A decorative graphic in the top left corner consisting of a blue curved shape with a white dot and a grey curved shape below it.

Billion Energy Cloud Quick Start Guide

Chapter 1: Login Billion Energy Cloud

- 1.1 SG6200NXL Connection checking
- 1.2 Login Billion Energy Cloud

Chapter 2: Manage Billion products in the cloud.

- 2.1 Register smart gateway in the cloud.
- 2.2 Add smart meter in the cloud.
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- 3.3 Energy Map

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- 4.2 Display the real time power information.
- 4.3 Display the historic power data by bar chart.
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- 7.1 Display power consumption trend.
- 7.2 Display power consumption performance.

Chapter 8: Set event to your meters

- 8.1 Set event.
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Chapter 1: Login Billion Energy Cloud

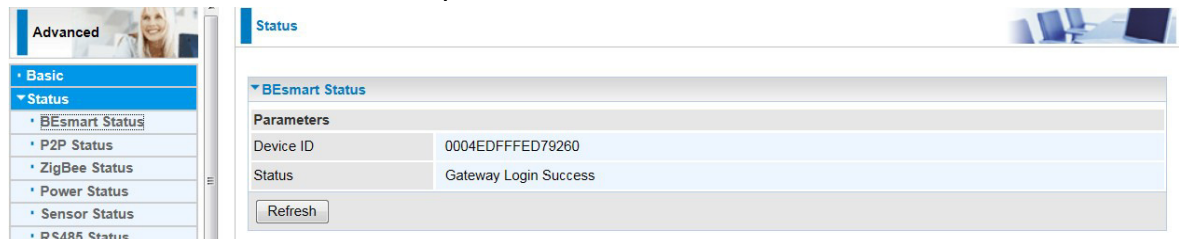
Open your web browser, enter the IP address of your SG6200NXL, which by default is **192.168.1.254**, and click “**Go**”, a user name and password window prompt appears. Enter the user name and password that your **Administrator** has set for you and select the **Account Type**, then click **Login**. When you are authorised, you will access to the router. The default username and password are “**admin**” and “**admin**” respectively for the Administrator account type.



STEP_1 Check the SG6200NXL has connected Billion Energy Cloud

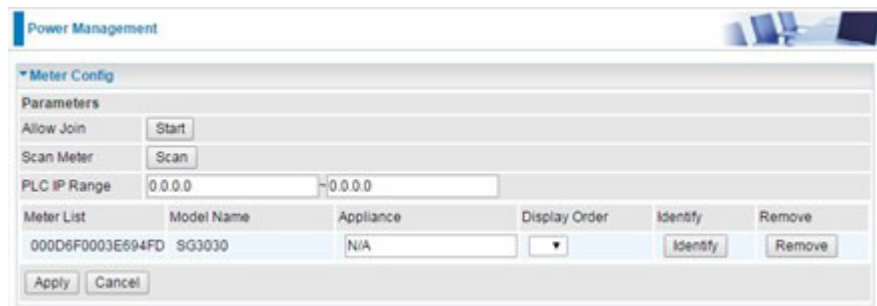
Advance->Status->BEsmart Status

Before check BEsmart Status, please ensure SG6200NXL connected Internet.



STEP_2 Check smart meter in the ZigBee network from WEB GU

Advance->Power management->Meter Config



1.2 Login Billion Energy Cloud

Open your web browser, enter <http://energycloud.billion.com/index.do>, then enter your User name and Password.

The screenshot shows the Billion Energy Cloud website interface. At the top, there is a blue header with the 'BILLION' logo and the tagline 'Intelligent Energy Management Cloud'. To the right of the logo, there is a language dropdown menu set to 'English' and a 'HOME' button with a leaf icon. Below the header is a decorative banner featuring illustrations of industrial smokestacks, modern buildings with solar panels, a schoolhouse, and a shopping cart. The main content area is divided into two columns. The left column is titled 'Latest News' and contains a news item dated '2013/08/10' about the enterprise energy management system. The right column is titled 'Member Login' and includes input fields for 'User Name' and 'Password', a 'Forgot password?' link, and a yellow 'Sign In' button. Below the login section, there are four colored boxes representing key features: 'Energy Measurement' (orange), 'Energy Control' (yellow), 'Report Management' (green), and 'Demand Allocation' (blue). Each box contains a brief description of the feature. At the bottom of the page, a blue footer contains the copyright notice: 'Copyright© Billion Electric Co., Ltd. All rights reserved.'

BILLION
Intelligent Energy Management Cloud

Language: English

HOME

Latest News

2013/08/10 Enterprise energy management system is now officially online, offering professional Green Energy Management services.

Member Login

User Name

Password

Forgot password?

[Sign In](#)

Energy Measurement
The visualized energy consumption information may help the enterprises to clarify electricity expenses.

Energy Control
The reliable controllers may help the enterprise to reduce unnecessary energy waste.

Report Management
The energy cost report may help to set up the enterprise energy cost records to effectively and apply the appropriate power use strategy.

Demand Allocation
Lowering the peak-hour power use with strategic allocation of operations to reduce the possible penalty charge.


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Chapter 2: Manage Billion products in the cloud.

2.1 Register smart gateway in the cloud.

Equipment Management->Gateway Management

The screenshot shows a web interface for Equipment Management. At the top, there are navigation tabs: Equipment Management, Watt Meter Information, Event Management, and System Settings. Below these, there are sub-tabs: Home, Equipment Management, and Gateway Management. The main content area is titled "Equipment list" and includes a status color code legend (Connected, Disconnected, Registration). There are search filters for Eqt. ID, Eqt. Name, Eqt. Type, Group Name, IP Address, and Status. A table with columns for Eqt. ID, Eqt. Name, Eqt. Type, Group Name, IP Address, Report Time, Status, and Management is visible. At the bottom, there is a pagination bar showing "Page 1 of 1, total 2 record(s)" and an "Add" button.

Click  to add your smart gateway in the cloud.

The screenshot shows the "Add gateway" form. It has three input fields: Gateway ID, Group Name, and Gateway Name. Below the fields are two buttons: "OK to add" and "Cancel to add".

Gateway ID:

Enter the smart gateway's ID.

The smart gateway's ID is come from SG6200NXL's WEB GUI

The screenshot shows the "Status" page of the SG6200NXL WEB GUI. It displays the "BEsmart Status" section with a "Parameters" table. The "Device ID" field is highlighted with a red box and contains the value "0004EDFFED79260". There is a "Refresh" button below the table.

The head number is **BN90**, the complete ID is BN900004EDfffED79260.

Group Name:

Select power management group that you went to add smart gateway.

Gateway. Name:

Enter the name to smart gateway.

Finally, click **OK to add** then the smart meter has been registered in the cloud.

Home Equipment Management > Gateway Management notifications (0) |

Equipment list

Status color code : Connected Disconnected Registration

Eqpt. ID Group Name
Eqpt. Name IP Address
Eqpt. Type Status

Eqpt. ID	Eqpt. Name	Eqpt. Type	Group Name	IP Address	Report Time	Status	Management
BN900004EDFFFD79260	SG6200NXL	ZigBee Gateway	Billion Demo site	36.231.100.150			

Page 1 of 1, total 2 record (s) < 1 2 3 GO

2.2 Add smart meter in the cloud.

Equipment Management->Gateway Management



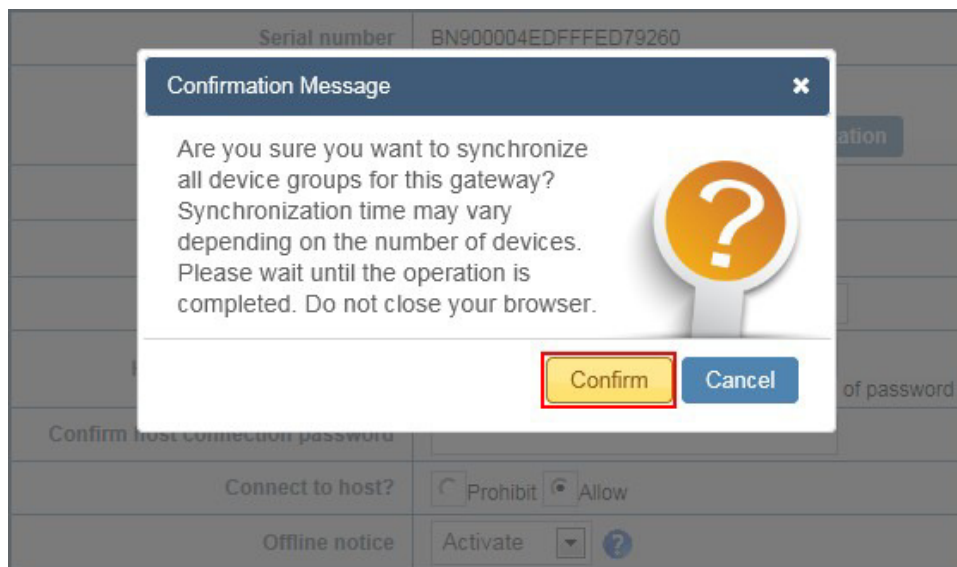
STEP 1: Click "Modify"

Gateway ID	Gateway Name	Gateway Type	Group Name	IP Address	Report Time	Status	Manage	Modify
BN900004EDFFED79260	SG6200NXL	ZigBee Gateway	Billion Demo site	36.231.97.127				

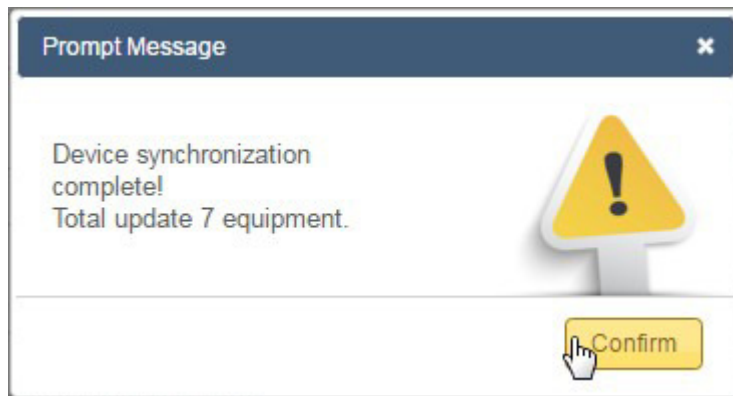
STEP_2 Click "Device Group Synchronization"

A dialog box for "Device Group Synchronization". It contains three input fields: "Gateway ID" (BN900004EDFFED79260), "Group Name" (Billion Demo site), and "*Gateway Name" (SG6200NXL). A yellow tooltip points to the "Device Group Synchronization" button, stating: "All device groups for this gateway will be synchronized". Below the fields are two buttons: "OK to modify" and "Cancel to modify".

STEP_3 Click "Confirm"



STEP_4 Click **“Confirm”**



STEP_5 Click OK to modify

Gateway ID	BN900004EDFFED79260
Group Name	Billion Demo site Device Group Synchronization
*Gateway Name	<input type="text" value="SG6200NXL"/>

OK to modify **Cancel to modify**

2.3 Configure smart meter

Equipment Management->Watt Management



2.3.1 Basic configuration

STEP_1 Click right **“modify”**

Eqpt. ID	Eqpt. Name	Eqpt. Type	Group Name	Gateway ID	Report Time	Signal Intensity	Status	Control	Map	Modify
BN11000D6F0003E6950C	SG3030	Power Meter (three-phase)	Billion Demo site	BN900004EDFFFED79260	2016-04-02 04:46:24	86				

STEP_2

Enter the meter name to Eqpt. Name in order to define smart meter's name.

Then click **“OK to confirm”**

Eqpt. ID	BN11000D6F0003E6950C
Eqpt. Type	Power Meter (three-phase)
Gateway ID	BN900004EDFFFED79260
Group Name	Billion Demo site
*Eqpt. Name	<input type="text" value="SG3030"/>
modbusid	
IP Address	
Connect to host?	<input type="radio"/> Prohibit <input checked="" type="radio"/> Allow

OK to modify
Cancel to modify

2.3.2 Advance configuration

STEP_1 Click left **“modify”**

Eqpt. ID	Eqpt. Name	Eqpt. Type	Group Name	Gateway ID	Report Time	Signal Intensity	Status	Detail load information
BN11000D6F0003E6950C	SG3030	Power Meter (three-phase)	Billion Demo site	BN900004EDFFFED79260	2016-04-02 05:01:41	81		

STEP_2 Click left **“modify”**

Load management
Watt Meter name : SG3030 (BN11000D6F0003E6950C)

[Back to Watt Meter Manage](#)

Load number	Load name>	Load category	Phase A wiring	Phase A name	Phase B wiring	Phase B name	Phase C wiring	Phase C name	Map	Modify
0										

STEP_3 Configure the smart meter information

Watt Meter name	SG3030 (BN11000D6F0003E6950C)	
Load number	0	
*Load name	<input type="text"/>	
Load category	Main Panel-Board ▼	
Load Type	5: Three-Phase (universal) ▼ ?	
Electricity Rate selection	 台灣-低壓-表燈用戶二段式時間電價 Commencement Date : 2015-11-01	
Phase A wiring		
Phase A name		
Phase B wiring		
Phase B name		
Phase C wiring		
Phase C name		
CT Ratio	<input type="text" value="1"/>	
PT Ratio	<input type="text" value="1"/>	
Target Demand	<input type="text"/>	KW
Master meter?	<input checked="" type="radio"/> No <input type="radio"/> Yes	
Connect to host?	<input type="radio"/> Prohibit <input checked="" type="radio"/> Allow	

Key parameter

1. Load name:

Set the load name for the load you want to measure.

2. Load category:

Select the Load category

3. Load Type:

Select the Load Type

4. Electricity Rate selection:

Currently, the Billion energy cloud support Taiwan and China for electrical rate.

If customer want to integrate local electrical rate, please provide the rate information to Billion.

5. Master meter:

If you want to see report, demand record...etc, please set Mater mode.

Chapter 3: Area Overview

Function Outline:

Power consumption of each building can be examined through mapping and positioning, including marking an abnormal condition, recording disconnection, abnormal consumption, etc. Overall power consumption can be ranked for the corporate to find out the building with the highest consumption.

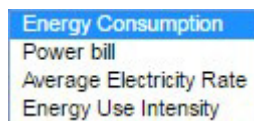
3.1 Energy Consumption Chart



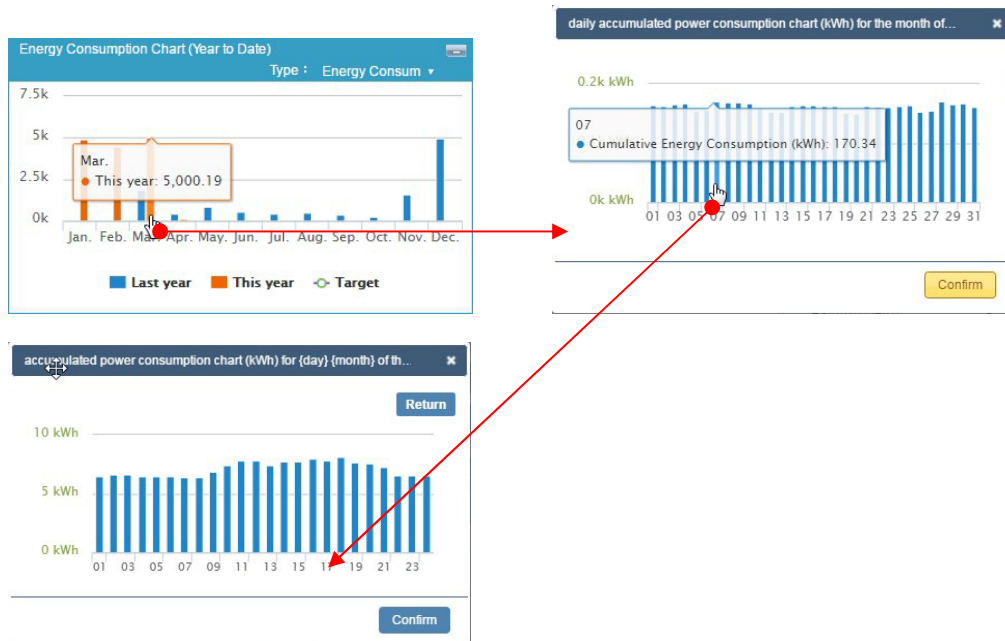
Energy Consumption Chart

Display the chart of different data type for last year, this year and target.

You can click "Type" to Select the data type you want as below



Click the "Bar" directly, you can see historical data of power consumption.



3.2 Energy Consumption Statistics

Provide summarize of energy consumption for customer.

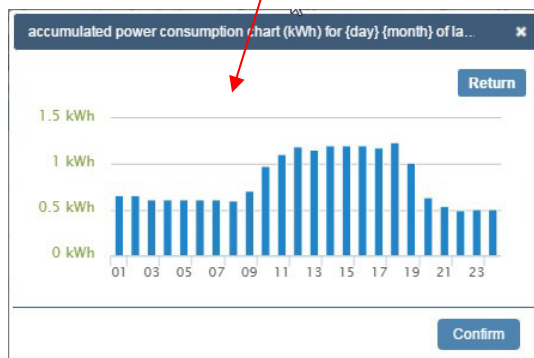
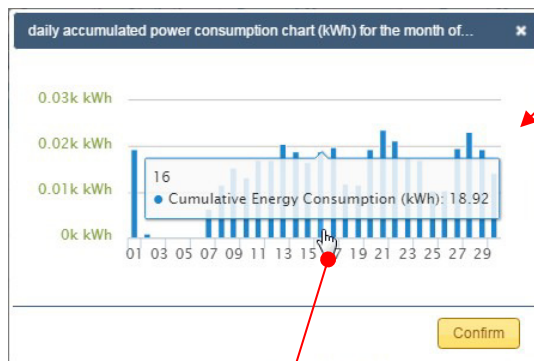
Energy Consumption Statistics			
Total Number of Buildings : 1			
Energy consumption information	This Month Target value	Actual Value of This Month	Last year Value of the Same Month
power bill (\$)	0.0	520.1	1,503.9
Energy Consumption (kWh)	0	161.34	415.01
Average Electricity Rate (\$/kWh)	0	3.22	3.62
EUI(kWh/m2.yr)	0	29.44	5.05

Total Number of Building:

Display total number of buildings with main meters in the site. Data is collected from beginning of the year up to the present day.

Energy Consumption (kWh)	0	161.34	415.01
--------------------------	---	--------	--------

Click the value of Energy Consumption, you can see historical data of this month.

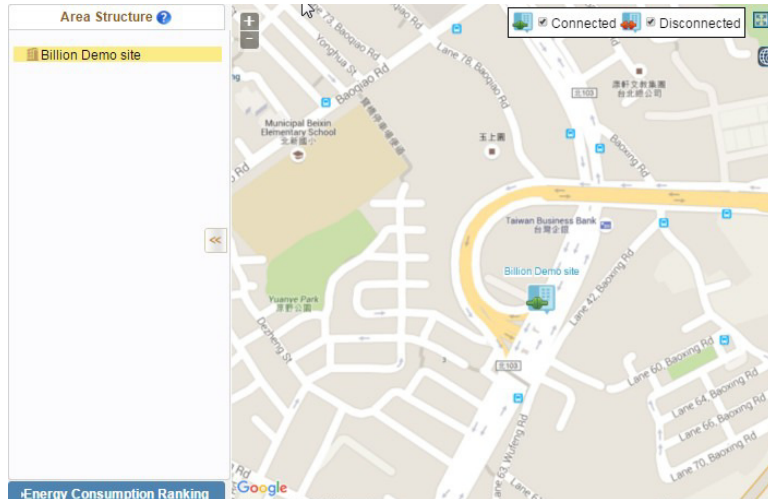


3.3 Energy Map

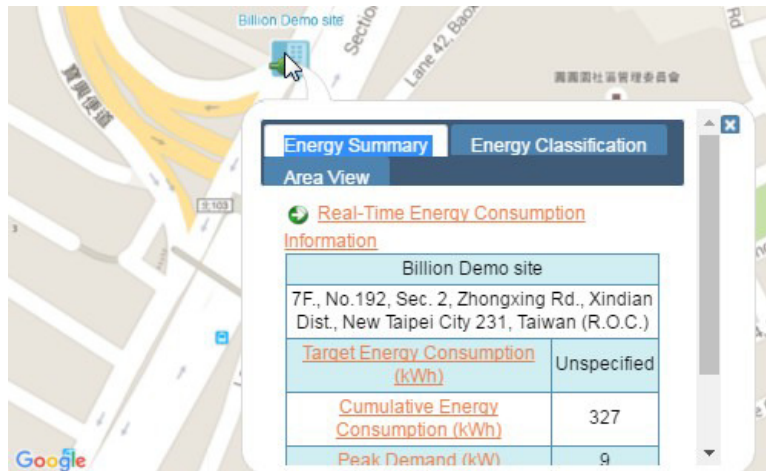
Function Outline:

Without the restrictions on time and geography, users are able to remotely manage equipment built at different locations.

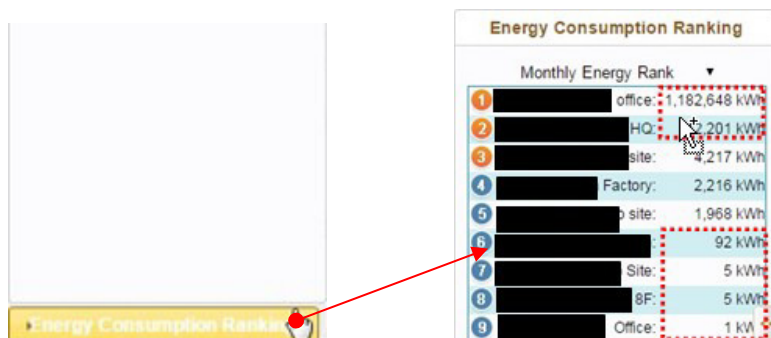
Users are able to significantly reduce maintenance costs while maximizing the efficiency of central management.



STEP_1 Click Building icon, you are able to see the detail power information.



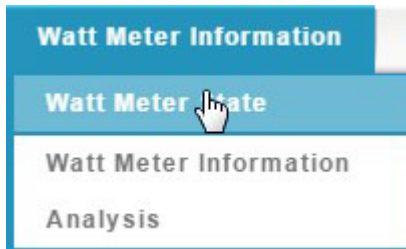
STEP_2 Click "Power Consumption Ranking" and the system will list buildings from highest to lowest consumption in the site. This can help user to quickly find out the building with the highest power consumption



Chapter 4: Check the power status of Smart meter.

4.1 Display the meter information.

Watt Meter Information->Watt Meter State



Watt Meter State

The screenshot shows the 'Watt Meter State' web application interface. At the top, there is a breadcrumb trail: Home > Watt Meter Information > Watt Meter State. A notification bell icon shows 0 notifications. Below the breadcrumb, the page title 'Watt Meter State' is displayed with a power meter icon. A legend indicates 'Status color code : ● Connected ● Disconnected' and 'control instructions : Enabled Disabled'. A search form contains fields for 'Eqpt. ID', 'Eqpt. Name', 'Eqpt. Type', 'Group Name', and 'Gateway ID', with 'Search' and 'Clear' buttons. Below the form is a table with 9 columns: Eqpt. ID, Eqpt. Name, Eqpt. Type, Group Name, Gateway ID, Report Time, Status, Control, and Management. The table contains 5 rows of data. At the bottom, there is a pagination bar showing 'Page 1 of 1, total 5 record (s)' and a 'GO' button.

1 Eqpt. ID	2 Eqpt. Name	3 Eqpt. Type	4 Group Name	5 Gateway ID	6 Report Time	7 Status	8 Control	9 Management
BN10000D6F00036B51C7	SG3010	Power Meter (one-phase)	Billion Demo site	BN900004EDFFED79260	2016-04-02 02:59:34	●	<input checked="" type="checkbox"/>	
BN10000D6F00036B5338	SG3010	Power Meter (one-phase)	Billion Demo site	BN900004EDFFED79260	2016-04-02 02:59:34	●	<input checked="" type="checkbox"/>	
BN11000D6F0003E6950C	SG3030	Power Meter (three-phase)	Billion Demo site	BN900004EDFFED79260	2016-04-02 02:59:34	●	<input type="checkbox"/>	
BN11000D6F0003E69698	Billion 7F office	Power Meter (three-phase)	Billion Demo site	BN90600347FFFE0095B4	2016-01-25 13:08:07	●	<input type="checkbox"/>	
BN1104852E0036B50000	RS485	Power Meter (three-phase)	Billion Demo site	BN900004EDFFED79260	2016-04-02 02:59:34	●	<input type="checkbox"/>	

1. **Eqpt. ID:** Display the meter ID
2. **Eqpt. Name:** Display the meter Name you set.
3. **Eqpt. Type:** Display the meter type.
4. **Group Name:** Display the Group Name you set.
5. **Eqpt. Gateway ID:** Display the SG6200NXL ID.
6. **Report Time:** Display the last report time of meter.
7. **Status:** Display the online status of meter.
8. **Control:** Control the loading from meter. (coming soon)
9. **Management:** Display more detail power information of meter.

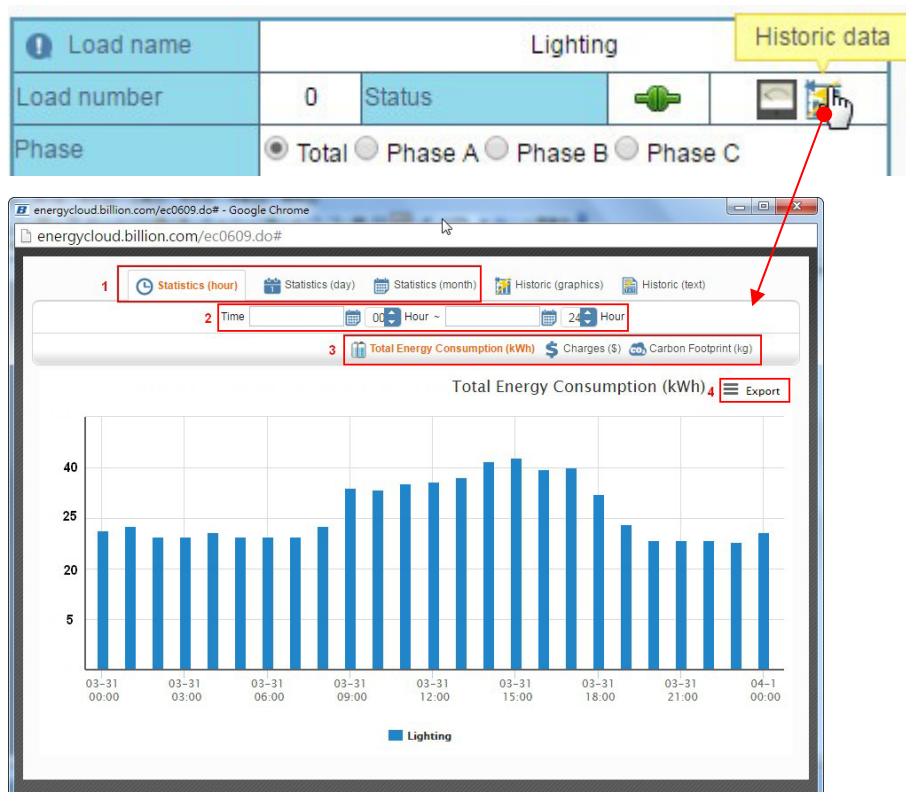
4.2 Display the real time power information.

Click **“Loading information”**

BN10000D6F00036B5338	SG3010	Power Meter (one-phase)	Billion Demo site	BN900004EDFFED79260	2015-03-03 16:04:03			Loading information
BN11000D6F0003E6950C	SG3030	Power Meter (three-phase)	Billion Demo site	BN900004EDFFED79260	2015-03-03 16:04:03			

Load name	Lighting		
Load number	0	Status	
Phase	<input checked="" type="radio"/> Total <input type="radio"/> Phase A <input type="radio"/> Phase B <input type="radio"/> Phase C		
2015-03-03 16:04:03		13.00 kW	
<input checked="" type="radio"/> Power <input type="radio"/> Voltage <input type="radio"/> Current <input type="radio"/> Power factor <input type="radio"/> Accumulated power generation			

4.3 Display the historic power data by bar chart.



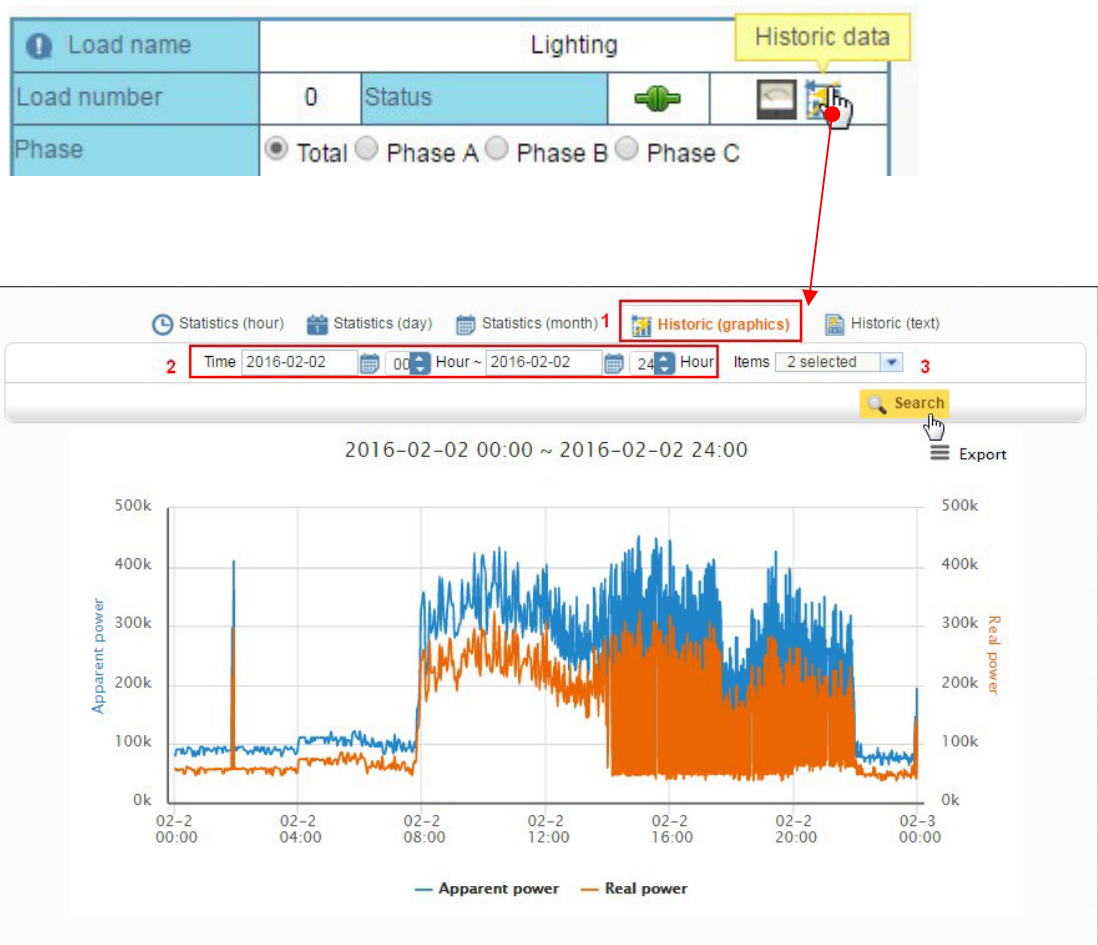
STEP_1 Statistics can be viewed by three options: Hour/Day/Month

STEP_2 Select time period you want to check.

STEP_3 You can view by three options: Total Energy, Charge and Carbon Emission.

STEP_4 Click **“Export”** to select from three export options.

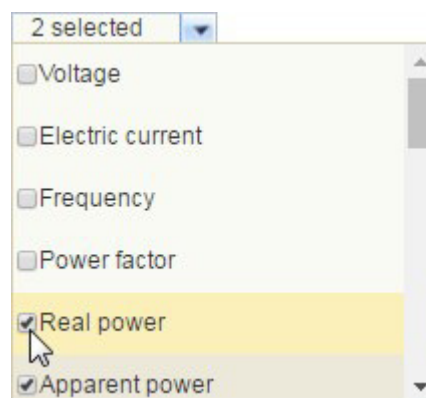
4.4 Display the historic power data by line chart.



STEP_1 Click "**Historic (graphics)**"

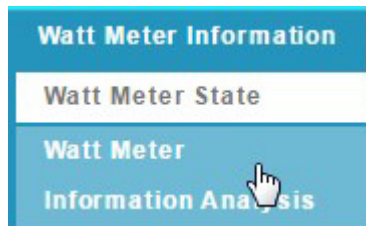
STEP_2 Select time period you want to check.

STEP_3 Select multiple power information you want to check.



4.5 Display the meter analyze

Watt Meter Information->Watt Meter Analysis



Watt Meter Analysis

Display the multiple meters analyze by Bar chart



STEP_1 Statistics can be viewed by three options: Hour/Day/Month

STEP_2 Select time period you want to check.

STEP_3 You can view by three options: Total Energy, Charge and Carbon Emission.

STEP_4 Click "Group" you want to check.

STEP_5 Select "watt meter" you want to check multiple meters.

Display the multiple meters analyze by Line chart



STEP_1 Click "**Historic (graphics)**"

STEP_2 Select time period you want to check.

STEP_3 Select power information you want to check.

STEP_4 Click "Group" you want to check.

STEP_5 Select "watt meter" you want to check multiple meters.

Chapter 5: Analyze the power report

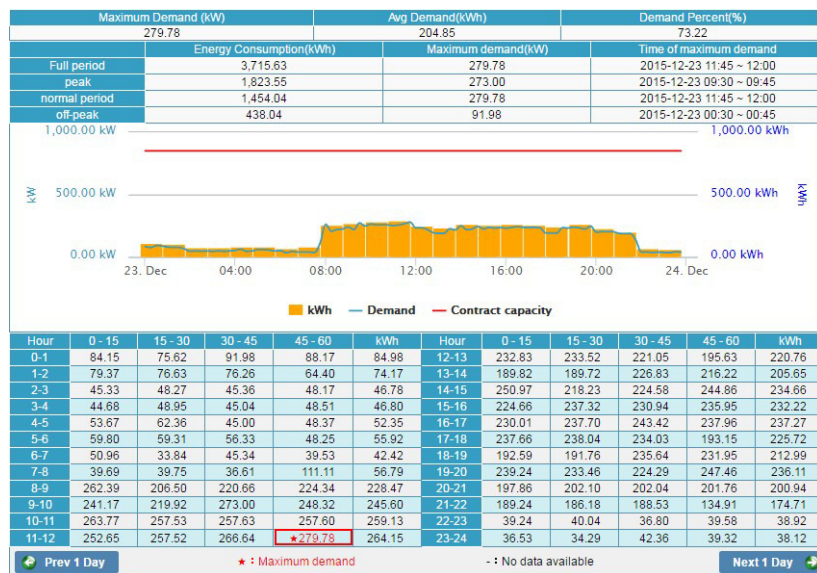
Report Management->Daily Demand Report

Report Management

- Yearly Demand Reports
- Monthly Demand Reports
- Daily Demand Reports**

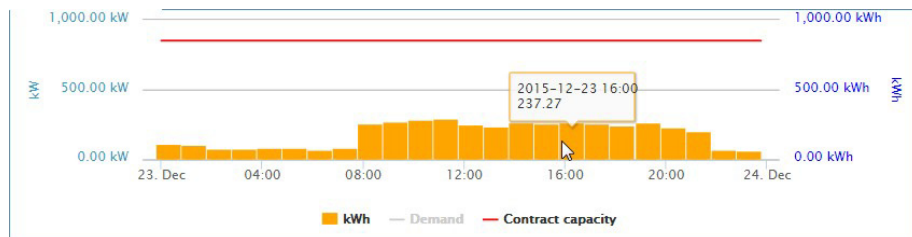
5.1 Analyze the power report

Power demand of a meter in an entire year is statistically analyzed to help find out the time when consumption is the highest, including total power consumption kWh in different periods and time when maximum demand KW occurred. Report can be exported in excel format.

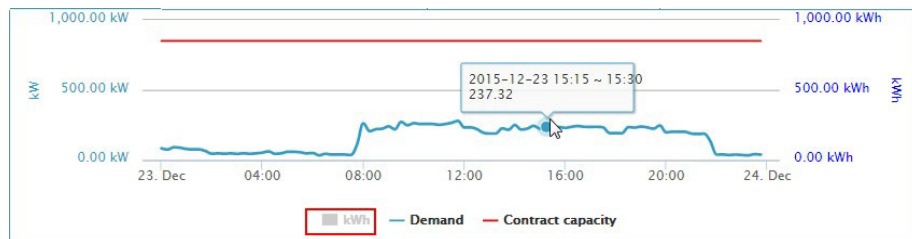


Click an option in the index to hide a bar or coordinate in the graph.

Exmpl Click "Demand"



Exmpl Click "KWh"

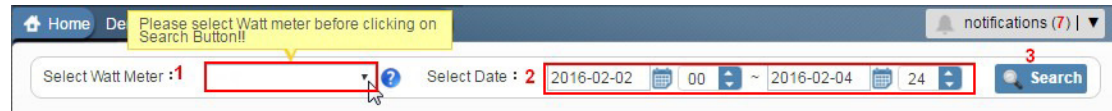


Chapter 6: Demand Management

Demand Management->Demand Statistics



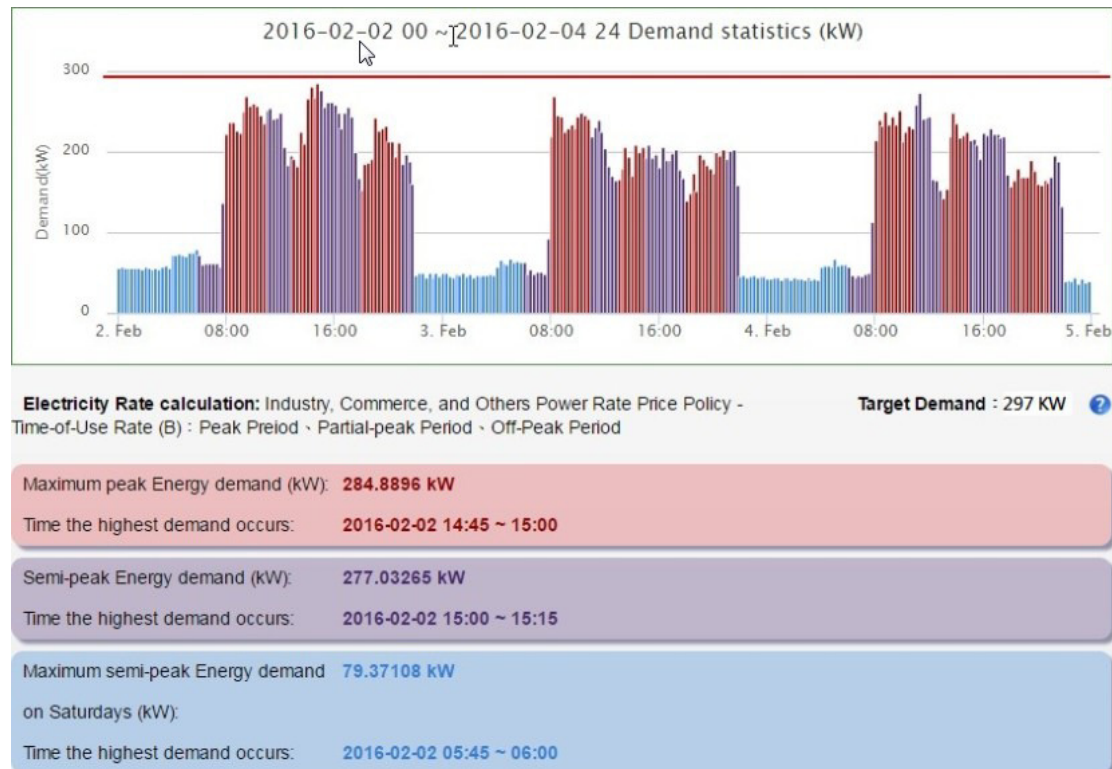
6.1 Display the demand statistics



STEP_1: Select smart meter you want to check.

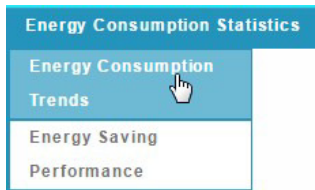
STEP_2: Select time period you want to check.

STEP_3: Click "Search"

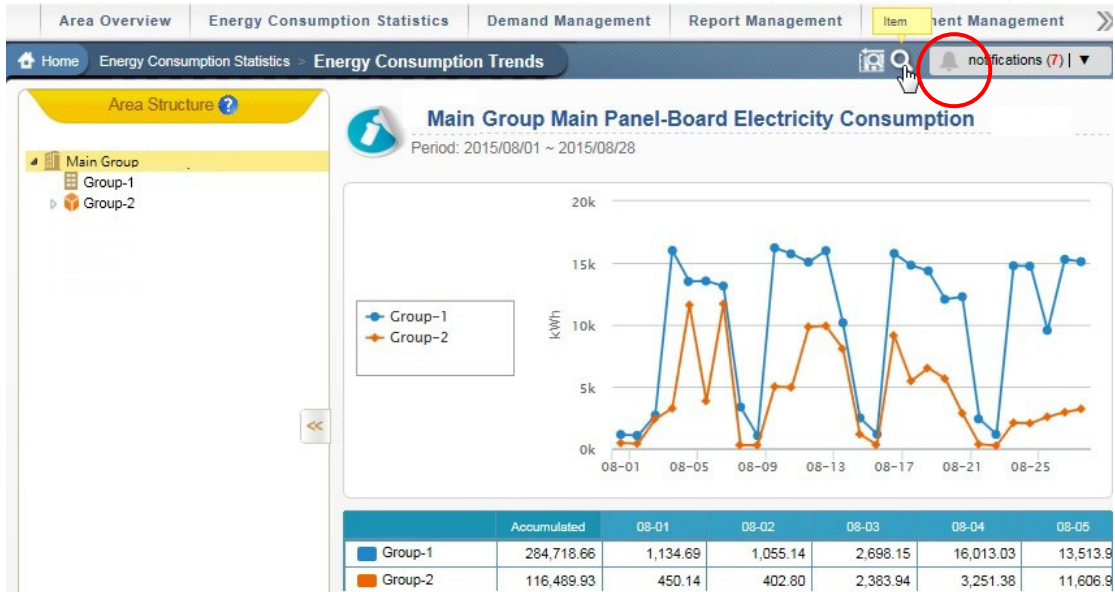


Chapter 7: Check power consumption statistics

7.1 Display power consumption trend.



Click  to select statistical analysis options. You are able to see the trend you want.



The options include as below

Energy Consumption:

Energy Consumption Type

- Main Panel-Board
- Light-Current
- Lighting
- Cooling
- Heating

You can set energy consumption to meter by **“Watt Meter Management”**

Statistic period

Statistic Period

Time Precision Year Quarter Month Day

Start Time

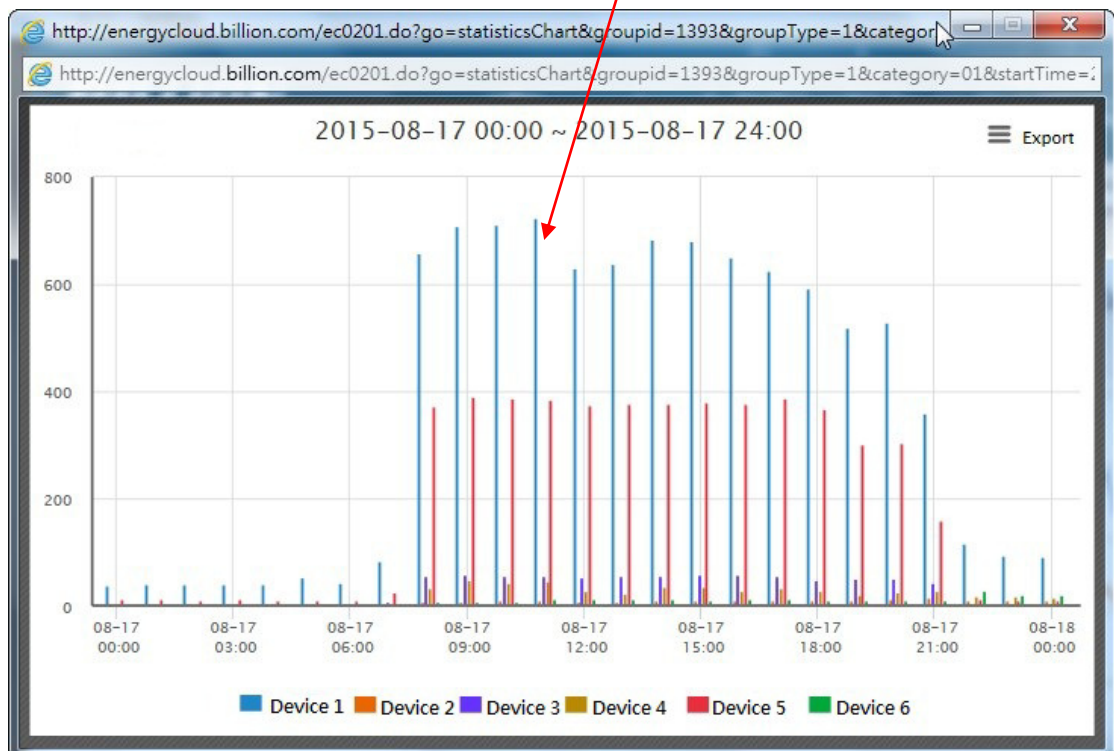
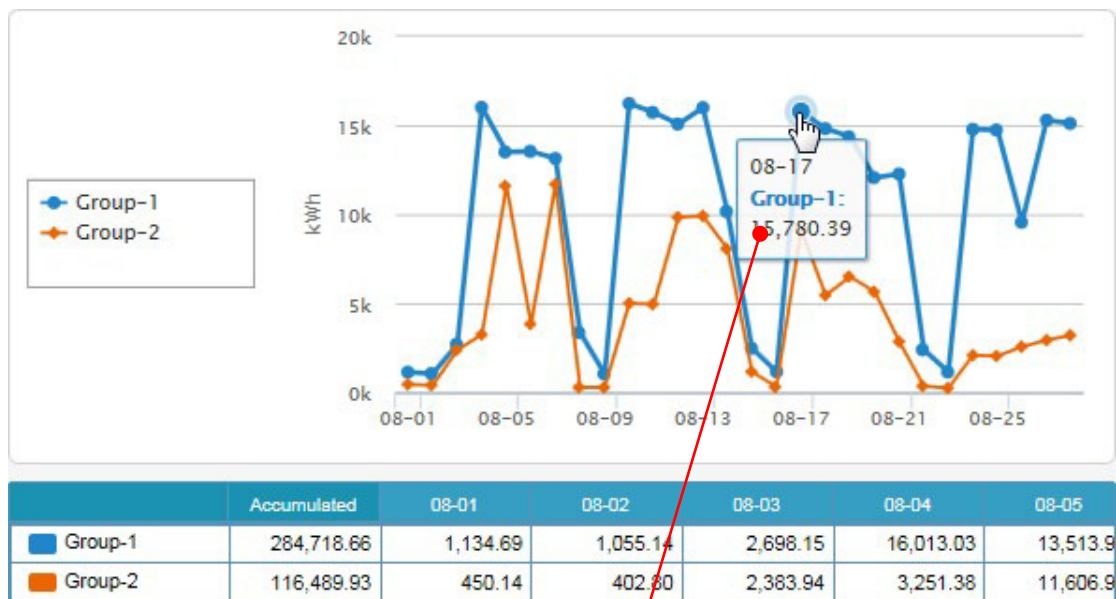
End Time

Data Attribute

Data Attribute

- Electricity Consumption
- Electricity Price
- Carbon Emission
- Average Electricity Price

Click the node on the line bar, you are able to see the detail.



In this scenario, there are 6 meters to monitor 6 devices in the group-1, so customer can see them.

7.2 Display power consumption performance.


Energy Consumption Statistics

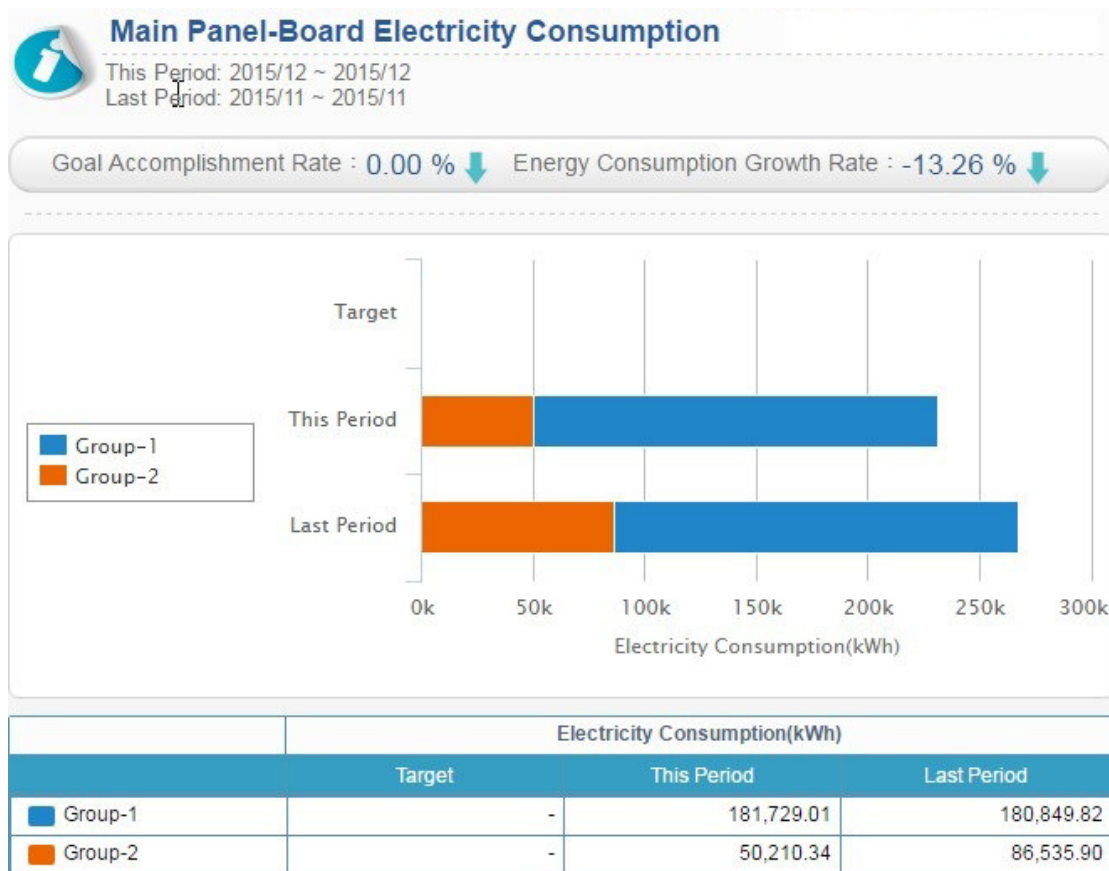
Energy Consumption

Trends

Energy Saving

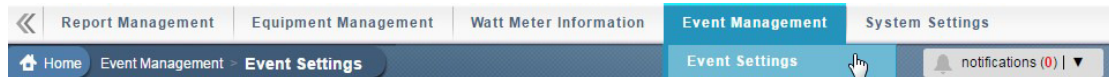
Performance

STEP_1 Click  to select statistical analysis options.



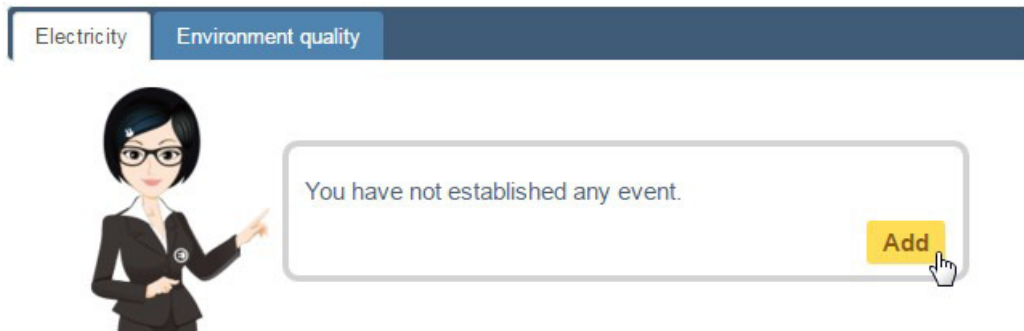
Chapter 8: Set event to your meters

Event Management



8.1 Set event.

STEP_1 Click “Add”



STEP_2 General settings

General settings

* Event name	Event-01
* Alarm	Low
* Time period	00 Hour ~ 24 Hour

STEP_3

Event regulation settings

1	* Appliance type	Watt meter
	* Appliance name	SG3030
	* Parameter type	Voltage(V)
	* Event judgment	Parameter>Judgment
	* Judgment	90
2	* Appliance type	Watt meter
	* Appliance name	Please Select
	* Parameter type	Power(kW)
	* Event judgment	Parameter>Judgment
	* Judgment	

New regulation

User can set multiple regulations to one meter.

If user wants to add more regulations, click “New regulation”

If user want to add only one meter, click “X”

STEP_4

Event trigger settings

* Trigger type	<input checked="" type="radio"/> Background App circuit
* Circuit interval	15 minutes

STEP_5

Notification settings

* Notification method	<input checked="" type="checkbox"/>  <input type="checkbox"/> 
* Number of notification	1

If user wants to set "SMS", please provide the local telecom information to Billion.

STEP_6

Notification filter settings

* Single event should not repeat notification	<input type="radio"/> No <input checked="" type="radio"/> Yes
* Do not notify after triggered period	<input checked="" type="radio"/> No <input type="radio"/> Yes

STEP_7





Distribute and turn on



* Set to turned on	<input type="radio"/> No <input checked="" type="radio"/> Yes
--------------------	---

STEP_8 Click "Mail Notification" to add receiver.

Electricity Environment quality

Page 1 of 1, total 1 record (s) < 1 > GO

Appliance type	Appliance name	Event name	Trigger type	Notification	Management
Watt meter	SG3030	Event-01	Background App circuit	 	 

 : Mail notification  : SMS notification

STEP_9 Select the group members.

Choose to send email notification to group members

Name	Domain	Email

STEP_10 Select Groups

Choose Multiple Groups

Billion Demo site

STEP_11

Choose to send email notification to group members

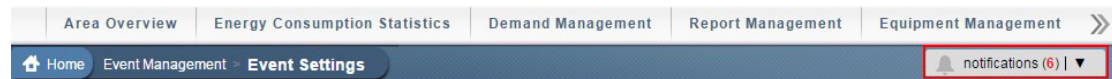
Name	Domain	Email
<input checked="" type="checkbox"/> BillionDemo	Billion Demo site	calvinliu@billion.com

STEP_12

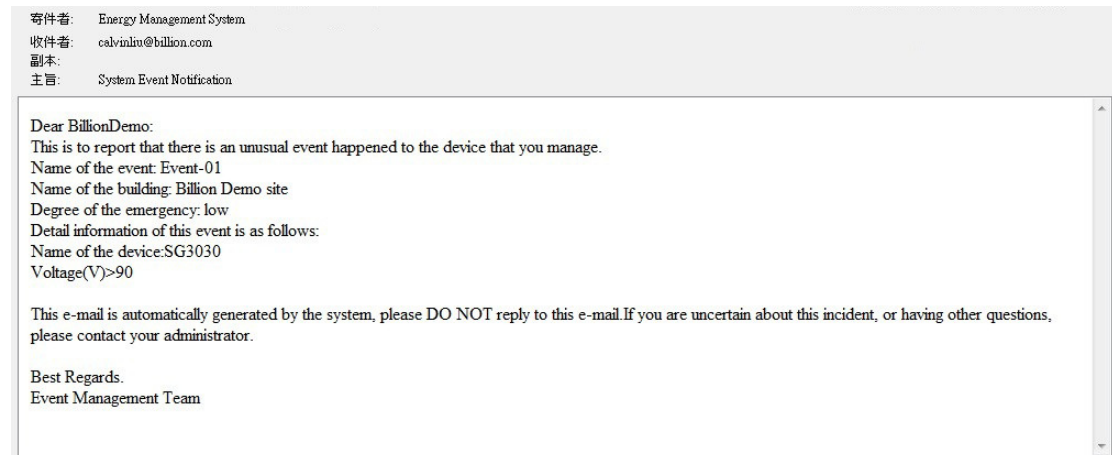
Click to save your setting.

8.2 Test event setting.

If the event is triggering, the notification will display on the Cloud.



User will receive the event mail.



User can check the event record from Event Logs

