

ELECTRIC LEAGUE OF MARYLAND

NEWS AND NOTES

September 2019

This special issue of *News and Notes* is written to our readers as we begin the last half of 2019. Best wishes for a great fall season; we plan to resume some special projects and work on positive legislation for the next year. So look for details in future **News and Notes** on our website.

As you know, the League has recently held two successful “Lunch and Learn” events - review our website for details. If you missed either seminar, you missed an opportunity to expand your knowledge on upcoming trends in the electrical industry and to make important contacts with other like-minded industry leaders.



The Electric League will continue to keep our members up to date on trends by featuring a special Lunch and Learn seminar (at a reasonable cost) on Future Electrical Innovative Ideas on New Energy Sources and Energy Storage Systems. To this end, changes to the 2020 NEC combines rules from Article 705 and inserts them into a new Article on Energy Storage Systems, which will become new Article 706 of the 2020 Edition of the NEC.



In the meantime, we are suggesting to the industry that you keep abreast of the time schedule for the release of the 2020 NEC. As you probably know, it has already been reviewed by various committees, voted on, sent back to the correlating committee, and has been printed for distribution in October or November. If you are a member of NFPA, you can begin to look at some major changes that will affect our industry.



As a help to you, I am trying to summarize the analysis of some changes found in one of the issues of the *IAEI Journal* by Mr. Keith Lofland.

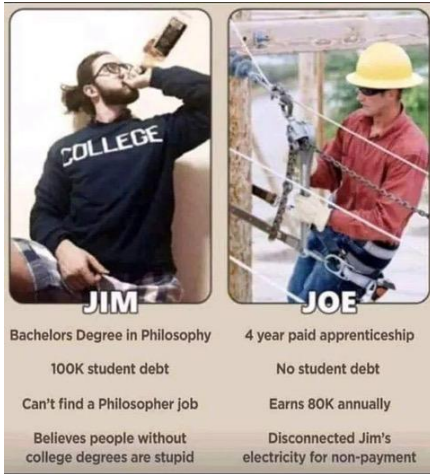
Of special note, there will be four new Articles added to the NEC.

1. **Article 242** – over voltage protection which will include three parts - general requirements for over voltage protection, surge protection for systems of not over 1,000 volts, and over voltage and surge protection for systems over 1,000 volts; much of the information has been relocated from existing **Articles 280 and 285**.
2. **Article 311** – medium voltage conductors and cables: medium voltage requirements that were previously found in **Articles 310 and 328** were consolidated into one Article to improve the usability of the code.
3. **Article 337** – Type P Cable: this new proposed Article will cover the use, installation, and construction specifications for 600 volt type P cable for use in hazardous locations.
4. **Article 805** – general requirements for communications systems: this new Article will combine common requirements that are now found in **Article 800, Article 820, Article 830, and Article 840** into a general requirement that does away with redundant rules and will be used for a change to **Article 110.12** (C Mechanical Execution of Work Cables and Conductors). This correlates with all wiring methods and will apply to all installations.

Now, everyone installing electrical work must do it in a workmanlike manner, no matter what the voltage classification is.

- There are changes to **Section 210.8** GFCI Protection for Personnel both in measurements and requirements. The voltage regulations have been removed so that now, even ranges and dryers will require GFCI, even though they operate at 230 volts and larger-type islands and peninsulas in kitchens and such will require measurements so that additional outlets will be installed on a square foot basis rather than just a linear requirement.
- Also, under GFCI Protection, a revision has been made to allow it to be installed on feeders, not just on branch circuits. This may change the concept from just using individual devices as the only way to provide protection.
- Lighting loads for non-dwelling occupancies **Section 220.12** has been revised to allow reductions in lighting loads based on technology and advancements of how to control area lighting. The design table will be changed to reflect new types of lighting (LED, etc.) and when motion or heat sensors are installed.
- There will be new requirements to provide surge protection devices (SPD) on all services in dwelling units. This requirement is intended to address the recognized need for surge protection to protect sensitive electronics and systems found in most safety devices and appliances (AFIs) and (GFCIs) and (smoke alarms) found in most dwellings. Again, this provides needed protection, even if people do not provide individual surge protection units.
- A major change will be outdoor emergency disconnects being required for dwelling units. New code language is being proposed that will require an emergency disconnect at a readily accessible outdoor location for all dwelling units. **Note:** Be alert for other emergency sources: solar, wind, fuel cells.....the purpose is to protect first responders so they can easily disconnect the source of power.
- There are new changes for the **Article 250** grounding which will permit connections on the supply side of service disconnects (**Section 250.25**), a change to using the grounding electrode conductor connections on (rebar) and also the restricted use of equipment grounding conductors (**Section 250.121**). No longer will the metal frame of a building or structure be used as an equipment grounding conductor – we never have allowed this in this area!
- **Article 310** Conductors for General Wiring – will be completely revised. Most of the changes go back to the old way to calculate ampacity found in Table 310.16 and then a list will be made of all exceptions. As part of these changes, equipment conductor fill has been revised as well. (**Section 314.16 (B) (5)**)
- Boxes at ceiling-suspended (paddle) fan outlets – the language has been revised and no longer will require a spare separated switched ungrounded conductor to be present in order to require a listed fan box for future installations.

As you will note, there are changes coming to the National Electrical Code to accommodate new technology and innovative concepts of our electrical trade. These are only a few of the many and new revisions to the Electrical Code. We'll have more information in future issues of **News and Notes**.



Take a good look at the picture to the left; share it with others.

Although slanted to favor “Joe the Electrician”, it makes the point that becoming a skilled craftsman in a great trade will always provide a good living wage and job security for the future.

Be a **drum leader** for the electrical industry. Start recruiting the younger generation and do your part to help stop the labor shortage that is occurring. As I have suggested in prior publications, we need a skilled and well-educated workforce. We as industry leaders, have a unique opportunity to advocate for, teach, and mentor young electricians so they can enter a demanding, exciting, and fulfilling living wage industry.



Gil Thompson, Vice President, Electric League of Maryland