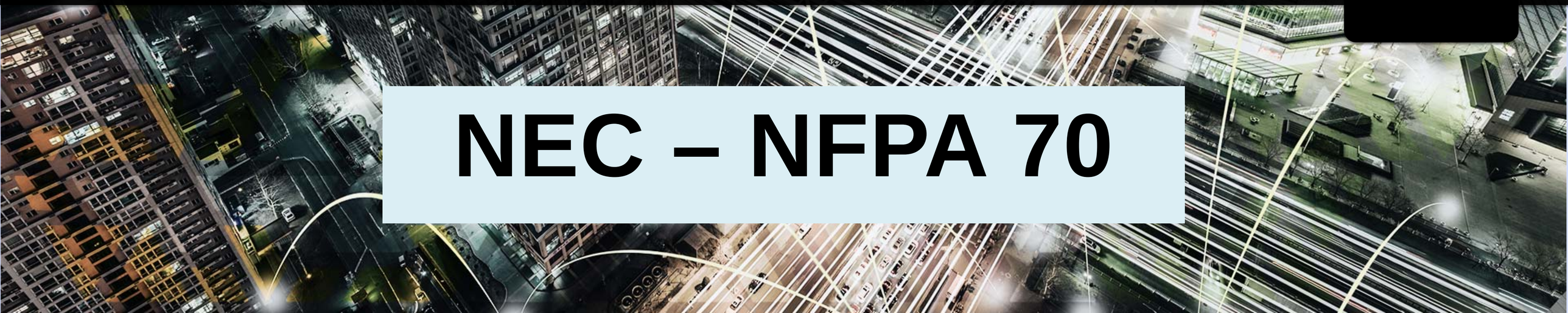
2020 NEC Changes



NEC – NFPA 70

Code Making Panel 13

445 – Generators
455 – Phase Convertors
480 – Storage Batteries
695 – Fire Pumps
700 – Emergency Systems
701 – Legally Required Standby Systems
702 – Optional Standby Systems
708 – Critical Operations Power Systems (COPS)
750 – Energy Management Systems
Annex F – Critical Operations Power Systems
Annex G – Supervisory Control and Data Acquisition (SCADA)

What's New in the 2020 NEC®

The evolution of NFPA 70®, National Electrical Code®, has taken place uninterrupted since the code was introduced in 1897. The 2020 edition of the NEC® fits solidly into that tradition, and features important changes related to emergency disconnects, ground-fault circuit interrupter protection, surge protection, and myriad other topics related to electrical safety. NFPA Journal looks at 2020 NEC Highlights.

- **Exterior Emergency Disconnects**: Helps to improve electrical safety for emergency responders at one- and two-family dwelling installations.
- **Deenergizing Panel Boards:** Revises service disconnect rules to help increase electrical worker safety.
- **Marinas and Boatyards**: Updates ground-fault protection and leakage-current measurement device requirements.
- **Power Over Ethernet:** Adapts NEC requirements to meet the installation practices of new and evolving technologies.
- **Conducting Load Calculations**: Modernizes the tables currently in use for calculations to reflect improvements in energy efficiency.
- **Reorganization of Article 310**: Includes new user friendly numbering for important ampacity tables
- **New general requirement**: Covering cables installed exposed on ceiling surfaces and sidewalls

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Coming in November

NFPA will release the 2020 NEC Changes Online Training in late fall. Stay tuned for updates.

210.8

GFCI Branch Circuit Changes

- Added “through 250V” to the requirements
- Ranges will apply if within 6 feet of a sink
- Dryers will always apply as it is considered part of the laundry area requirements
- Finished basement receptacles also will require GFCI protection

230.67

Surge Protection Requirements

- All services in dwelling units will require the installation of a Listed Surge Protection Device
- Installed either in the service equipment, or first downstream distribution panelboard
- Surge Protectors are now part of the new Article 242 Overvoltage Protection

230.85

Emergency Disconnect

- On One- and Two-Family Dwelling Units an “Emergency Disconnect” will be required to be at a readily accessible location at the metering equipment on the exterior of the dwelling unit.

230.85

Emergency Disconnect-Option 1

- Service disconnect(s) marked as follows:

  “EMERGENCY DISCONNECT, SERVICE DISCONNECT”

- Service Rated Transfer Switch

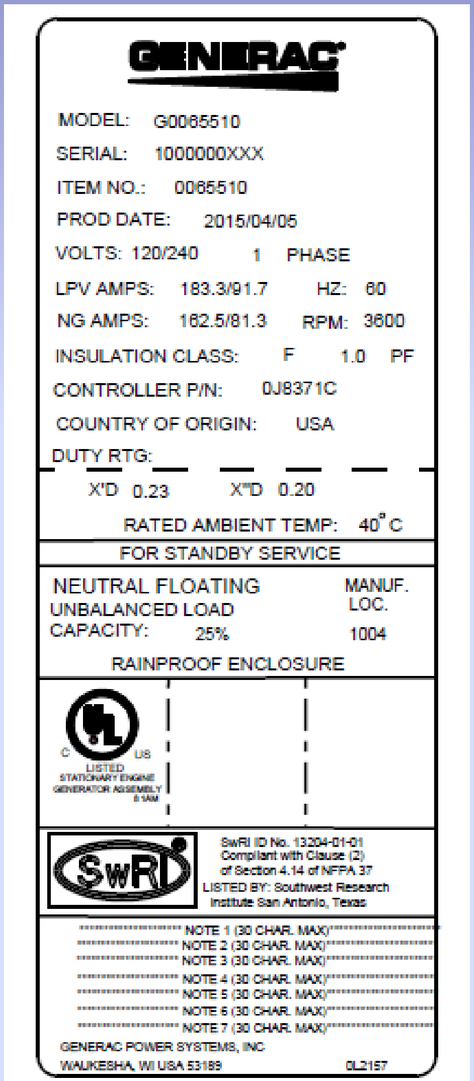
- Meter Socket with Main Service Disconnect

230.85

Emergency Disconnect-Option 2

- Meter disconnect(s) installed per 230.82(3) and marked as follows: “EMERGENCY DISCONNECT, METER DISCONNECT, NOT SERVICE EQUIPMENT”

- Meter disconnects that are approved by the utility are installed ahead of the meter socket enclosure



445.6

Listing Requirements

- All permanently installed generators operating at 600V and less will be required to be listed.
- *Exception: One of a kind or custom manufactured generators shall be permitted to be field labeled by field evaluation body.*

- OSHA NRTL marks are on the generator data plates.

445.18

Prime Mover Shutdown –Residential 2020 NEC

- All generators >15kw shall be provided with an exterior shutdown device at a readily accessible location.

445.18

Prime Mover Shutdown

- All generators will require a shutdown means on the generator.
- 15 kW and larger will require a remote emergency stop switch to be installed.

700.4 / 701.4

Generator Sizing

An emergency system shall have adequate capacity in accordance with Article 220 or by another approved method. (engineering supervision)

700.12(D) / 701.12(D)

Internal Combustion Engines as Prime Movers

Rewrite to section and exception that reads as;

“Where approved by the AHJ, the use of other than on-site fuels shall be permitted where there is a low probability of a simultaneous failure of both the off-site fuel deliver system and power form the outside electrical utility company.”

Article 700.5 and 701.5

Transfer Equipment

Meter mounted transfer switches shall not be permitted for emergency and legally required system use.

Transfer switches shall not be permitted to be reconditioned.

702.5

Transfer Switches

- Field labeling the actual ATS fault current rating is no longer required for dwelling units, still required for commercial installations.
- All ATS’s are required to be listed
- Meter-mounted transfer switch permitted where approved by the utility provider and local AHJ

Questions?