



**UNITED STATES MARINE CORPS
MARINE CORPS SYSTEMS COMMAND
2200 LESTER STREET
QUANTICO, VIRGINIA 22134-6050**

IN REPLY REFER TO

9310 – v2
GTES/EPS
1 Feb 2008

MEMORANDUM

From: USMC Central Control Point

Subj: USE OF NON-STANDARD GENERATORS IN THE MARINE CORPS

Ref: (a) DoD Directive 4120.11, Standardization of Mobile Electric Power Generating Sources, July 1993.

(b) MCO 11310.27, Joint Operating Procedures (JOP) Management and Standardization of Mobile Electric Power Generating Sources, June 2003

(c) MIL-HDBK 633F, Standard Family of Mobile Electric Power Generating Sources, General Description Information and Characteristics Data Sheets, August 1997

(d) MIL-STD 1332, Definitions of Tactical, Prime, Precise, and Utility Technologies for Classification of the DoD Mobile Electric Power Engine Generator Set Family.

Encl: (1) Request for Deviation Format

1. Purpose. To provide policy, guidance, responsibilities and procedures for the procurement and utilization of non-standard generators in the Marine Corps.

2. Scope. The policy applies to all acquisition programs and field activities that may consider the procurement of non-standard generators.

3. Background. Due to the existence of over 2,000 varieties of different makes, models and sizes of generator sets in the DoD inventory, and the potential for non-standard generators to proliferate within the Marine Corps, efforts are warranted to streamline the size and types of generators fielded, thereby providing for cost effective logistics support. While commercial generator sets are excellent machines for the environments and customers for whom they are designed, they often times lack the necessary robustness, features, characteristics and performance required in generators for the military environment. When analysis or trade-offs warrant introduction of a non-standard generator, the process to allow a deviation of policy is provided.

4. Policy Directives and Authority.

a. Department of Defense Directive 4120.11 “Standardization of Mobile Electric Power (MEP) Generating Sources”, reference (a), provides for a standard family of Mobile Electric

Power Generating Source (MEPGS) within the DoD and establishes procedures for controlling procurement of non-standard MEPGS. This Directive is binding on all USMC activities. The Joint Services Program Manager for Mobile Electric Power is the designated authority for approval to use non-standard generators.

b. “Joint Operating Procedures (JOP) Management and Standardization of Mobile Electric Power Generating Sources”, reference (b), adopts and implements DOD Directive 4120.11 as Marine Corps Order 11310.27. This MCO the policies of DOD Directive 4120.11 and clarifies directions for the management of MEPGS.

c. Marine Corps Order 11310.27 assigns the Program Manager, Expeditionary Power Systems, Marine Corps Systems Command as the USMC Central Control Point for the Request for Deviation (RFD) process to utilize a non-standard generator in the Marine Corps.

d. MIL-HDBK 633F “Standard Family of Mobile Electric Power Generating Sources, General Description Information and Characteristics Data Sheets”, reference (c), provides a detailed description of the standard family of Mobile Electric Power Generating Sources.

e. MIL-STD 1332 “Definitions of Tactical, Prime, Precise and Utility Technologies for Classification of the DoD Mobile Electric Power Engine Generator Set Family”, reference (d), defines subdivisions and classifications of power quality and also details standard voltage connections, altitude operating requirements and restrictions, required environmental operating conditions, and power ratings.

f. All requests for use of a non-standard generator must be reviewed, and approved in accordance with the references before development or acquisition efforts commence. Provided in enclosure (1) is the RFD template. Additional information or assistance can be obtained from the Program Manager, Expeditionary Power Systems, PMM-153, Marine Corps Systems Command. Points of contact are:

- Program Manager - Michael A. Gallagher, (703) 432-3572
- Deputy Program Manager - Maj David Morris, (703) 432-3607
- Mobile Power Team Leader - CWO5 Richard R. Triviso, (703) 432-3610

5. Responsibilities

a. Program Managers (PMs) in Marine Corps Systems Command

(1) If feasible, all programs shall utilize generators from the current family of in accordance with the reference (b) to satisfy requisite program power requirements, before pursuing any non-standard generator. Copies of the above references and information on the current family of generators in the USMC inventory is available at

<http://www.marcorsyscom.usmc.mil/sites/pmeps>

(2) When it is envisioned that a USMC / DOD generator is not the proper solution for a specific application, the program shall initiate an RFD for use of non-standard generators with best available information. The Program Manager / Project Officer (or his assigned agent) is responsible for preparation of all RFD materials. The Program Manager for Expeditionary Power Systems, PMM 153, is available to assist and will offer technical assistance to project teams. Generators below 2 kilowatts of electrical output power do not need an RFD.

(3) Any program that procures non-standard generators will be responsible for and subsequently must fund for all life cycle aspects of the generator system, to include any safety assessments, transportability assessments, performance tests, logistics support, maintenance, and personnel to operate and maintain the system.

USMC MAINTENANCE PERSONNEL FROM THE ENGINEER/UTILITIES
COMMUNITY ARE NOT RESPONSIBLE TO SUPPORT NON-STANDARD
GENERATOR SYSTEMS.

b. USMC Field Activities

(1) If feasible, all activities shall utilize generators from the current family of DOD/USMC generators in accordance with reference (b) to satisfy requisite power requirements before pursuing a non-standard generator. Information on the current generators in the USMC inventory is available at:

<http://www.marcorsyscom.usmc.mil/sites/pmeps>

(2) When it is envisioned that a USMC / DOD generator is not the proper solution for a specific application, the requiring activity shall prepare an RFD for use of a non-standard generator. The acquiring activity is responsible for preparation of all RFD materials, but the Program Manager for Expeditionary Power Systems will offer technical assistance. Generators below 2 kilowatts of electrical output power do not need an RFD.

(3) The activity that procures non-standard generators will be responsible for and subsequently must fund for all life cycle aspects of the generator system, to include any safety assessments, transportability assessments, performance tests, logistics support, maintenance, and personnel to operate and maintain the system, in accordance with their own internal policies and practices.

c. Program Manager, Expeditionary Power Systems

(1) The Program Manager will provide technical assistance to PMs and field activities with the preparation of the RFD.

(2) The Program Manager will maintain a record of completed non-standard generator RFDs and subsequent approvals.

6. Procedures.

a. Request for Deviation

(1) Enclosure (1) provides the format for an RFD. The purpose of the RFD is to provide necessary information in order to make a sound decision as for using a non-standard MEPGS. The RFD can serve as a checklist for the system developer to ensure that proper consideration has been taken concerning the critical aspects of the generator set and that it is suitable for the environmental, electrical, and transportability requirements of the system. The RFD further provides a reminder for the system developer that logistics support for the nonstandard set must be considered in the decision to field a nonstandard set.

(2) For Marine Corps Systems Command requests, the RFD will be mutually signed by the Program Manager for Expeditionary Power Systems (PM EPS) as USMC Central Control Point and the Program Manager or Product Group Director of the program that originates the request. PM EPS will transmit the request to the Program Manager for Mobile Electric Power.

(3) For USMC activities outside of Marine Corps Systems Command, the RFD shall be forwarded to the Program Manager for Expeditionary Power Systems (Attn PMM 153), who will then endorse the request (if appropriate) and forward on to the Program Manager for Mobile Electric Power.

b. Timeframe

Approvals to RFDs are dependent on many factors, but an indication for approval is generally known within 2-4 weeks after submission. Early coordination with PM EPS can overcome many of the expected obstacles.

7. Additional Sources of Information.

a. Points of Contact for Information:

- . Program Manager - Michael A. Gallagher, (703) 432-3572
- . Mobile Power Team Leader - Robert McKenzie, (703) 432-3616

b. Web sites for information:

USMC Information:

<http://www.marcorsyscom.usmc.mil/sites/pmeps>

DOD Program Manager for Mobile Electric Power

<http://www.pm-mep.army.mil>



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IN REPLY REFER TO
Office code
Date

MEMORANDUM

From: Program Manager, _____
To: DoD Project Manager, Mobile Electric Power, Ft. Belvoir, Virginia
Via: Program Manager, Expeditionary Power Systems, Marine Corps Systems Command
Subj: REQUEST FOR DEVIATION

- Encl: (1) Generator technical specifications
(2) Applicable Safety Certifications
(3) Generator Systems Assessment
(4) Test Reports
(5) Program Fielding Schedule
(6) User's Logistics Support Summary (ULSS)
(7) Supportability Plan

1. Originating organization identification:

- 1.a. Department:
- 1.b. Command:
- 1.c. Division, branch or office:
- 1.d. Mail symbol:
- 1.e. Address:
- 1.f. Contact (name):
- 1.g. Telephone: (include COMMERCIAL and DSN extensions)

2. System identification and data:

- 1.a. Nomenclature:
- 1.b. System designator:
- 1.c. NSN:
- 1.d. System status: (R&D, production, fielded)
- 1.e. Power requirements of using system (attach Purchase Description, Specification, or Statement of Work covering power source requirements):

1.e.(1) Maximum rated load (all system components energized)

AC ____ kW ____ V ____ Hz ____ Phase ____ PF

DC ____ kW ____ V ____ % ____ Ripple

[If load temperature dependent, provide power requirements at temperature extremes.]

1.e.(2) Nominal load [the kilowatt sum of those components that operate during operational scenarios]

AC _____kW_____V_____Hz_____Phase_____PF_____

DC _____kW_____V_____%_____Ripple

[If load temperature dependent, provide power requirements at temperature extremes.]

1.e.(3) Voltage regulation requirement:

_____ % regulation [no load to rated load]
_____ % bandwidth steady state stability (short term, 30 seconds)
_____ % transient dip/rise (upon sudden application/removal of rated load
+/- _____seconds, recovery after transient

1.e.(4) Frequency regulation requirement:

_____ % regulation [no load to rated load]
_____ % bandwidth, constant load deviation [short term, 30 seconds]
_____ % transient overshoot/undershoot
[upon sudden application or removal of rate load]
+/- _____ seconds, recovery after transient

[NOTE: State bandwidth value in 2e(3) above as percent of rated voltage ; state bandwidth value in 2e(4) as percent of rated frequency.]

1.f Other requirements for MEPGS (Special or unusual requirements must be justified and classified as essential or desirable.)

1.f.(1) Environmental [Temperature range, altitude requirements (both rated and derated conditions), and storage temperatures.]

1.f.(2) Transportability [e.g., railroad, truck, trailer, aircraft.]

1.f.(3) Shock and vibration

1.f.(4) Size and weight [both dry and wet (operational)]

1.f.(5) Mean time between major overhauls

1.f.(6) Reliability [include confidence level.]

1.f.(7) Maintainability

1.f.(8) Special or Unusual: [e.g., remote control, special fuel, load transfer, paralleling]

1.g System, vehicle, or end item requiring power source

1.g.(1) Calendar year of initial fielding

1.g.(2) Estimated remaining life (calendar year)

1.g.(3) Is request for deviation due to change in the original item?

_____Yes _____No

3. Identify the special purpose item requested:

3.a Make and model:

3.b NSN:

3.c Power rating:

3.d Engine make and model:

3.e Engine type:

_____Spark ignition _____Gas turbine _____Compression ignition _____Other

3.f Engine cooling: _____Air _____Liquid

3.g Is item used in other military applications?

_____Yes _____No

If yes, identify one or more end item applications:

3.h Are technical manuals available for operation and maintenance of the requested generator sets?

_____Yes _____No

_____Commercial _____Military

3.i Are repair parts, special tools, and test equipment available within the Marine Corps / Marine Corps supply system / DoD supply system?

_____Yes _____No

3.j What action will be taken by the requester to ensure logistical support of the deviation item if approval is granted to include depot-level rebuild or overhaul plans?

3.k Has the requested item been adequately tested to ensure its suitability for military use?

_____Yes _____No

If yes, attach copy of test report or state location of test data with point of contact name and telephone number.

3.1 Is there an adequate technical data package available for procurement of the requested item?

[Identify the Service or agency custodian, address, office symbol, and telephone number.]

3.m Is operator and maintenance training now in effect?

_____Yes _____No

3.n Planned disposition on generator set upon system end-of-life phase?

4. Quantity of items to be acquired under this request if approved:

Initial quantity	_____
Estimated total quantity	_____
Date(s) required	_____

[Attach time-phased delivery schedule]

5. Identify the nearest Standard Family Item (model number and NSN):

5.a Has the standard family item been tested with the using system?

_____Yes _____No

5.b How does the above standard family item fail to meet requirements of using system?

5.c What specific changes would be needed in the standard family item to make it suitable for the using system?

5.d What change in the using system would make it compatible with a standard family generator set?

5.e What action is being taken to adapt the system or major end item to permit interface with a standard family item? [Include the action office, address, office symbol, telephone number, and forecast completion date.]

5.f Total quantity of deviation item in current use by requester:

6. Command approval of Request for Deviation:

 Name
 PM XXX
 Marine Corps Systems Command

 Michael A. Gallagher
 USMC Central Control Point
 Marine Corps Systems Command