MITSUBISHI ELECTRIC

UNINTERRUPTIBLE POWER SUPPLIES

CRITERIA FOR SELECTING A GOOD SERVICE PROVIDER *by Kyle Tessmer*

After the time invested in designing your critical power system, and once the data center is turned over to the IT department, you want to ensure the equipment is receiving the best possible service. That raises the question, what makes for a good service provider? Your team spent months – if not years – developing the UPS environment. All that time and diligence can quickly be undone if standards and procedures are not in place. That's where a Method of Procedure (MOP), Scope of Work (SOW), and Service Vendors come into play.

A MOP is designed to provide step-by-step instructions to be executed by service technicians performing an operation that implies a change in critical components of an installation. The MOP should establish a procedure for any action that could alter the normal operation of your system, while ensuring the desired outcome of those actions. Depending on the type of service or activity, the MOP can vary. But each of them should contain detailed, written instructions for executing the service and should be followed by anyone operating the equipment.

The procedure should include prerequisites, make note of any necessary tools, safety requirements, a back-out plan, and procedure sequencing. Prerequisites should include actions to be done prior to service – including approval processes, maintenance windows, and system re-configuration. Any additional tools needed, outside of a typical toolbox, should be listed to reduce risk to the data center and make efficient use of your maintenance window. Safety requirements, lockout-tagout procedures, and protective equipment should be named. If a safety administrator's presence is required, the necessary parties should be notified and proper safety equipment should always be used. The list of instructions is a crucial part of your MOP – this list describes, in detail, each step and the expected result. Each step should be indicated 'Complete' as the operator goes through each step. This provides a log of events in terms of record keeping and can be later used for reference. The user should be able to follow the list of instructions and achieve the intended result.

Your MOP should include the following: a job information section, where general information and service descriptions are made; a back-out procedure, in the event of an interruption; a detailed description of activities and the expected outcomes; any necessary approval signatures and additional attachments.

A key takeaway from a well-established MOP is the technicians are wholly aware of procedures, expected outcomes, and understanding why the procedures are in place. Once this is achieved, risk of outages can be significantly reduced while increasing workplace safety.

Similar to a MOP, a Scope of Work (SOW) provides a detailed summary of the service to be performed. Before a technician arrives to site, you can ask for a SOW to know exactly what to expect from the service visit.

Typically, SOW's are used for maintenance contracts (or various service work) and provide clarification for each maintenance trip. Contents of the scope can vary but should include physical, electrical, and operational inspections of the equipment along with follow through and documentation of the technician's findings. Other aspects of a SOW that should be included are data recordings/ measurements – particularly for your battery cabinets, proper cleaning of the system, and a remedial action plan – including any necessary replacement parts.

You should ask yourself a few questions when it comes to selecting a service provider.

- Is the provider OEM certified?
- Do they have access to a spare parts depot?
- Can certified OEMparts be shipped quickly? – Particularly in emergency situations?
- Is there a 24 x 7 support network in place?
- Will the provider be able to upgrade software?
- Does the provider carry necessary insurance or issue a Certificate of Insurance?

Service Provider Checklist

- ☐ SOW (Scope of Work)
- ☐ MOP (Method of Procedure)
  - ☐ Pre-requisites
    - ☐ Before Work Approvals
    - ☐ Tool Requirements
    - ☐ Safety Requirements
    - ☐ Lockout/Tagout Procedures
  - ☐ Sequential List of Instructions
  - ☐ Backout Procedure
  - ☐ Expected Outcome
  - ☐ Necessary Approvals
- ☐ Certifications/Skills
- ☐ Experience
- ☐ Availability of OEM Spare Parts
- ☐ Ability to Upgrade Software
- ☐ 7 x 24 Emergency Support
- ☐ Certificate of Insurance
- ☐ Internal Support Network
- ☐ 7 x 24 x 365 Hotline

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When selecting a service provider, the first question to ask is, 'Are they OEM certified?' While OEM's offer direct service options, they may have an additional network of partners who are certified to provide service on their behalf. These service partners typically have attended training courses held at OEM Headquarters and passed all the training requirements to provide field service.

Options for certified OEM spare parts can vary but having parts readily available is crucial to the continuity of your system. Maintenance schedules should coincide with recommended parts replacement schedule to maximize your uptime.

In the event of an emergency, it's important to entrust your service provider with the responsibility of developing a quick and effective remedial action plan. Your provider should have a 24 x 7 network established, with technicians available for dispatch. An often overlooked support feature is the internal support network – Application Engineers, Project Managers, Service Coordinators, and Technical Support Specialists. This support team works in the background to specifically support customers and ensure all commitments are met.

As software upgrades periodically become available, your service provider should have access to those upgrades and be included with a maintenance contract.

Depending on your data center, you may require specific insurance requirements – the service vendor should comply with those requirements and follow any explicit data center rules when on site.

Reliability is a paramount factor in any UPS service company. You entrusted your UPS vendor with supplying continual power to your critical equipment; your service vendor should provide that same reliability. Following the OEM recommended maintenance / replacement schedule can significantly reduce total cost of ownership– savings that can be passed along to your customers.

An effective MOP can significantly reduce data center outages caused by human error but should be routinely followed and updated when necessary. When evaluating service providers, you should ask for a Scope of Work; this document(s) provide clarification on the service to be provided. You should verify that this falls in line with your expectations and ask for revisions when necessary. In particular, it's important to verify that SOWs are on a level playing field. By comparing SOWs, you can ensure you know exactly what you are paying for and request modifications as needed. Site walkthroughs should be customary to gain perspective, site familiarity, and overall system design. Once you make a decision on a service vendor, they become part of your team; working closely with the Service group is a mutually beneficial relationship for both parties and is the best way to maximize uptime of your UPS.