

Generators

This is in response to your inquiry regarding the load calculation requirements for generators.

 Section 702.5(B) in the 2008 National Electrical Code (NEC) states that a load calculation is required for generators with either manual or automatic transfer switches regardless of whether there is load management or not. The calculation is only for the purpose of providing those loads that will be placed on the generator and to make sure that those loads will not exceed the output of the generator.

The load calculation is permitted to be any part of Article 220 like 220.42 or 220.83, a manufacturer provided calculation sheet or program, a utility bill showing the demand for the building in kw or a reading of the panel with all equipment on signed and sealed by a NJ licensed electrical contractor is also an acceptable means.

Section 702.5(B)(1) in the 2008 NEC states that where manual transfer equipment is used, an optional standby system shall have adequate ampacity and rating for the supply of all equipment intended to be operated at one time. **The user of the optional standby system shall be permitted to select the load connected to the system.**

Where utilizing an 'interlock' type device for the manual transfer which is specific to the panel it is being installed on, such as a Square D interlock device on a Square D panel, this meets the listing and labeling requirements in the code per Section 110.3(B) in the 2008 NEC.

Therefore, load calculation should indicate what is to be supplied to verify that the output of the generator will not be exceeded in accordance with Section 702.5(B) and the 'interlock' kit as specified above meets the requirements of Sections 110.3(B) for listing and labeling as well as Section 702.5(B)(1) for a manual transfer means.

The local enforcement responsibility for these sections of the code appears to have been met and the inspection is at the point and time in which the equipment has been installed. When the inspection of the installation is performed and the load of the generator has been exceeded, the installation is then failed and must be corrected to comply with the code. The owner and/or the contractor take responsibility if there is additional load put on the generator after the inspection has been performed.

I trust this answers your question on this matter. This opinion is, however, advisory in nature and therefore non-binding on any of the parties concerned. Should you be in need of further assistance, please contact me at (609) 984-7609.

Very truly yours,
Suzanne Childers
Suzanne Childers
Code Specialist

For standby generators the following is required before installation:

- Zoning permit including copy-of property survey noting where the generator will be located accompanied by a \$25.00 fee for zoning.

- Construction permits including: permit file jacket, construction permit, electrical permit(for transfer switch), plumbing permit(for natural gas line), fire permit(for required NFPA clearance).

- Load Calculations

- Brochure on generator

For portable generators (gasoline operated) electrical permit is required for the transfer switch.

