

9. Title: Smart Energy Metering Solution

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Keywords: Smart Meter, Energy Metering

Domain: Energy Management

Summary: A device for conversion of the existing meter to a smart meter with a retrofitting solution to track the consumption of electrical energy in real time without anomalies. This retrofitting solution can view, monitor and log the consumption data. The device controls and monitors the energy consumption of a building/home using existing energy metering infrastructure. It upgrades the existing building energy management system into the Internet of Things (IoT) enabled smart energy metering solution. It controls the plurality of appliances connected in a building/home via multiple modes of communication such as Wi-Fi, Bluetooth, GSM and LAN.



Advantages:

- » Real time monitoring of electrical parameters
- » Price based load control for demand-side management
- » Can provide information on load behavior and load consumption by appliances to users
- » No more estimated bills with smart metering
- » Reduced energy consumption
- » Choice of prepaid or post-paid metering

Applications: Power Distribution and Metering Industries

Scale of development: A functional prototype is developed and deployed at IIT Delhi and performance is validated.

Technology Readiness Level: 5

IP status: Indian Patent Application 202111037712