

# **Customer Installation Standards for Electric Service 2013 Edition**

## **Frequently Asked Questions**

February 1, 2013

The 2008 edition of the **Customer Installation Standards for Electric Service** has been revised and the 2013 edition has been issued. Questions may arise concerning this document. Some of them are answered below.

### **1. Why is Entergy issuing a revised version of the Customer Installation Standards for Electric Service?**

- The National Electric Code's and the National Electric Safety Code, and many other codes and standards have changed since the 2008 version was issued.
- Entergy is continuously working to make it easier for builders, electricians and developers to meet Entergy's technical requirements.

### **2. When did this new edition take effect? February 1, 2013**

Both the 2013 and 2008 **Customer Installation Standards for Electric Service** manuals will be accepted until June 1, 2013 after that only the 2013 version will be accepted.

### **3. How can I find out what the changes are and get a copy of the 2013 Customer Installation Standards for Electric Service?**

The book, a list of major changes and more can be downloaded at no charge on the Entergy web page ([www.entergy.com](http://www.entergy.com)). Under Utility Web Sites, select your Service Area; select 'Business Customers' and then select 'Builder Services and Standards before You Build'

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### **4. If I have a question about the 2013 edition of the Customer Installation Standards for Electric Service, how can I get an answer?**

Answers to questions about the Customer Installation Standards can be obtained by calling your local Entergy Representative or sending an email through the link on the web.

## **5. Why is 2 1/2" Conduit required for underground residential 200 amp service?**

4/0 triples is standard cable for 200 amp secondary service. Conduit is sized based upon conductor size. Normally 2" conduit would be the right size. In the southern service areas the ground is sinking and the conduit deforms. So the conduit can be reused in 10, 20, 30 years, larger conduit is used.

## **6. What is the difference between a manufactured home and a mobile home?**

A manufactured home is considered a mobile home but a mobile home is not considered a manufactured home. By HUD definition both are mobile homes but a manufactured home must have a label on the outside identifying it as a manufactured home.

According to the NEC, Section 550-23 Service Equipment:

The mobile home service equipment shall be located adjacent to the mobile home and not mounted on the mobile home.

For a manufactured home, the service equipment shall be permitted to be installed in or on a manufactured home provided that all of the following conditions are met. The manufactured home is secured to a permanent foundation that complies with applicable building codes.

The service equipment is installed in a manner acceptable to the authority having jurisdiction. HUD 3280.803 on power supply: states that the service equipment installed on a manufactured home shall be in accordance with NEC and that the installation shall be completed by the manufacturer except for the service connections, the meter and the grounding electrode.

The installation of the service equipment complies with Article 230 of the NEC.

Means are provided for the connection of a grounding electrode conductor to the service equipment and routing it outside the structure. Per HUD: A red "Warning" label shall be mounted on or adjacent to the service equipment and state: Warning- do not provide electrical power until the grounding electrode is installed and connected.

## **7. Why use a 4"x6" temporary pole for overhead service instead of a 4"x4" pole?**

Numerous line personnel have complained of 4x4 poles breaking under the weight of ladder plus installer when they went to install the overhead service.

The solution was the 4X6 pole for overhead temporary

## **8. What are the rules on Standoff brackets?**

Required by safety to make climbing the pole safer

All brackets are to be located on same side of pole in a group. When a second or third or fourth, etc conduit is to be installed on the same pole contact the company in advance. The Company will determine and if needed and if needed supply a large cable down the pole to a secondary pedestal. Customers to be connected in the large pedestal

**Where unsafe and not required** (Customer must have written agreement from Company to do this)

- on the streets that have parades and school play grounds to avoid children climbing poles
- Where large farm animals can use them as a scratching post

## **9. Do Power Factor Correcting Devices Lower Residential Power Bills?**

From time to time a device that promises to save 6%-30% on utility bills is advertised. These devices are being aggressively marketed to lower the VAR load at your house – and they do reduce VAR load -- but residential customers are not billed for VAR load. These devices will not reduce residential power bills.

These devices go by many names:

- GOES Gems
- ZAP Box
- Power Saver
- ElectricSuperSaver
- Intelliworks
- Kingsmen
- Electric Saver 1200
- Green Power Box
- V-Blox
- PAK
- EZ Energy Saver 1200

This is not an exhaustive list of names. New names and brands are being created all the time.

The boxes can be mounted near the electrical meter panel, or installed in series with an electric 240V clothes dryer.

**EnergyStar**, which is a joint effort of the U.S. Environmental Protection Agency and the U.S. Department of Energy, and which certifies technologies that save energy, makes it clear that they will not certify any of these devices. Here is a link:

<http://energystar.supportportal.com/link/portal/23002/23018/Article/14738/Can-Power-Factor-Correction-Devices-sometimes-called-Amp-Reduction-Units-or-kVAR-earn-the-ENERGY-STAR-label-Do-they-really-save-as-much-money-as-they-claim>

The **National Institute of Standards and Technology** also explains that these devices do not reduce residential power bills:

[http://www.nist.gov/pml/div684/power\\_121509.cfm](http://www.nist.gov/pml/div684/power_121509.cfm)

## Questions

*a) I saw these boxes demonstrated, and the amperage to a motor clearly went down when the device was turned on. Doesn't this prove the box works?*

No. The box makes use of capacitors to compensate for the inductive load of motors. (Motors run your refrigerator and AC compressors.) The capacitors reduce the total amperage and reduce what engineers call “apparent power” (measured in VA, or volts-amps), but the capacitors do not reduce what engineers call “real power” (measured in Watts). Residential customers are only billed for real power over time (kWh), not apparent power over time (kVAh).

So, yes, these boxes “work” only in the sense that they reduce apparent power and energy, but residential customers are not billed for apparent power or energy. Residential customers are only billed for real power and energy. These boxes do not reduce real power consumption and they will not reduce your bill. This product is a scam.

These boxes do nothing to change the real power load of the house. They will not save money on residential power bills.

***b) What about the testimonials and endorsements from industrial customers?***

Reactive power compensation can save money for industrial and commercial customers because those customers sometimes have a rate that charges them for poor power factor. Residential customers do not pay for poor power factor.

***c) What about testimonials from electricians?***

Many electricians do not understand what this box is doing internally. The instruments electricians commonly use are often not designed to distinguish between real and apparent power. And, a small number of electricians do not know the difference between real power and apparent power.

***d) What about the testimonials from satisfied customers?***

Your electric bill changes every month. If your bill goes down after installing a device, it would have gone down even without the device.