

# **INTEGRATED POWER** *for unique applications*

*Digital Environmental Systems, Inc. (DESI) is proud to offer **Integrated Power Systems and Services**, where we make out-of-the-ordinary solutions for backup power applications a reality.*



# 5 VARIATIONS OF INTEGRATED POWER

## Integrated Power Serves . . .

- Emerging and alternative markets
- Distributed networks, network closets and “edge” networking
- High tech manufacturing
- Industrial process control
- Machine builders, OEM’s
- Water/waste water
- Transportation including railroad, bridges, tunnels, tollways
- Government/military
- Oil and gas
- Marine

## Why Integrated Power?

**Support** – We’re your collaborator, from concept to full-implementation.

**Resource Management** – Leverage our highly capable team as part of yours.

**Broaden Project Scope** – Deliver more than just products.

**Time Management** – Keep the project on schedule.

**Value Creation** – Keep the project within budget while maximizing value.

**Risk Reduction** – Mitigate errors and failures using validated, fully functional systems, pre-tested before they ship.

**Diversify and Grow Business!**

## We Create Customized Backup Power Solutions For:

- Unique datacenter applications
- Harsh or extreme environments, including:
  - High/low temps
  - Water/humidity
  - Dust/dirt
  - Caustic chemicals
  - Outdoor/direct sun
- Extended runtime situations
- Ruggedized, shock and vibration attenuation

### Variant 1 Assembly

#### Solution includes:

- Kitting and bundling
- Asset tagging
- IT enclosure builds that include:
  - wire/cable management
  - UPS, EBM, PPDM, ePDU, eATS
  - web/management card installation/programming
  - environmental monitoring
- System configuration validation, testing and certification

#### Project Example: National Data Carrier Network

- ✓ Edge Network Infrastructure upgrade
- ✓ Project and logistics management (235 sites, 1-5 UPS/site)
- ✓ Install/program network management card
- ✓ Asset tagging
- ✓ Shipped to location to meet customer’s installation schedule



### Variant 2 Modifications to Standard Products

#### Solution includes:

- ePDU customization
- UPS line cord installation
- Custom cable assemblies
- Firmware flash/up and down
- Enclosure holes and cutouts
- Accessory installation

#### Project Example: Portable 3-Phase Power System

- ✓ Line-cord cable assemblies and connectors installed to hardwired, 3-Phase UPS
- ✓ Custom din-rail mounted power distribution panel manufactured
- ✓ Custom 3-Phase pin and sleeve Hubble-style cable assemblies
- ✓ Custom ePDU’s input cable assemblies and output receptacles installed
- ✓ System started up, customer-defined test procedure completed
- ✓ Custom documentation and test results provided



### Variant 3 Power Systems Integration

#### Solution includes:

- Multiple manufacturers’ content
- Standard and modified components
- Validated configurations
  - custom UPS and battery
  - climate control and ventilation
  - industrial enclosures and accessories
  - cabling, wire and connectivity management
- Qualification testing of designs
- Custom user documentation

#### Project Example: Converged Infrastructure, Municipality

- ✓ Uptime racks (integral 13,000BTU/1-ton cooling)
  - 1 dedicated power
  - 4 power distribution/customer’s own IT equipment
- Custom biometric security
- ✓ 36KW Blade UPS
- ✓ Network management and communications
- ✓ System test, custom user/installation manuals
- ✓ Batteries refreshed/re-labeled





## Variant 4 Engineered Solutions

### Solution includes:

- Design/execution based on concept/ drawing or complete specifications
- Project definitions, scope of work, schedule and budget
- Component specification, supplier selection and costing
- Bill of material, proposal, pricing
- Approval/manufacturing drawings
- Submittal documentation
- Manufacturing
- Integration, system build user manuals and installation documentation
- Startup, testing and validation
- Logistics management and delivery
- Startup/turnover

### Project Example: SCADA Monitoring System Backup

- ✓ 4-post rack, side skins, roof and 8U filler panels
- ✓ 3KVA UPS, 5U EBM, MBB MBP-conformal coating
- ✓ Custom ePDU
- ✓ Custom engineered surge/ inrush arresting device with customer provided load profile and inrush
- ✓ Custom MBP mounting panel with flush/clean install
- ✓ Input/output and communications terminal blocks/relays
- ✓ User and installation documentation, submittals and drawings
- ✓ Test and validation
- ✓ Packaged for overseas transit



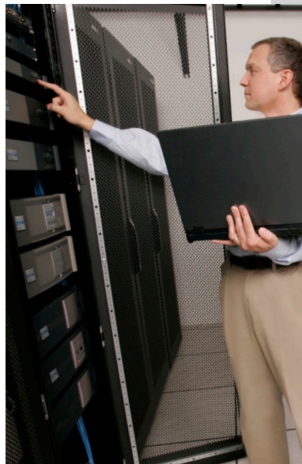
## Variant 5 Field/Installation Services

### Solution includes:

- Site Survey/define project scope of work
- Project and logistics management, asset tagging
- Removal and Disposal of line-corded equipment. Certificate of Destruction as required
- Installation and integration of line-corded equipment incl. UPS, EBM, MBP, ePDU, eATS
- Installation and programming of management card
- Power and networking connections completed
- System startup, full-functional test
- Options:
  - 3 or 5 yr extended warranty
  - management software installed
  - on-site training

### Project Example: Hospital Network Closet Upgrade

- ✓ Site survey completed for 96 network closets
- ✓ Logistics and delivery coordinated with technician's arrival
- ✓ Uninstalled aged 1-phase UPS equipment
- ✓ Installed UPS, eATS and ePDU's
- ✓ Programmed IP addresses and installed software
- ✓ 2-day software training
- ✓ 5-year warranty w/ 4-hour response
- ✓ Project completed after-hours over 5 days
- ✓ Provided comprehensive reporting and certificate at conclusion of project



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## Support

- Applications engineering, technical pre-sales support
- Direct customer interaction, joint sales calls, training
- Marketing – campaign strategy, electronic and print material development, direct mail, eMarketing support
- Product availability – in-stock in our distribution centers
- Project management

