

DSET Policy on the use of Non-State-Owned Uninterruptible Power Supplies with NG911

Background

In the past, when the “Vision Switch” generation of E9-1-1 equipment was procured by DSET, the required UPS was also provided. Some PSAPs which had their own UPS asked that they be allowed to use them to supply E9-1-1, but DSET made the policy decision at that time not to allow that option.

With the advent of the NG911 system, this question is being asked again. Recognizing that some PSAPs have issues with adequate space and HVAC capacity in their equipment rooms, DSET has decided to change its policy with regard to non-state-owned UPS (NSUPS) for use with NG911 equipment. We will permit such use, but will require that the NSUPS and its installation meet the following minimum requirements in order that the complete NG911 system meets or surpasses DSET’s quality, length of time and monitoring requirements.

NSUPS Requirements

The proposed NSUPS shall:

1. Be a UL “Listed”, “Recognized” or “Classified” product
2. Be installed in accordance with the Connecticut State Building Code and Connecticut Supplement
3. Supply only critical PSAP loads¹
4. Be connected to, along with all powered equipment, a single-point facility ground identified for the PSAP.
5. Provide performance equivalent to a Level 1, Type “O” or Type “U” stored emergency power supply system as specified in NFPA 111, *Standard on Stored Electrical Energy Emergency and Standby Power Systems* (2013 edition)
6. Be equipped with sufficient battery to provide no less than 15 minutes of operation at the maximum rated load (NFPA 111 Class 0.25)
7. Be maintained and tested in accordance with the requirements of NFPA #111²
8. Have loading no higher than 85% of nameplate specified maximum, calculated including NG911 loads
9. Have a bypass switch that maintains the power connection during switchover and that is capable of isolating all UPS components while allowing power to flow from the source to the load
10. Provide remote annunciation within the PSAP operations room, and provide notification to the PSDN NOC (using a network connection) of the following conditions:
 - a. Source power failure, overvoltage, and under-voltage
 - b. High and low battery voltage
 - c. UPS in bypass mode

Note: For those PSAPs with an approved NSUPS, the “dry power” electrical connection currently installed from the State-provided UPS to the floor will no longer be required, provided that all NG911 equipment receives its power from the approved NSUPS through isolated-ground outlets whose grounding connection is derived from the single-point facility ground identified in Item #4 above.

¹ *The Public Safety Data Network (PSDN) equipment is also considered a “critical load”, but was provided with a rack-mounted UPS at the time of the PSDN installation. This UPS, if retained, will be required to be powered by the NSUPS.*

² *Generally, this includes a requirement for testing the UPS under load every year, with batteries replaced as indicated by the testing. We recommend that PSAPs obtain service agreements with their vendor to provide these services.*