

ecobee Smart Thermostat

ZigBee/Smart Energy Manual

This document is an addendum to the user and installer manuals shipped with the ecobee Smart Thermostat. This document covers the configuration of the ZigBee module, joining the Smart Meter network and using the in home energy display capabilities.

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1. Connecting to a Utility Smart Meter Network

There are two ways to join (or register) a utility smart meter network. If the thermostat has not yet been registered to the WiFi network, you can start the registration wizard via the home screen “**Register**” button., otherwise the Zigbee setup menu is used.

Regardless of which method is used, you will need to contact the utility company and provide the unique installation code of your ecobee Smart Thermostat for the registration process to be completed. The installation code is displayed below for either registration method used.

1.1. Setup Using the Register Button



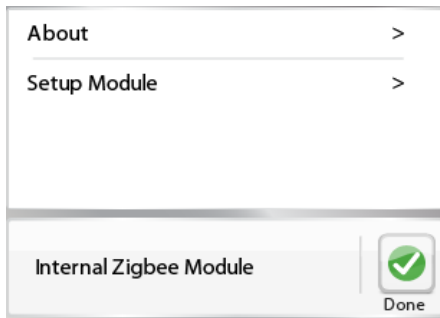
Using the ‘Register’ button on the home screen, will start the process:

Registration Wizard This wizard will guide you through the steps to connect to Utility Smart Meter network, to set up HA network and web portal. Cancel Continue	 Smart Meter and Utility  Smart Devices and Home Automation What type of setup?	 Trilliant Utility ESI  Others.. What type of Smart Meter?
IMPORTANT! Provide utility with following Install Code and MAC address to initiate registration. Install Code: 65 12 24 00 1C 0C 93 CD MAC Add: 44 61 32 00 00 00 D3 Install Code and MAC Cancel Next	You will be notified when the registration has been completed. Registration Initiated Done	

Once “Done” is pressed you will be asked to continue on with setting up the WiFi network.

1.2. Setup Using ZigBee Setup Menu

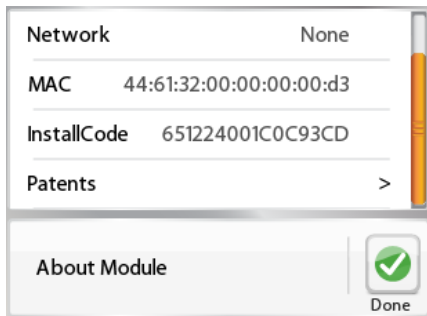
To start registration to a Smart Meter network without the wizard, start at the home screen and press:
More → Settings → Zigbee Module



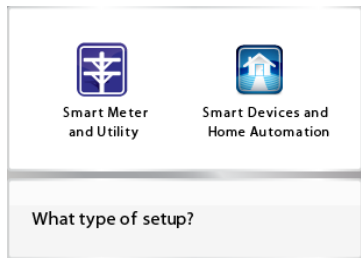
About - selecting this item will display the MAC address of the ZigBee radio installed in the device as well as the unique install code.

Setup Module – will begin the process of registering the thermostat on the Smart Meter network.

Pressing the “**About**” button displays the following:



Pressing the “**Setup Module**” button begins the Smart Meter network setup:



You will be presented with following screens when you press ‘Smart Meter and Utility’.



2. Electricity Menu

Electricity related settings of In Home Display features are accessed via the Electricity menu. To access the electricity menu from the home screen press

More → Electricity



Electricity Menu

The **Meter** button displays a real time electricity usage meter along with time of use pricing information and a histogram of electricity consumption for the past hour

The **Hourly Report** button displays a bar graph of today's electricity usage and price information broken down by hour.

The **Daily Report** button displays a bar graph of the current week's electricity usage and price information broken down by day.

The **Weekly Report** button displays the past 5 weeks electricity usage and price information.

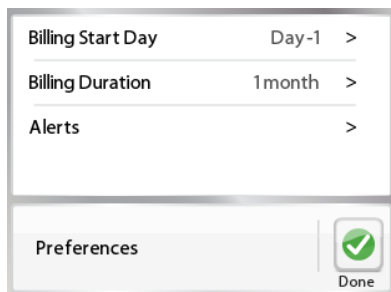
The **Projected Costs** button displays the actual and projected electricity costs for the current billing cycle.

The **Settings** button provides access to the configuration of In Home Display options. See topic: 'Electricity Settings' below.

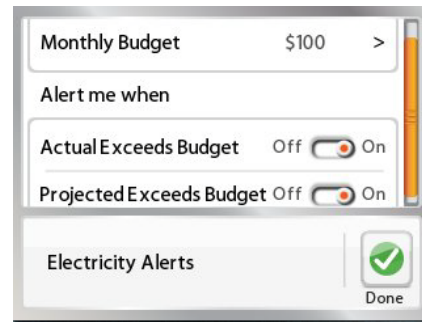
The **Events** button displays the details for current and future demand response events and utility messages and provides options to accept or decline these events. The entries in **Events** menu is only visible when there are events to be displayed.

3. Electricity Settings

These settings allow you to configure In Home Display options.



Electricity Alert – the options allows you to program various alerts associated with your consumption of electricity.



Monthly Budget- this option lets the homeowner enter how much they plan to spend on their total electricity consumed for any given month. The number here should be the actual cost of electricity and does not include any delivery, connection, surcharges or other charges typically found on your Utility bill.

Alert Me When- using the value entered in the Monthly Budget, the ecobee Smart Thermostat can provide the homeowner with an alert (on screen, and via e-mail if registered to a web account) when:

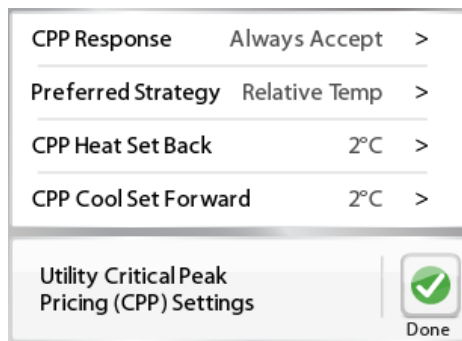
Actual Exceed Budget- when enabled, an alert will be generated when the actual total cost of electricity consumed exceeds the monthly budget.

Projected Exceeds Budget – when enabled, an alert will be generated if the ecobee Smart Thermostat projects that at the end of the month, your actual consumption will exceed your monthly budget.

When you have completed this section press **Done**, to return to the Electricity Screen.

Demand Response- Option to automatically accept all voluntary demand response events, or to ask you each time an event is sent by the Utility can be set up in the thermostat 'Setting' menu.

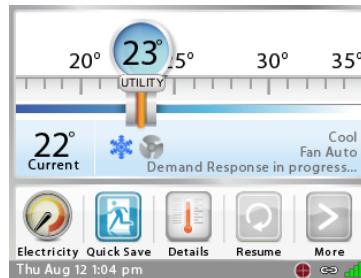
From the home screen, press
More , then
Settings, then
Preference, then
Utility CPP Settings



4. Using your In Home display

At any time, pressing the hard button on the right of the ecobee Smart Thermostat will take you to the home screen. For basic operation of the thermostat, and description of the basic home screen functions, please refer to the ecobee Smart Thermostat User manual

4.1. Home Screen



Home Screen

4.1.1. Demand Response Indication

The home screen displays a message when a demand response event is in progress. As can be seen in the image above, the message informs homeowners that the device temperature setting is in a “Hold” mode.

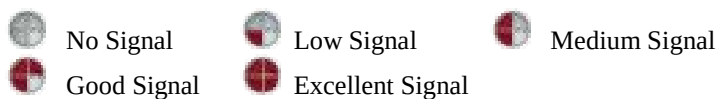
For voluntary demand response events, the Resume button can be used to opt-out of the event, but the customer is first prompted to accept this decision.

For mandatory events, the Resume button is grayed out. If pressed, a message is displayed indicating that it is a mandatory event and it can't be cancelled.

4.1.2. Radio Signal Strength Indicator

The ZigBee radio signal strength is indicated on the home screen. This is updated in real time. During the first few seconds of the ecobee Smart Thermostat startup, the signal strength is not shown, once the Zigbee radio has been initialized and has re-joined the network the signal strength will be updated.

Signal Strength Image Reference



4.2. Accessing the Smart Meter Reports

Pressing the **More** button will display the additional menu items that can be accessed. Refer to the ecobee Smart Thermostat User manual for details on these functions.

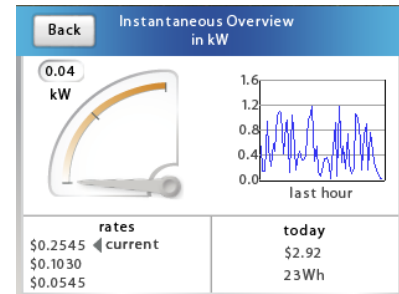
To access the in home display options, press the **Electricity** button to reveal this screen.



Electricity Menu

4.2.1. Meter

Selecting the Meter button will display the following screen.



This screen displays

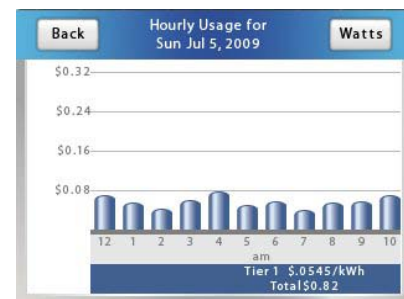
- an electricity gauge that shows the real time instantaneous electricity consumption.
- on the right, a graph displays electricity usage over the last hour.
- the bottom left of the display shows the possible time-of-use rates and which rate is current in effect.
- the bottom right of the screen shows the total electricity used so far today, in Wh and dollars.

4.2.2. Hourly Report

Selecting the Hourly Reports button will display the following screen. This graph can be scrolled left and right to view a full 24 hour by pressing on the graph and simultaneously sliding your finger left or right.

This screen

- displays the total electricity consumed each hour for an entire day.
- allows you to switch the display between kWh or cost by pressing the button on the top right of the screen
- has color coded bars that reflect the various price tiers and the total cost and consumption



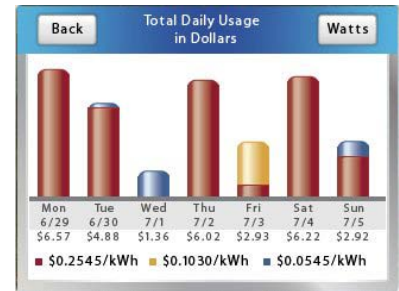
4.2.3. Daily Report

Selecting the Daily Reports button will display the following screen.

This screen

- displays the total electricity consumed each day for the past 7 days
- allows you to switch the display between kWh or cost by pressing the button on the top right of the screen
- has color coded bars that identifies the cost/consumption at the various price tiers
- has a legend to indicate the available tier prices

Pressing on any bar will zoom in and show the hourly report for that day.



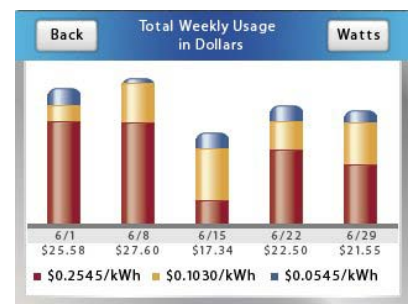
4.2.4. Weekly Report

Selecting the Weekly Reports button will display the following screen.

This screen

- displays the total electricity consumed each weeks for the past month.
- allows you to switch the display between kWh or cost by pressing the button on the top right of the screen
- has color coded bars that identifies the cost/consumption at the various price tiers
- has a legend to indicate the available tier prices

Pressing on any bar will zoom in and show the daily report for that week.



4.2.5. Projected Costs

Selecting the Projected Costs button will display the following screen.

This graph will display

- the actual cost of electricity consumed so far this month
- what the ecobee Smart Thermostat projects the cost to be at the end of the current month.
- the monthly budget (if entered by the homeowner)

The graphs are normally blue, if the either actual or projected cost exceeds the monthly budget the color will change to pink.

