



# Energy Data Collection Project working w/ Taiwanese Ministry of Economic Affairs - Bureau of Energy & Singaporean National Environment

## Case Study: Data Center

**Billion participated in the Energy Data Collection Project with Taiwanese Ministry of Economic Affairs - Bureau of Energy and Singaporean National Environment using Billion SEMS™ (Smart Energy Management System)**

Energy Data Collection Project was initiated in 2015 by the Singaporean government with Singaporean National Environment for an in-depth understanding of the electricity usages for a total of 1,170 households. The Singaporean government would like to know the total power consumption and the percentage of electricity supplied to different electrical appliances, including air condition, refrigerator, lighting, etc. to facilitate energy efficiency regulations to restrict the carbon emission of mainly energy-consumed home appliances.

Meanwhile, Taiwanese Ministry of Economic Affairs - Bureau of Energy also implemented Billion SEMS for the similar purpose by measuring a collective 2,500 Taiwanese households' electricity activity to develop national energy efficiency policy. Billion has been a long-term solution partner of Taiwanese Ministry of Economic Affairs since 2014 by providing Billion Smart Energy Management facilities to monitor home electricity usage for government data storage and analysis.

Location: Taiwan & Singapore

Time: 2015

## Our Solution

Two Billion Smart Meters and one Billion Smart Gateway were adopted by per household

among a collective 3,670 participated homes to measure the total energy consumption and the electricity consumed by different home appliances, specifically air conditioners and refrigerators. The other three Smart Meters are flexible for home users to decide which electrical devices they want to monitor. Through the integration with a variety of temperature & humidity sensors, meters, and internet gateways, Billion SEMS was able to transform electricity consumption into readable, valuable data and provide detailed statistical reports with real-time billing information converted from the current energy price rate for home users. Users could also learn and access to the historical energy trends, notice abnormal energy activities instantly through mobile App and remotely control advanced scheduling based on different times and dates. On top of all, the users were allowed to identify the key roots resulting in the abnormal energy activities and generate a better energy saving performance.



(1) Data can be downloaded from Billion SG6200 Smart Energy Gateway by connecting to WIFI.



(2) One Smart Energy Meter SG3015-T3 and SG6200 Smart Energy Gateway were installed in per household.

Billion SEMS has successfully helped Singaporean National Environment and Taiwanese Ministry of Economic Affairs - Bureau of Energy to monitor the residential electricity consumption.

- Visualize consumption data into easy understanding statistical report and charts
- Pre-schedule equipment on and off operations based on different times and dates.
- Convert analytic result into Excel worksheet to examine the performance of energy saving plan for Taiwan government
- Offer energy data for Singaporean Data Center owners to improve their current revenue model
- Graphic report indicates any abnormal energy activity and failure notification