OBVP from Legacy to Next Generation

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Battlefield Power

Sources of Power
- Utility
- Indigenous Fuels
- Solar
- Intelligent Power Hubs

Mobile
- Gen-Sets
- UPS
- Sustained Operations
- Islands of Power

On-the-Move
- OBVP
- Battery
- Payload Support
- Export / Import

Consumers of Power
- Utility Support
- Backup
- Export / Import

Pushes Mission Power Forward to the Warfighter
Key Requirements

• 30 kW Stationary Power (120/208V)
• 10.5 kW On-the-Move Power
• Power Quality No Worse Than MEP-805 TQG
• Weight Less Than 25 Pounds / kW
Baseline OBVP System

- PDU/Cap Store/Boost Supply
- DRS PAPDS
- Electronics Cooling
- Generator
- Bell Housing Modifications
- Relocated TCU
- Output Connector

OBVP System is Integral to Vehicle
Baseline OBVP Drive Line Integration

- Bell Housing Adapter
- Flexplate
- Rotor Assembly
- Engine Adapter Plate
- Stock Torque Converter
- Modified Transmission Bell Housing
- Stock Engine
- Access Cover
- Stator Assembly
- Stiffening Bracket x2

No Change in Driveline Length
Installed by OEM or Field Depot Retrofit
Integrated and Delivered
Next Generation OBVP Architecture
What's Next?

Operational Flexibility
- Power Mgmt.
- Full Power On-the-Move
- Paralleling

Current/Future Electric Loads
- > 20 kW 28 Vdc
- Clean “704” 28 Vdc Power

Evolutionary Capabilities
- FCS Spin-Outs
- Mounted Surveillance
- Shore Power

Un-Met Needs
70 kW In-Line Generator

Common Architecture / Cross Platform Solution
Parallelable Auxiliary Power Converter

- Sized for Next Generation Tactical Vehicles
- Parallelable for Higher Levels of On-Board Power
- MIL-STD-1275 Conditioned 28 Vdc Power
- MIL-STD-810

Current/Future Electric Loads

- > 20 kW 28 Vdc
- Clean "704" 28 Vdc Power

Un-Met Needs
Pulse Width Modulated-Rectifier/Controller (PWM-RC)

- Field Enhancing/Weakening
- Power Factor Correction
- Active Bus Regulation
- MIL-STD-810

Current/Future Electric Loads
- > 20 kW 28 Vdc
- Clean "704"
- 28 Vdc Power

Un-Met Needs
• Pushes mission power forward to the warfighter

• Integrates with no change in drive line length

• Provides flexibility in installation by OEM or field depot retrofit

• Delivers common architecture / cross platform solution