ABC GENERATOR SERVICE OR SERVICE

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COMPLIANCE ALERT

Impact of Provision 700.3(F) of the 2017 National Electrical Code on *Emergency Systems* & *Legally Required Standby Systems*

Provision 700.3(F) is a new code requirement that applies to a ***Temporary Source of Power for Maintenance or Repair of the Alternate Source of Power***.

This provision states that if the emergency system relies on a single alternate source of power (e.g. standby generator), which will be disabled for maintenance or repair, the emergency system shall include a permanent switching means to connect a temporary alternate source of power for automatic operation, which shall be available for the duration of the maintenance or repair.

The permanent switching means to connect a portable or temporary alternate source of power shall comply with the following conditions:

1) Connection to the portable or temporary alternate source of power shall not require modification of the permanent system wiring.

   In other words - You can't simply disconnect the existing wiring and hardwire the back-up generator. A recommended solution is a permanent docking or quick-connect panel that is UL listed and able to receive a cam-style cable connection.

2) Transfer of power between the normal power source and the emergency power source shall be in accordance with 700.12 (*10 seconds or less to supply emergency power*).

   In other words - Back-up power has to be up and running within 10 seconds. The docking panel will need remote auto start contact terminals for the mobile generator.

3) The connection point for the portable or temporary alternate source shall be marked with the phase rotation and system bonding requirements.

In other words – The docking panel should contain voltage & phase specific color-coded bulkhead mount cam-style connectors for the mobile generator. Additionally, a phase monitor with the system bonding markings is an inexpensive option that will add another level of safety and convenience.

4) Mechanical or electrical interlocking shall prevent inadvertent interconnection of power sources.

In other words - The docking panel should make it impossible to parallel the permanent and temporary generator or backfeed the permanent generator, protecting the electrician or technician working on the generator. A trapped key interlock (TKI) isolation breaker or a rotary manual transfer switch is the recommended solution to accomplish this.

5) The switching means shall include a contact point that shall annunciate at a location remote from the generator or at another facility monitoring system to indicate that the permanent emergency source is disconnected from the emergency system.

In other words – A remote annunciator/alarm panel should be provided to indicate when the primary generator is unavailable and the alternative emergency source is connected. It should include both visual and audible alarm warnings.

Exceptions: The permanent switching means to connect a portable or temporary alternate source of power, for the duration of the maintenance or repair, shall not be required where any of the following conditions exists:

1) All processes that require an Emergency System or Legally Required Standby System (LRSS) are capable of being disabled during maintenance or repair of same.
2) The building is unoccupied, and the fire suppression system doesn't require an emergency system or LRSS.
3) Other temporary means can be substituted for the Emergency System or LRSS.
4) A second Emergency System or LRSS capable of supporting the emergency systems exists onsite.

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NEC Adoption by State

NEC® in Effect

3/1/2020

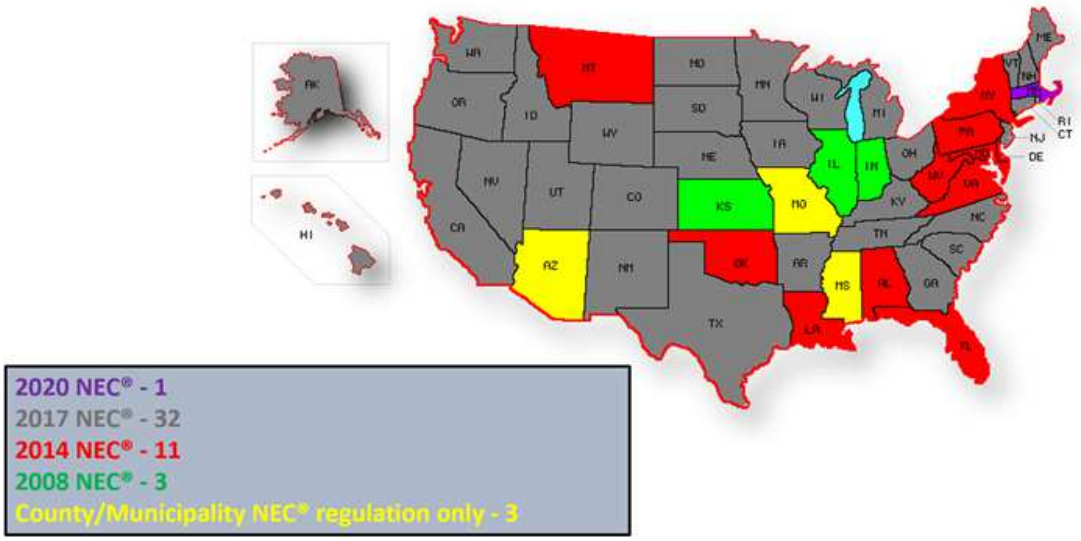

Figure 1

NEC® Update Process In Progress

3 /1/2020

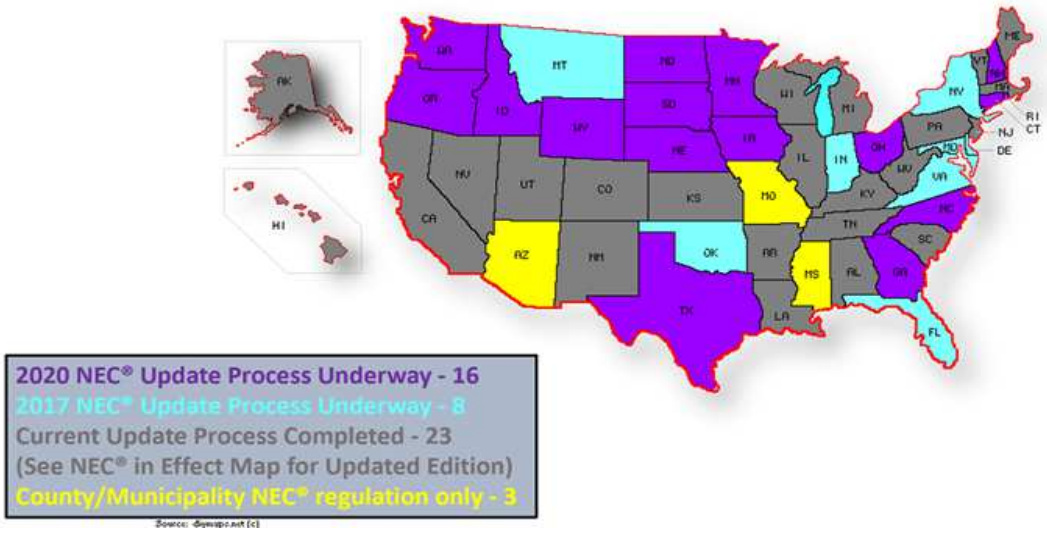

Figure 2

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In summary, Provision 700.3(F) of the 2017 National Electrical Code requires a permanent point of connection for a mobile generator. That connection point needs to be installed and a mobile generator needs to be deployed for automatic operation, when the generator (defined as an emergency system or legally required standby system) is offline for maintenance and repairs. Additionally, a remote annunciator or alarm panel is required to give an audible and visual annunciation that the permanent emergency source is disconnected from the emergency

This information is being provided as a professional courtesy. The goal being to inform and educate the affected owners and operators of the code and its requirements. If you have questions or would like additional information, please contact:

ABC GENERATOR SALES OR SERVICE

John Q. Public
jpublic@abcgenerator.xxx
(800) 000-0000

Reference Figure 1 & 2 Map Illustrations: https://www.nfpa.org/NEC/NEC-adoption-and-use/NEC-adoption-maps March 3rd 2020

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