

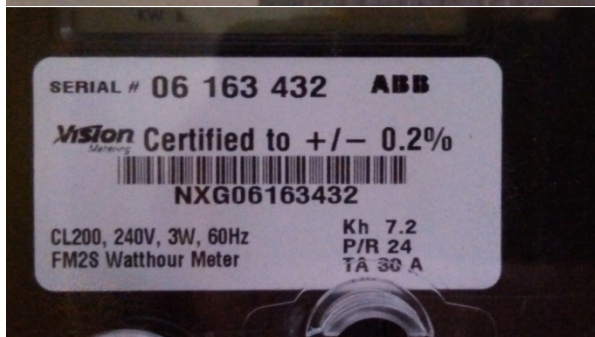
May 13, 2014

**Case No. 14-0683-EL-REN  
Harris-Phil-IN-PV-10kW Residence  
Staff Interrogatories – Initial Set**

**Question 1:** In Section N.1.e of the application, you are required to submit a photograph of the meter(s) with date image taken.

The photograph submitted in Section N.1.e does not show the manufacturer and serial number of the meter clearly. Please submit a photograph of the meter that shows these details clearly, and indicate the date when the photograph was taken.

**Answer 1:**



**Question 2:** In **Section N** of the application, you stated the following:

**N.a** The meter(s) that are measuring output from the facility are:

No **Inverter Meter(s)**

Yes **Utility Grade Meter(s)**

**N.1** Please provide the following information for each meter used in your system.

**N.1.a Manufacturer:** GE

**N.1.b Serial Number:** 028-03092

**N.1.c Type:** SP-GE-KV2C+-2S

**N.1.d Date of Last Certification:** December 27, 2013

All facilities that are larger than 6 kW must measure the output of the facility with a utility grade meter (*Must meet ANSI 12.1, or demonstrate an accuracy level of  $\pm 2\%$* ). Facilities that are larger than 6 kW and that are not measuring output with a utility grade meter will not be certified ([OAC 4901:1-40-04 \(D\)\(1\)](#) , [OAC 4901:1-10-05\(B\)](#)). Please submit proof that this meter is utility grade.

**Answer 2:** Please information below and attached to show that the meter meets ANSI 12.1 standards.

The screenshot shows the AEE Solar website. The top navigation bar includes links for DEALERS, ABOUT US, and BECOME A DEALER. The main content area is titled "Performance Based Initiative Approved Meters". It features a search bar and a sidebar with a "Products" menu. The main text describes smart meters approved for PBI systems, listing three types: form 25 (single-phase), form 95 (3-phase delta), and form 165 (3-phase wye). A table lists the descriptions and item codes for these meters. A photograph of a meter is shown on the right. Below the table, there is a section for "Wireless Communications" mentioning "EnGenius Outdoor Rated Long Range Wireless Bridge".

**Products**

- Mounting Structures
- Wind Power
- Inverters
- Power Systems
- Converters & Controls
- Charge Controllers
- Meters & Monitoring
  - DC meters
  - AC kilowatt-hour meters/Wireless Communications

**Performance Based Initiative Approved Meters**

These Smart meters appear on the [goosolarcalifornia.org](http://goosolarcalifornia.org) website list of approved meters for Performance Based Initiative (PBI) systems. Capable of communication using RF, Cellular, Power Line Carrier, and Ethernet protocols. The **GE KV2C+** is designed for especially harsh climates and suitable for 600 V applications.

The **form 25** meter is used for single-phase, 120/240 VAC, 3-wire installations.

The **form 95** meter is used for 3-phase, 208 VAC, 4-wire delta installations.

The **form 165** meter is used for 3-phase, 208 or 480 VAC, 4-wire Wye installations.

Description	Item code
GE kilowatt-hour meter -PBI APPROVED, single phase form 25, GE-KV2C+-2S	028-03092
GE kilowatt-hour meter -PBI APPROVED, 3 phase form 95, GE-KV2C+-95	028-03091
GE kilowatt-hour meter -PBI APPROVED, 3 phase form 165, GE-KV2C+-165	028-03090

**Wireless Communications**

**EnGenius Outdoor Rated Long Range Wireless Bridge**

## GE Energy

### kV2c/kV2c+ Meter Equipped with Itron® 53ESS ERT®

## fact sheet

Utilities can maximize the level of service they provide to residential and industrial customers using automatic meter reading (AMR)



solutions. GE Energy offers the kV2c/kV2c+ meter, equipped with the Itron 53ESS ERT, as a solution for commercial and industrial applications. This AMR solution allows utilities to collect not only consumption data from demand or time-of-use metered accounts, but billing data as well. An Itron 53ESS ERT installed "under the cover" of a kV2c/kV2c+ retrieves the billing data directly from the meter.

This offering encompasses the key attributes of these GE meters and the benefits delivered by Itron's radio based meter reading solutions.

This solution brings value to the marketplace through:

- Ease of installation – the AMR endpoint can be installed at the GE factory, programmed in the meter shop or field, and inserted into the meter socket
- Ease of use – both the meter and the module use MeterMate™ for configuration
- Flexibility – the ERT module is a plug-in module that fits in the modem card slot in the meter. With the module installed, all other I/O boards and option boards not requiring that slot are supported
- Broad range of data options – when programming the 53ESS ERT, customers can select any three payloads from the available list to define a data option, or they have the flexibility to choose from among 14 predefined data options
- Compatibility – all softswitches are supported in these meters

The kV2c/kV2c+ meter performs all metrology calculations and the 53ESS ERT transmits this data back to the Itron meter reading software via three standard consumption messages (SCMs).



The kV2c/kV2c+ equipped with the 53ESS ERT supports three SCMs. Each SCM contains a payload data value, an ERT ID, and counters providing tamper and/or other meter related information. The Itron Interval Data Message (IDM) is also supported. This solution features a flexible data option that allows customers to configure any payload to any SCM from the available list of payloads. In addition, these polyphase meters offer several ways to reset demand: manually, via the meter's optical port, or based on a calendar schedule.

#### About the kV2c/kV2c+ meter:

This GE meter moves beyond revenue metering to real-time instrumentation, true power quality monitoring and real cost of service measurements. It provides you:

- Revenue accuracy (with DC detection capability)
- Installation verification and tamper detection tools
- Coincident demand measures
- Power quality monitoring and analysis
- 20 channel recording
- Totalization options (with 4 external inputs)
- 4-Quadrant industrial or substation measures
- Per phase AC instrumentation (amps, volts, and frequency)

#### kV2c/kV2c+ Specifications

Available Models:

ANSI Form 1S, 2S, 3S, 4S, 9S, 12S, 16S, 36S, 45S

ANSI CLASS CL20, CL200, CL320

Voltage Rating 120V to 480V

Applicable Standards –

Meets or exceeds:

ANSI C12.1, C12.10,  
C12.18, C12.20

Operating Range:

Voltage 120 to 480V:

+10% - 20%

Temperature:

-40 °C to + 85 °C

Typical Accuracy: within +/- 0.2%





## About the Itron 53ESS ERT:

- Allows utilities to retrieve consumption, demand, TOU and reactive billing quantities remotely via Itron reading devices
- Compatible with the following Itron reading devices: Handheld OMR, Mobile AMR, MicroNetwork™ Fixed Network™
- Compatible with the following Itron data collection software: Premierplus4™, MV-RS™, Integrator™, Field Collection System (FCS)™

### 53ESS ERT Specifications:

- ERT Type is 08
- No "wake-up" tone is required—the 53ESS ERT self-initiates transmission of SCM's

- Transmit frequency: 910 MHz to 920 MHz
- Data integrity: Verified in every data message
- Operating temperature: -40C to +85C
- Operating humidity: 5% to 95% noncondensing relative humidity
- FCC compliance: Part 15 certified
- ANSI compliance: Meets or exceeds ANSI C12.1 Standards

With three SCM messages in the 53ESS ERT, you can now retrieve any three measured values or any two measured values and demand reset date with the kV2c/kV2c+ meter.

## kV2c/kV2c+ Equipped with 53ESS ERT Catalog Numbers Basic Meter with 53ESS ERT, No Option Board or Switches

### Basic Meter with 53ESS ERT, No Option Board or Switches

#### Self Contained 120 - 480V

Circuit	Wire	Form	Element	Class	Cat #
1 $\phi$	2	1S	1	CL200	787x230005
	3	2S	1	CL200	787x230001
	3	2S	1	CL320	787x230003
1 $\phi$ , $\Delta$ or Network, 2 $\phi$	3	12S	2	CL320	787x130003
	3	12S	2	CL200	787x130001
3 $\phi$ Y or $\Delta$	4	16S	3	CL200	787x430001
	4	16S	3	CL320	787x430003

#### Transformer Rated 120-480V

Circuit	Wire	Form	Element	Class	Cat #
1 $\phi$	2	3S	1	CL20	787x330001
	3	4S	1	CL20	787x330003
3 $\phi$ Y or $\Delta$	4	9S	3	CL20	787x930001
3 $\phi$ Y	4	36S	2 1/2	CL20	787x630001
3 $\phi$ $\Delta$ , 2 $\phi$	3	45S	2	CL20	787x530001

### kV2c+ Meter with 53ESS ERT, No Option Board or Switches

#### Self Contained 120 - 480V

Circuit	Wire	Form	Element	Class	Cat #
1 $\phi$	2	1S	1	CL200	781x230005
	3	2S	1	CL200	781x230001
	3	2S	1	CL320	781x230003
1 $\phi$ , $\Delta$ or Network, 2 $\phi$	3	12S	2	CL320	781x130003
	3	12S	2	CL200	781x130001
3 $\phi$ Y or $\Delta$	4	16S	3	CL200	781x430001
	4	16S	3	CL320	781x430003

#### Transformer Rated 120-480V

Circuit	Wire	Form	Element	Class	Cat #
1 $\phi$	2	3S	1	CL20	781x330001
	3	4S	1	CL20	781x330003
3 $\phi$ Y or $\Delta$	4	9S	3	CL20	781x930001
3 $\phi$ Y	4	36S	2 1/2	CL20	781x630001
3 $\phi$ $\Delta$ , 2 $\phi$	3	45S	2	CL20	781x530001

Additional form/voltage configurations may be available. 600V application is planned for the kV2c+ only. Please consult your GE Account Manager for more information.



To obtain more information or to purchase GE Energy's metering products, please call GE 1-STOP at 1-800-431-7867. Product information is also available on our web site. Please visit [ge.com/energy](http://ge.com/energy) for more information.

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Premierplus4, MV-RS, Integrator, Field Collection System, MicroNetwork and Fixed Network are trademarks of Itron, Inc.

G2A-14319 (11/05)

Please let me know if you have any further questions and thank you for your cooperation.

Best,

Anna Noucas  
Senior Associate  
Sol Systems, LLC

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Summary: Reply reply to staff interrogatory electronically filed by Ms. Anna Noucas on behalf of Harris, Phil