEP)



Platoon Power Generation (PPG)



3kW Tactical Quiet Generator (TQG)



Power Distribution Illumination Systems Electrical (PDISE)



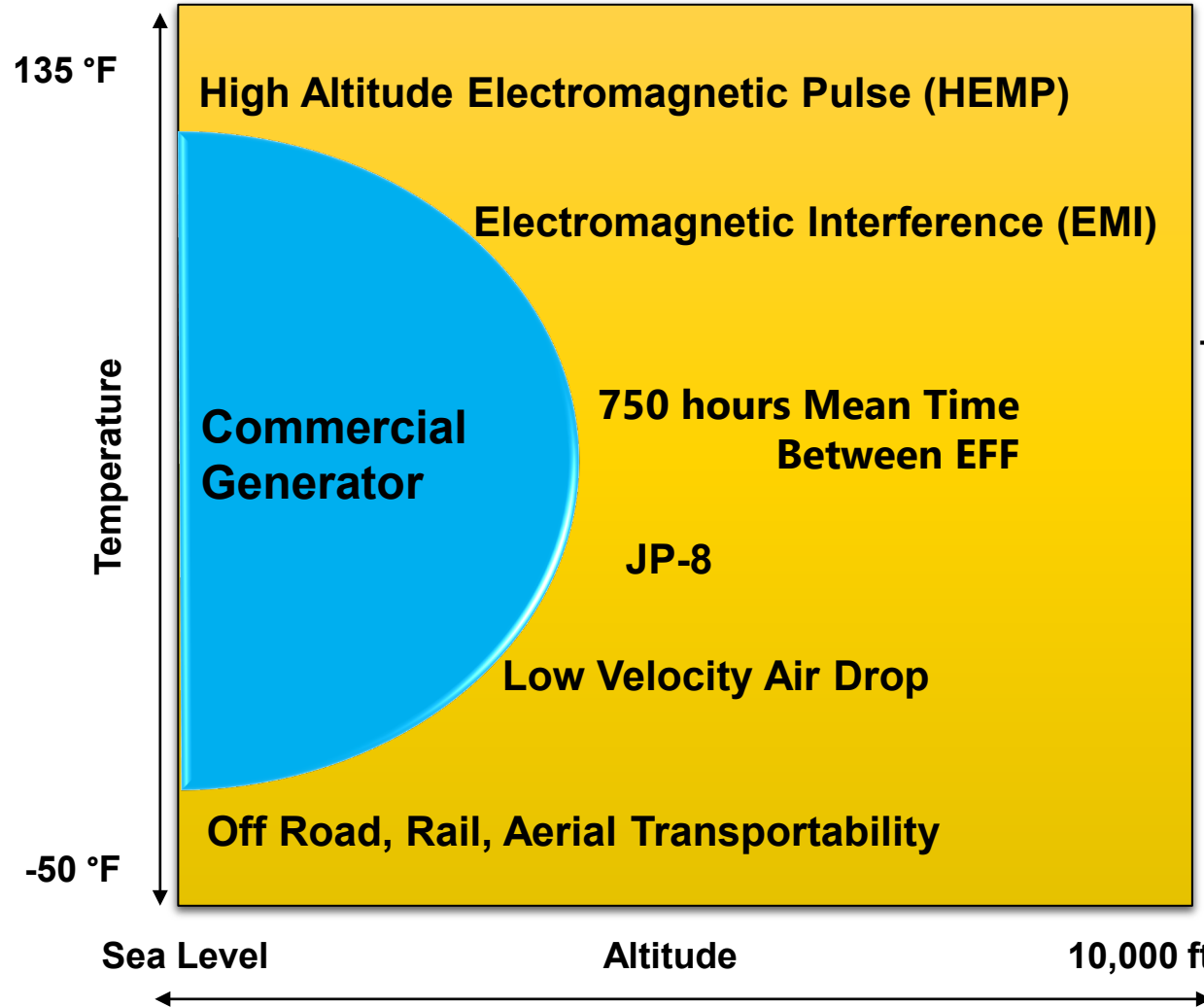
2kW MTG



5-60kW TQG

# Military Power Requirements

- **Commercial generators:** Made for specific purposes; don't meet military requirements
- **Military generators:** Made to support multi-domain OPS



(EXAMPLES OF SUPPORTED SYSTEMS)

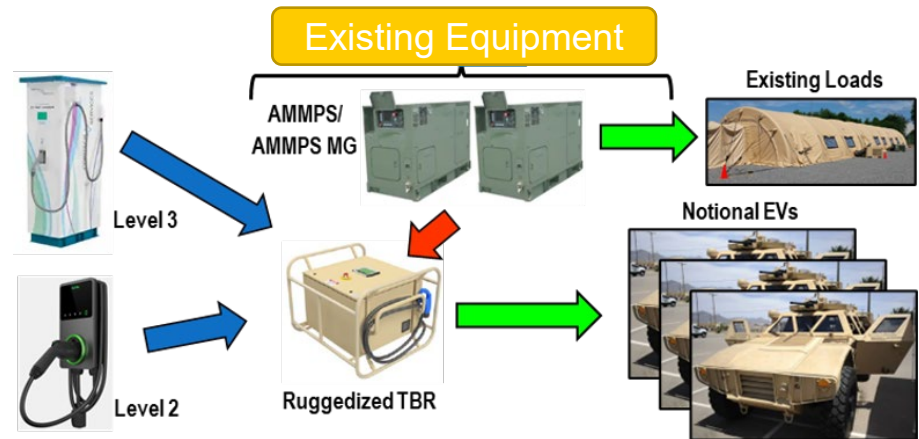
**Power System Requirements Driven by Mission Equipment Requirements**

# Current Vehicle Interactive Power Efforts



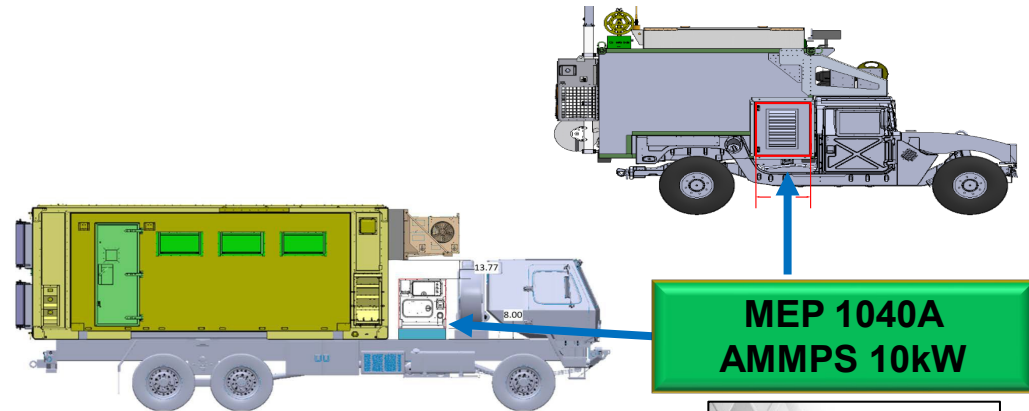
## • Future of Tactical Battlefield Recharging (FTBR):

- Addresses options to use existing tactical power for EV charging



## • Vehicle Auxiliary Power for the Command Post Integrated Infrastructure (CPI2)

- Integrated power for full operational capability at the short-halt
- Microgrid connectivity for efficiency and resiliency at the long-halt



**Power Generation and Vehicle Power must interface to be effective across the range of military operations**



**Microgrid**

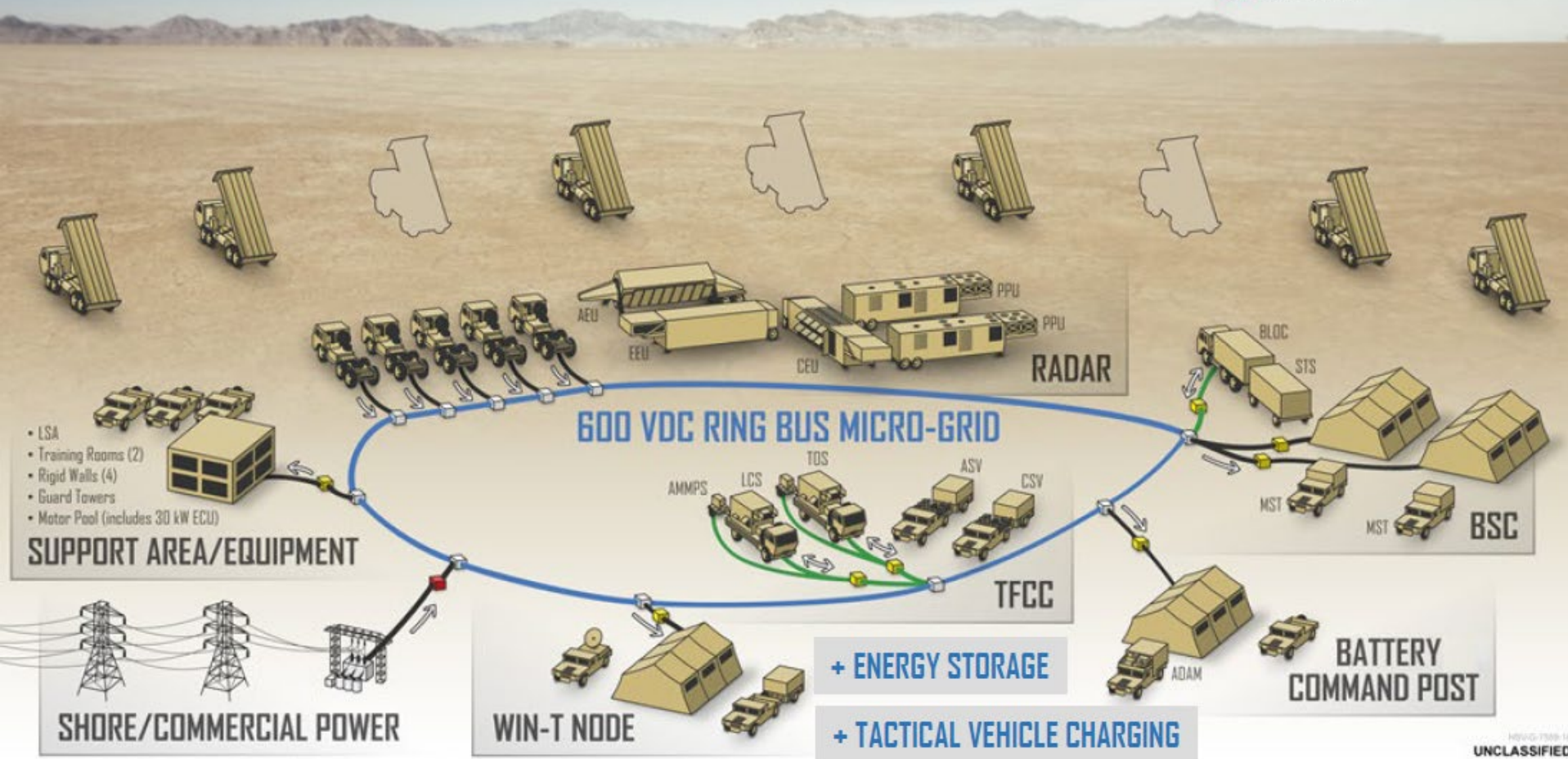
# Interactive Power Generation/Distribution



## NOTIONAL AC/DC MICROGRID IMPLEMENTATION

### LEGEND

- Power Distribution w/Micro-Grid Controls
- Bi-directional DC/AC Inverter (208 V 5-wire 3 Phase)
- AC/DC Converter



UNCLASSIFIED

## SIMILAR CONFIGURATION FOR COMMAND POST INTEGRATED INFRASTRUCTURE (CPI2) USE CASE



# Increased Power Demands

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- **The rapid growth of tactical power demand far outpaces the growth of tactical power capabilities**
  - This creates a gap before we create a solution
  - This gap is obscured by training reliance on administrative sources of power, and recent battlefield experiences with plentiful contractor logistics support
- **An electrified tactical fleet will significantly change the power generation landscape**
  - How are we going to do that?
- **Commercial open systems architecture vs. military unique requirements**
  - When are we standing in our own way?

**Power Cannot be an Afterthought**

# Contact Information

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