

# P2030.5

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**Submitter Email:** [bheile@ieee.org](mailto:bheile@ieee.org)

**Type of Project:** New IEEE Standard

**PAR Request Date:** 06-Mar-2013

**PAR Approval Date:**

**PAR Expiration Date:**

**Status:** Unapproved PAR, PAR for a New IEEE Standard

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**1.1 Project Number:** P2030.5

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

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**2.1 Title:** Standard for Smart Energy Profile 2.0 Application Protocol

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**3.1 Working Group:** Requested: Smart Energy Profile 2.0 (COM/PLC/SEP2)

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**3.2 Sponsoring Society and Committee:** IEEE Communications Society/Power Line Communications (COM/PLC)

**Contact Information for Sponsor Chair**

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None

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**4.1 Type of Ballot:** Entity

**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 07/2013

**4.3 Projected Completion Date for Submittal to RevCom:** 10/2013

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**5.1 Approximate number of entities expected to be actively involved in the development of this project:** 30

**5.2 Scope:** This standard defines the 'APPLICATION' layer with TCP/IP providing functions in the 'TRANSPORT' and 'INTERNET' layers. Depending on the physical layer in use (e.g., IEEE802.15.4, IEEE802.11, IEEE1901), a variety of lower layer protocols may be involved in providing a complete solution. Generally, lower layer protocols are not discussed in this standard except where there is a direct interaction with the application protocol. This standard defines the mechanisms for exchanging application messages, the exact messages exchanged including error messages, and the security features used to protect the application messages. With respect to the OSI network model, this standard is built using the four layer Internet stack model. The defined application protocol is an IEC 61968 common information model [61968] profile, mapping directly where possible, and using subsets and extensions where needed, and follows an IETF RESTful architecture [REST].

**5.3 Is the completion of this standard dependent upon the completion of another standard:** No

**5.4 Purpose:** The purpose of this document is to define the application protocol to enable utility management of the end user energy environment, including things like demand response, load control, time of day pricing, management of distributed generation, electric vehicles, etc.

**5.5 Need for the Project:** The role of the Home Area Network (HAN) for managing energy usage is a crucial factor in addressing the worlds growing energy concerns. This standard serves these needs by providing an adoptable and sustainable experience by linking new and useful digital technologies to the needs of consumers. By empowering consumers with near real-time information of their energy usage through an array of products and services, the intent is to help consumers use energy more efficiently, take advantage of renewable energy resources, and also to minimize their personal impact on the environment.

In addition, with a predicted mass global deployment of electric vehicles on the horizon, the home effectively becomes an electrical filling station for future transportation needs. This standard includes a section on Pluggable-Electric Vehicles (PEVs) and how consumers can leverage an enhanced HAN to manage this new and unique transportation model.

This standard leverages and further enhances earlier HAN specifications (specifically, the ZigBee Alliance Smart Energy Profile, v1.0 and v1.1) for utilities and product manufacturers and to help ensure a consistent, robust, and successful customer experience.

**5.6 Stakeholders for the Standard:** Electric Utilities, Metering Manufacturers, Consumers, Silicon Providers, Government Ministries and Regulatory Agencies, Appliance Manufactures, Automotive Manufacturers, OEMs, Service Providers and those related to providing elements and applications for Home Energy Management Systems (HEMS).

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**Intellectual Property**

**6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?:** No

**6.1.b. Is the Sponsor aware of possible registration activity related to this project?:** No

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**7.1 Are there other standards or projects with a similar scope?:** No

**7.2 Joint Development**

**Is it the intent to develop this document jointly with another organization?:** No

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**8.1 Additional Explanatory Notes (Item Number and Explanation):** The ZigBee Smart Energy Profile 2.0 will serve as the basis of this standard