PROGRAM OPPORTUNITY NOTICE
EFFICIENCY MAINE TRUST

PROGRAM OPPORTUNITY FOR

REMOTE AND INTEGRATED THERMOSTATS PROJECT

PON EM-008-2020

Opening: October 23, 2019
Closing: January 15, 2020

CONTENTS

SECTION 1: PON INFORMATION AND INSTRUCTIONS

1.1 Purpose of This Request

Through this Program Opportunity Notice (PON), the Efficiency Maine Trust (the Trust) is seeking vendors wishing to participate in a remote and integrated thermostats and metering program within the State of Maine. The Trust will refer to this as the Remote and Integrated Thermostats PON.

1.2 Program Description

The Trust is seeking vendors to submit applications to implement projects related to three separate tracks of remote and integrated controls for ductless heat pumps. Following is a description of the three tracks and associated requirements:

1. Remote Thermostat (RT) track. Incentive awards are set at $300 per qualified project, with a maximum of one qualifying project per home. Awardees must:
   - Install a remote thermostat that senses the temperature and is connected to a single zone heat pump but separate from the standard remote;
   - Install a meter to monitor the output of the controlled heat pump with a device provided by the Trust; and
   - Obtain a signed agreement from the customer that allows for installation of the meter and associated components for electricity usage monitoring, allow Efficiency Maine to retrieve the meter, and that acknowledges the customer will complete a survey after monitoring is completed. The customer will receive a $100 gift card upon meter retrieval and survey completion.
2. Single Zone Integrated Thermostat (IT1) track. Incentive awards are set at $500 per qualified project, with a maximum of one qualifying projects per home. Awardees must:
   - Install a remote thermostat that will control the output of both a single zone heat pump and a central boiler from a single control. The remote thermostat must prioritize the heat pump with a droop of at least 3 degrees above the central system and maintain the priority regardless of homeowner temperature adjustment. This should be the only control that the homeowners use for either unit;
   - Install a meter to monitor the performance of the controlled heat pump with a device provided by the Trust; and
   - Obtain a signed agreement from the customer that allows for installation of the meter and associated components for electricity usage monitoring, allow Efficiency Maine to retrieve the meter, and that acknowledges the customer will complete a survey after monitoring is completed. The customer will receive a $100 gift card upon meter retrieval and survey completion.
3. Two Zone Integrated Thermostat (IT2) track. Incentive awards are set at $1,000 per qualified project, with a maximum of one qualifying projects per home. Awardees must:
   - Install two remote thermostats that will each control the output of a different single zone heat pump and the central boiler in a qualifying residential home. The remote thermostats must prioritize the heat pumps with a droop of at least 3 degrees above the central system and maintain the priority regardless of homeowner interventions. This should be the only controls that the homeowners use for all connected units;
   - Install meters to monitor the performance of both controlled heat pumps with a device provided by the Trust; and
   - Obtain a signed agreement from the customer that allows for installation of the meter and

associated components for electricity usage monitoring, allow Efficiency Maine to retrieve the meter, and that acknowledges the customer will complete a survey after monitoring is completed. The customer will receive a $100 gift card upon meter retrieval and survey completion.

Applicants may apply for one track at a time and up to 10 projects, with a maximum of one qualifying project per home. Applicants can reapply for an additional block of projects upon completion of those previously awarded until this PON reaches its project goal, or January 15 if the goal is not reached. The Trust anticipates awarding 4 blocks of 10 projects for each of the three tracks (120 projects in total). For a home to be eligible, it must have a single-head heat pump eligible for our residential rebates and must be used in conjunction with a central boiler or furnace. The heat pump must be able to heat the zone independently.

At the time when a remote or integrated thermostat is installed, a vendor must also install electricity usage monitor (meter), provided by the Trust, on the heat pump(s). This will involve:

- Placing a current transformer (CT) on the relevant lines from the breaker,
- Attaching the CT to the transmitter and linking the transmitter to the energy monitor,
- Setting the appropriate voltage on the display, and
- Recording the meter number provided by Efficiency Maine. This will be clearly indicated in black marker on each meter.

Applicants must submit a program design outlying the equipment and methods that will be used to comply with this PON. To receive the incentive award, applicants must sign a contract with the Trust acknowledging the terms of the program and return the relevant forms outlined in Section 3 of this document.

1.3 Contact Person

The Trust encourages any applicant who has interest in or questions around this PON to contact the Trust. The Trust's sole designated contact for this PON is as follows:

Dan Mistro, Research and Data Analyst

Efficiency Maine Trust
168 Capitol Street, Suite 1
Augusta, ME 04330-6856
dan.mistro@efficiencymaine.com
207-213-4152

1.4 Program Term

The Trust will accept applications for the Remote and Integrated Thermostats PON starting on October 21, 2019, and ending January 15, 2020, or when funding is depleted.

SECTION 2: APPLICATION REQUIREMENTS

Applicants must submit a brief description of the methods and equipment that will be used, as well as agree to the terms of this PON. A template is included in Section 5 (Vendor Application and PON Agreement). Signed applications should be submitted to:

Dan Mistro, Research and Data Analyst

Efficiency Maine Trust
168 Capitol Street, Suite 1
Augusta, ME 04330-6856
dan.mistro@efficiencymaine.com
207-213-4152

SECTION 3: INCENTIVE AWARD

3.1 Contract

Incentive award recipients will be required to enter into a contract with the Trust governing the disbursement and use of the incentive award funds. This contract will contain the full terms and conditions outlined in the Remote and Integrated Thermostats PON.

All incentive awards are subject to the recipient's compliance with this PON and the Trust's program rules. Approval of an application or notice of an award by the Trust is not a guaranty payment. Timely performance of projects in accordance with program terms is a condition to payment of any incentive award. The Trust expects awardees to begin and complete projects promptly after executing the program contract.

If the awardee does not complete any projects within the first month after fully executing a contract the Trust reserves the right to rescind the award and reallocate funds.

3.2 Award Decisions

Following an evaluation process, the Trust will make an award decision and communicate the outcome to the applicant in writing via email. Notwithstanding any statement or prior course of conduct to the contrary, no application shall be deemed approved and no incentive shall be deemed awarded in the absence of a specific written notice of award from the Trust. Applicants must not commit award funds or begin any project that relies on an incentive award absent a specific written notice of award from the Trust and final execution of a program contract.

3.3 Limitations

Costs incurred in the preparation of any application in response to this PON are the sole responsibility of the bidder This solicitation does not commit the Trust to make an award or to otherwise procure or contract for services or supplies. The Trust reserves the right to reject any application that in its sole determination does not meet the requirements and specifications of this PON, the Trust's rules, Maine law, or generally accepted business practices, or which contains inaccurate or incomplete information. The Trust may seek clarifications and supplementation of applications as it may deem reasonable. The Trust will award funds for approved applications only if sufficient funding is available when the application is reviewed. The Trust may elect not to award all of the available funds through this PON and may issue another PON for the remaining funds. Additionally, the Trust reserves the right to award less than the amount requested by an applicant.

3.4 Publicity of Applicant's Participation

The Trust reserves the right to disclose certain information about the incentive awardee's participation in the program, including, but not necessarily limited to, the awardee's name, the incentive amount, and projected energy savings.

3.5 Reservation of Rights

The Trust reserves the right to cancel or extend the PON term at any time. The Trust also reserves the right to reject any and all submissions in response to this PON and to waive formalities if doing so is in the best interests of the Trust.

3.6 Request for Reconsideration

An aggrieved person may request a hearing for reconsideration of an award decision by filing a written petition with the Executive Director of Efficiency Maine Trust within 14 calendar days of the notification of the contract award. Each petition to reconsider must meet the requirements specified in Efficiency Maine Trust Rule Chapter 1, Contracting Process for Service Providers and Grant Recipients, Section 5(B), which can be found on the Efficiency Maine Trust website in the Policies section of the Library: http://www.efficiencymaine.com/docs/Chapter-1-Contracting-Process-for-Service-Providers-and-GrantRecipients.pdf

SECTION 4: INVOICE SUBMITTAL INSTRUCTIONS

Payment terms will be specified in the award and will reflect the amounts of $300 per qualifying RT installation, $500 per qualifying IT1 installation and $1,000 per qualifying IT2 installation. In order to receive these incentives, vendors with an active contract with the Trust must submit the following for all eligible projects:

- Itemized invoice that includes the price that the customer would have paid for all the work done (equipment cost, labor cost, etc.);
- Signed site survey with complete and accurate information about each project, provided by the Trust; and
- Signed customer agreement form provided by The Trust.

Invoices for multiple projects can be combined into a single invoice and submitted to the Trust on a weekly basis. Invoices can be submitted by email to dan.mistro@efficiencymaine.com.

SECTION 5: APPENDIXES

1. Vendor application and PON agreement (to be submitted once per application)
2. Installation site survey (to be completed for every project)
3. Customer agreement for meter retrieval (to be completed for every project)
4. CT meter installation guide (for reference only)

Vendor application and PON agreement

(to be submitted once per application)

Remote and Integrated Thermostats PON

Vendor Application and PON Agreement

Thank you for helping Efficiency Maine install a remote or integrated thermostat that can control both a ductless heat pump and a boiler as well as an electricity usage monitor. Please submit your plans for completing projects

Which project track are you applying for? (Select one)	☐ **Remote Thermostat (RT)** ☐ **Integrated Thermostat 1 (IT1)** ☐ **Integrated Thermostat 2 (IT2)**
Do you anticipate this project with be done concurrently with new heat pump installations, or retrofits of previous installs?	☐ **YES, new installations** ☐ **NO, retrofits** ☐ **Other (please explain):**
Will the heat pumps used in this PON be eligible for Efficiency Maine's residential rebates?	☐ **YES** ☐ **NO**
First Remote Thermostat Make	
First Remote Thermostat Model #	
Second Remote Thermostat Make (If applicable)	
Second Remote Thermostat Model # (If applicable)	
Will you use an array kit to connect the thermostat to the central heating system?	☐ **YES** ☐ **NO** ☐ **Other (please explain):**

Email or mail to Dan Mistro **(dan.mistro@efficiencymaine.com)**, 168 Capitol St. Suite 1, Augusta, ME, 04330

Array kit Make (If applicable)	
Array kit Model # (If applicable)	
Will you create a droop between the heat pump and central system?	☐ **YES** ☐ **NO** ☐ **Not Applicable**
Will the droop be at least 3˚F?	☐ **YES** ☐ **NO** ☐ **Not Applicable**
Will the heat pump be prioritized in the droop, regardless of homeowner interventions?	☐ **YES** ☐ **NO** ☐ **Not Applicable**
Will you move the thermostat away from any sources of direct heat?	☐ **YES** ☐ **NO** ☐ **Not Applicable**
Additional comments about installation plans	

By signing this form, you and your subcontractors agree to:

1. Install an efergy E.2 energy monitor, supplied by Efficiency Maine Trust, for the ductless heat pumps in each participating home. This will involve:
    a. placing a current transformer (CT) on the relevant lines from the breaker,
    b. attaching the CT to the transmitter and linking the transmitter to the energy monitor, and
    c. etting the appropriate voltage on the display.
2. Complete a site survey for each participating home. The survey template will be provided by The Trust.
3. Obtain a signed agreement from the customer that allows for installation of the meter and associated components for electricity usage monitoring, allow Efficiency Maine to retrieve the meter, and that acknowledges the customer will complete a survey after monitoring is completed. The customer will receive a $100 gift card upon meter retrieval and survey completion.

In return, and subject to compliance with all program terms and conditions, Efficiency Maine will pay you $300 per qualifying Remote Thermostat (RT) installation, $500 per qualifying Integrated Thermostat 1 (IT1) installation and $1,000 per qualifying Integrated Thermostat 2 (IT2) installation. Applicants may apply for up to 10 projects, with a maximum of one qualifying project per home.

SIGNATURE. Please certify that you agree to perform the services described above by signing below.

Installer _____

Installer Signature: _____

Date: _____

Email or mail to Dan Mistro **(dan.mistro@efficiencymaine.com)**, 168 Capitol St. Suite 1, Augusta, ME, 04330

Installation site survey

(to be completed for every project)

Remote and Integrated Thermostat Site Survey

Please complete the form below and email or mail to Dan Mistro (dan.mistro@efficiencymaine.com), 168 Capitol St. Suite 1, Augusta, ME, 04330

Homeowner Information					
First Name					
Last Name					
Address					
Town		State		ZIP Code	
Email					
Phone number					

Existing Heating System	
Fuel Type	☐ **oil** ☐ **kerosene** ☐ **electric** ☐ **propane** ☐ **natural gas** ☐ **wood** ☐ **other (please specify):**
Make	
Model	
Nozzle Size	
Burn Rate	
Previous Thermostat settings(s)	
Provides Domestic Hot Water	☐ **YES** ☐ **NO**

Remote and Integrated Thermostat Site Survey

Heat Pump 1	
Make	
Model	
Efficiency Maine CT Meter # (See handwritten number)	

Heat Pump 2 (If applicable)	
Make	
Model	
Efficiency Maine CT Meter # (See handwritten number)	

Remote Thermostat 1	
Make	
Model	
Droop between heat pump and central system (˚F, if applicable)	
Approximate distance from controlled heat pump (feet)	

Email or mail to Dan Mistro **(dan.mistro@efficiencymaine.com)**, 168 Capitol St. Suite 1, Augusta, ME, 04330

Remote and Integrated Thermostat Site Survey

Remote Thermostat 2 (If applicable)	
Make	
Model	
Droop between heat pump and central system (˚F)	
Approximate distance from controlled heat pump (feet)	

Home Configuration	
Type of Home	☐ single family home ☐ 2-unit multifamily building ☐ mobile home ☐ other
What type of room is the first heat pump in?	☐ kitchen ☐ living room ☐ dining room ☐ bedroom ☐ bathroom ☐ other:_____
What type of room is the second heat pump in? (if applicable)	☐ kitchen ☐ living room ☐ dining room ☐ bedroom ☐ bathroom ☐ other:_____
Type of floorplan	☐ open floorplan ☐ many separate rooms without doors ☐ many separate rooms with doors
Number of stories	☐ one ☐ two ☐ three
Estimated square footage	
Estimated square footage served by heat pump(s)	
Additional comments about installation	

Email or mail to Dan Mistro (dan.mistro@efficiencymaine.com), 168 Capitol St. Suite 1, Augusta, ME, 04330

Rev. 10.22.2019

Remote and Integrated Thermostat Site Survey

SIGNATURE. Please certify that all information on this form is correct by signing below.	
Installer Company	
Installer Signature	
Date	

Email or mail to Dan Mistro (dan.mistro@efficiencymaine.com), 168 Capitol St. Suite 1, Augusta, ME, 04330

Customer agreement for meter retrieval

(to be completed for every project)

Efficiency Maine
P.O. Box 219
Brunswick, ME 04011-0219

(866) 376-2463

efficiencymaine.com

Efficiency Maine is conducting a study to assess the energy savings from remote thermostats for ductless heat pumps and/or integrated thermostats that can control both a ductless heat pump and boiler. As part of this study, Efficiency Maine has arranged to install a meter to monitor the electricity use of your heat pump. Thank you for participating in our study!

If you have any questions, please contact Efficiency Maine at (866) 376-2463.

Customer Agreement

By participating in this site visit, I, _____ (print name), agree to:

1. Allow the installation of a meter and associated components for electricity usage monitoring.
2. Allow a representative of Efficiency Maine to come back to retrieve the installed meters.
3. Complete a detailed survey on heat pump usage and thermal comfort when the meter is retrieved.

To offset the time and any inconvenience, I will receive a $100 gift card in the mail after I complete the more detailed survey and the metering has been completed at my home.

Printed Name:_____

Signature:_____

Date:_____

CT meter installation guide

(for reference only)

efergy®

CE RoHS N16354

At the end of its serviceable life, this product should not be treated as household general waste. It should be handed over to the applicable collection point for the recycling of electrical equipment, or returned to the supplier for disposal.

*All values shown in this manual are only examples. Actual figures will vary depending on your consumption.

E2

WIRELESS ELECTRICITY MONITOR

efergy®

INSTRUCTION MANUAL

CONTENTS

INTRODUCTION

Energy metering and monitoring are at the heart of energy management, understanding when and where your energy is consumed is key to saving money.

The **e2** wireless electricity monitor shows the amount of energy that a household is consuming at the time the display is read. The display can also give the user a reading showing usage in financial terms. You can walk around the home with your monitor device, switching appliances on and off, to see the difference that each one makes. With a few small changes in your consumption behaviour the **e2** can help you reduce your energy costs.

Ask George
If you have any questions about using your **efergy** monitor or if you'd like further advice on monitoring electricity at home, please feel free to contact us, or visit the website for up to date information, downloads and frequently asked questions.

Email your questions to;
info@efergy.com for UK

Email your technical questions to;
askgeorge@efergy.com for UK

We aim to answer all your email's within 48 hours

www.efergy.com for UK

IMPORTANT SAFETY INFORMATION

IMPORTANT: It is important that you observe some simple precautions before using this product.

- When installing the **efergy** monitor you should find that everything is relatively straightforward. However, there are a number of important health and safety issues which you need to be aware of.
- Please read and act upon the important information on the following pages. Remember the device is not intrusive and does not require rewiring.
  In some countries (i.e Australia) the live cable can only be accessed by a qualified electrician.
- If you notice anything unusual about the electricity supply such as loose wires, exposed cabling, burn marks, holes in the insulating materials or damage to the meter, stop immediately and report the findings to your supply company.
- Do not force or bend the cables at any point during installation. If you are worried or have any concerns about the installation, please contact a qualified electrician immediately.
- The user does not need to remove the sensor through the working life of the unit. Battery changes are performed on the transmitter and on the display. There are no batteries to change in the sensor.

IN THE BOX

Your **e2** Pack contains the following elements:

1 x mini CT Sensors
1 x Transmitter
1 x **e2** Wireless Energy Monitor

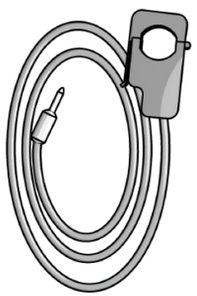
You will need to attach the sensor to the live feed cable which connects the meter to the monitor. Any power you use in your home will pass through this cable. The clip on sensor acts as a CT sensor, and relays the amount of current being drawn in the home to the transmitter. From there it is sent wirelessly to the energy monitor, which shows how much power is being consumed.

You can upload your energy data from your **e2** monitor onto your PC/Mac using **elink** software.

It also includes:

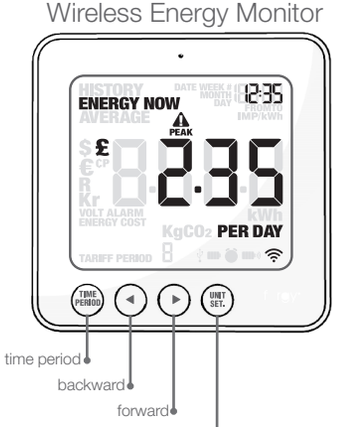
1 x USB Cable
1 x **elink** Software CD
1 x **elink** Software Guide
1 x Instruction Manual

CT sensor



Transmitter

Wireless Energy Monitor



HARDWARE INSTALLATION

MOUNTING INDIVIDUAL OR MULTIPLE CIRCUITS

Locate Your Electrical Panel
Locate your electricity meter and determine its type. You can normally find this on an outside wall, in the garage, basement or utility room. If you live in a flat, it can often be found outside your front door, in the communal stair case, or in the basement. Ensure there is enough of accessible cable coming from the bottom of your electricity meter.

Modern office blocks and apartments may have safety panels to protect wires entering the meter. It is recommended that professional electricians be contacted where this is the case.

Find the Main Feed Wires for Your Home
You should find four cables exiting the meter (see both Fig. 1 and Fig. 2). The feed cable (cable 4) is the live cable exiting from the meter to the fuse box. Connect the mini CT sensor to cable 4. Some installations will have cable 1 and cable 2 covered or partially covered to prevent any tampering with the supply (see Fig. 2). In this case you will still attach the sensor to cable 4.

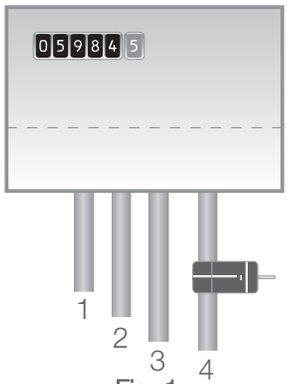


Fig. 1

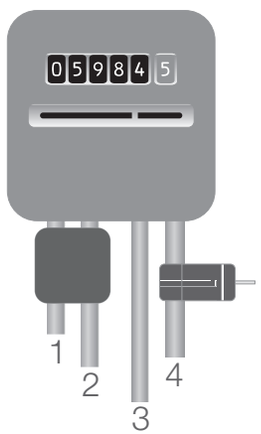


Fig. 2

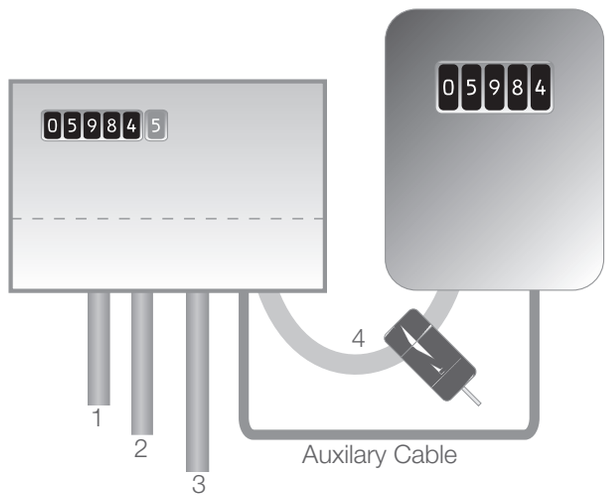
HARDWARE INSTALLATION

MOUNTING INDIVIDUAL OR MULTIPLE CIRCUITS CONTINUED

Dual Tariff Meters
Dual Tariff meters (shown in Fig. 3) will often have an auxiliary cable running between cable 3 and cable 4. Auxiliary cables will be smaller in diameter than the feed cables, and will run into an adjoining metering device.

Newer installations will normally have two cables exiting from the bottom of the meter. One is the earth cable, the other the live feed cable. The mini CT sensor should be clipped around the live feed cable (this is normally brown coloured).

If you have a three phase supply, or economy 7 meter, then you may require additional sensors. These can be simply plugged into the additional sockets at the base of the transmitter. Please contact your supplier for additional sensors.



HARDWARE INSTALLATION

INSTALLING THE MINI CT SENSOR

The sensor needs to be fitted to the live feed cable. Sensors are suitable for cables up to 12mm in diameter. You should not force the cable to fit. The sensor should fit loosely around the cable and there should be no packing used.

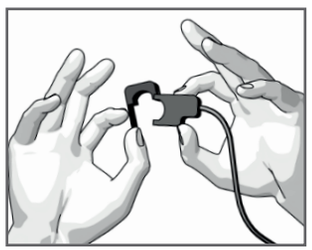


Fig. 4

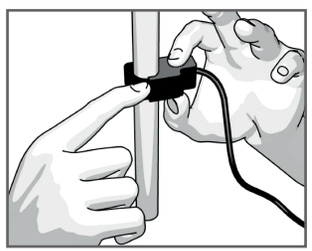


Fig. 5

1. Pull the release clip to open the mini CT sensor (Fig. 4)

2. Select the correct feed cable, and then place the sensor around it

3. Push the clasp to close around the feed cable securely (Fig. 5)

Remove a standard 1cm knock out from the meter box. Feed the mini CT sensor lead from inside the box out through the raw knock out hole. Open and place the mini CT sensor around the live feed cable 4 (Fig.5).

Mounting the Transmitter

Insert the jack on the end of the mini CT sensor wire into any of the three input sockets on the transmitter. The mini CT sensor acts as a current sensor and relays the current being drawn into the home to the transmitter. Mount the transmitter on the wall next to or above the meter box. This will make it easier to replace the batteries (although the batteries will last for a long time). If the panel is in a finished area, you may mount the transmitter inside the meter box. This may reduce transmission distance. Replace the panel cover(s) when finished installing the mini CT sensors.

MONITOR SETUP

LINKING THE TRANSMITTER AND MONITOR

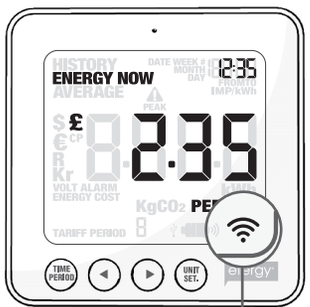
Step 1 - Ensure three AA batteries are inserted in the transmitter and three AAA batteries are inserted in the wireless energy monitor. Observe polarity when installing batteries.

Step 2 - Push the **link** button on the reverse of the monitor for two seconds. The transmission signal symbol will flash for one minute.

Step 3 - While the transmission signal in the display flashes push the **link** button on the front of the transmitter and wait until the transmission signal symbol becomes solid.

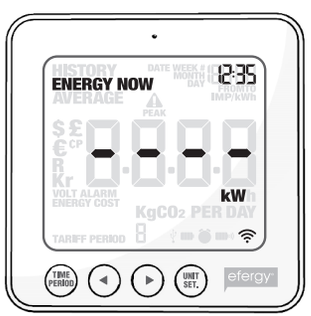
Note - The default value for the transmission frequency is six seconds. This means the transmitter is sending information every six seconds. You can change the frequency from 6s (red flashing light) to 12s (orange flashing light) and to 18s (green light) by pushing and holding the transmitter button.

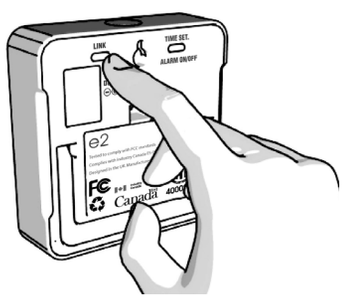
If the **link** is completed you will clearly see the transmission signal



Transmission Signal

If the **link** is not completed you will see dashes on the display





Wireless energy monitor **link** button

Transmitter **link** button

MONITOR SETUP

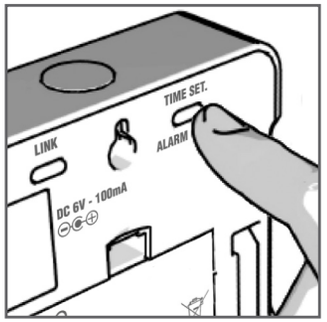
SETTING THE TIME AND DATE

The **e2** monitor needs to know the time and date in order to provide you with the correct information.
Set the time and date as follows:

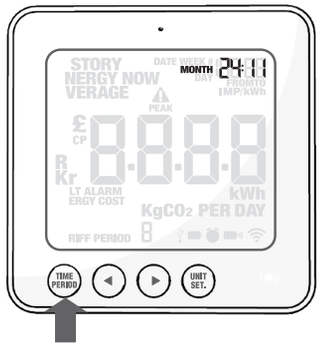
Step 1
On the reverse of the display you will find the **time set** button. Press and hold for two seconds. Time set up will flash in the display.

Step 2
Set the hour to the correct time by using **backward** and **forward** buttons. Press **unit set** button once to save the hours. Repeat for minutes, using the **unit set** button to confirm.

Step 3
Set the date by using the **backward** and **forward** buttons. Press **unit set** button to confirm and move to month set up. Repeat the process to set the year. Once the correct time and date have been set, push **unit set** button to save and exit.



Hold for 2 seconds



press **time period** button to exit

MONITOR SETUP

SETUP INSTRUCTIONS

IMPORTANT - Throughout the setup process, push the **time period** button at any time, your settings will be saved & you will exit the function setting mode.

The **efergy** monitor needs to know the unit cost per kWh charged by your electricity supplier, along with voltage and alarm settings. The following steps will move through each of these settings (See page 15 for Dual Tariff Settings).

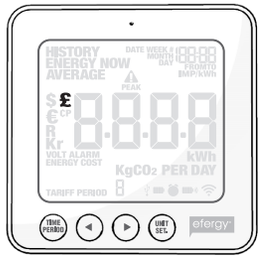
Press and hold down the **unit set** button for two seconds, this will enable you to enter the setting mode.

Note - Twenty seconds of inactivity in setting mode will return the unit to normal display mode without saving changes.

Step 1 - Voltage
Press and hold **unit set** button for two seconds. Default voltage is set at 240V. Use **backward** and **forward** buttons to change the voltage. Press **unit set** button to save your setting and move into currency selection setting.

hold for 2 seconds

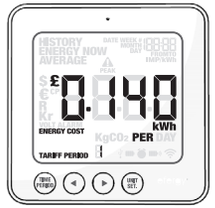
Step 2 - Currency Selection
Select the currency using **backward** and **forward** buttons. Default currency will be £. Push **unit set** button to confirm and to move onto tariff selection set up.



MONITOR SETUP

Step 3 - Single Tariff Set Up
On release you will see the symbol **tariff period 1** will be highlighted. If you are charged one single tariff push **unit set** button to confirm. If you have dual tariff rate, please see the following page.

Step 4 - Electricity Cost
Default cost is set at 0.140 £/kWh. This is the average price per kWh electricity that suppliers charge. Use the **backward** and **forward** buttons to set the cost per kWh. Press **unit set** button to save your setting and to move onto carbon emission ratio setting.



Step 5 - Carbon Emissions Ratio
Now set your carbon emissions ratio. This value can be increased or decreased using **backward** and **forward**. Press the **unit set** button to store the value. The European average is 0.50 kg. CO_2/kWh, this is the default value. Press **unit set** button to save your setting and move on to alarm setting.

Step 6 - Alarm
The default **alarm** is set at 5kW. If the alarm function is switched on, and you are using more than 5kW, the alarm will sound. This value can be increased or decreased using **forward** and **backward** buttons. Press **unit set** button to store the value and exit the **function** mode. To activate and deactivate the alarm at any time press the alarm on/off button on the back of the unit.

MONITOR SETUP

DUAL TARIFF MODE

If you have a dual or multiple tariff rate meter you may want to setup the dual tariff function.

Step 1 - Activation Of Dual/Multiple Tariff
Press and hold **unit set** button for two seconds. On release you will see the voltage setting flash. Press **unit set** button twice and you will move onto the tariff selection setting. Now you will see the symbol TARIFF 1 flash. Press **backward** or **forward** buttons to select dual or multiple tariff set up (you can select up to four tariffs). Push **unit set** button to confirm. Now you have to set START and END time periods for each tariff.

hold for 2 seconds

Step 2 - Set Start & End Time For Tariff 1
Set the start time for TARIFF 1 first using **backward** or **forward** buttons. Set the hours and press **unit set** button to save and move to minute set up. Set minutes using **backward** or **forward** buttons and pushing **unit set** button to confirm. Repeat the process for other tariffs (if you have multiple tariff settings). You will always set one period of settings less than the number of tariffs you have selected as the remaining period will be saved automatically.

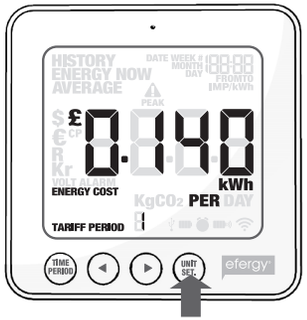
MONITOR SETUP

Step 3 - Set Tariff 1 Rate
Use **forward** and **backward** buttons to input the cost per kWh. Press **unit set** button to save your setting. Tariff 2 set up will flash.

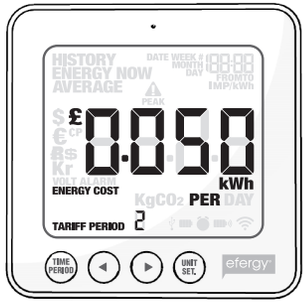
Step 4 - Set Tariff 2 Rate
Use **backward** and **forward** buttons to input the cost per kWh. Press **unit set** button to save your setting.

Step 5 - Set Tariff 3 & 4 Rate
Use **backward** and **forward** buttons to input the cost per kWh. Press **unit set** button to save your setting. Repeat the process for Tariff 4.

Example - If you are on a tariff which starts at 1:00am and finishes at 8am, set start time at 01:00 and end time at 08:00. Push the **unit set** button to confirm. Select and set the cost per kWh you pay for each tariff, for night and day time rates respectively.

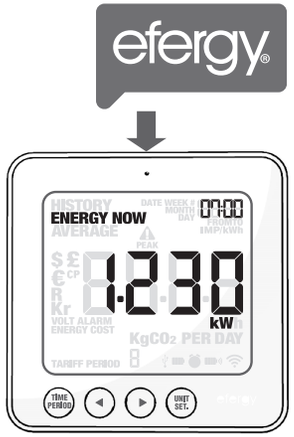


hold for 2 seconds



PEAK When in ENERGY NOW mode, this symbol appears when the most expensive tariff is in use.

MONITOR SETUP



HOW TO CHANGE FUNCTIONS

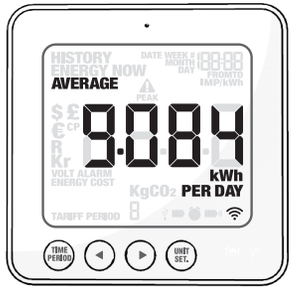
Function
Press the top **function** button to change the information displayed from **ENERGY NOW** to **AVERAGE** and to **HISTORY**.

Step 1 - Energy Now
The **efergy e2** monitor shows instant power(kW), estimated electricity costs per day and carbon emissions per day.

Step 2 - Average
The information shown is the average calculated since the monitor was switched on for the first time. It shows daily, weekly and monthly average consumption in kWh, cost and carbon emission.

Step 3 - History
In this mode the monitor shows consumption of the last 7 days, last 7 weeks and last 24 months in kWh, cost and carbon emission. Press **time period** button to switch between day, week and month.

Note - Hourly data is stored in the **e2** for 240 days. This can be viewed when the data is transferred onto your computer using the **elink** software.



MONITOR SETUP

HOW TO CHANGE MODES

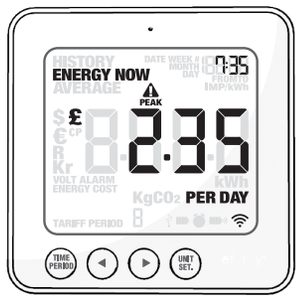
Mode
Press **unit set** button to change the unit displayed.

Step 1 - Power
Shows the power of your whole house at any instant, in kW.

Step 2 - Energy
During the AVERAGE and HISTORY modes the display shows energy consumption, in kWh.

Step 3 - Cost Per Day
Estimates the electricity cost of your home at that current moment in time, in cost per day.

Step 4 - Carbon Emissions
Estimates the indirect carbon footprint for electricity consumption at that current moment in time, in kg.CO_2/day.

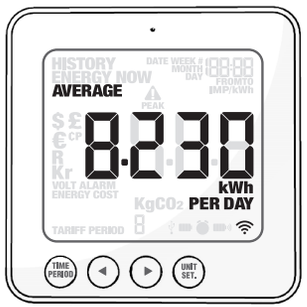


MONITOR SETUP

HOW TO CHANGE MODES CONTINUED

Step 5 - Time Period Button
Press **time period** button to change from daily, to weekly and to monthly data during AVERAGE or HISTORY mode. During HISTORY mode the **backward** and **forward** buttons are used to scroll between date, weeks and months.

Day



Week

Month

Day

Week

Month

FAQS

If I remove the batteries will I lose the information on the display?
The display has an internal memory, so if you need to change or remove the batteries the information stored on the display will not be lost.

How do I reset the display (clear the data and start again)?
Press **time period** and **unit set** buttons simultaneously and hold for two seconds CLR will be displayed on the screen.

How far does the device transmit?
Transmitters work up to around 230ft/40m within the home. The 433.5MHz range is well suited for home use. This can cover three floors, and also well suited to buildings where electricity meters are outside the main building.

I have dashes (- - - -) showing on the display. What does this mean?
Move the display closer to the transmitter and press the **link** button. If the dashes remain on the display this would indicate the transmitter and receiver are not communicating. Please contact **efergy** Customer Service to help locate the problem.

Backlight appears to work sometimes, and not other times. Is my display broken?
No. The backlight is on a timer to save battery life. The display should work at darker periods of the day, when any buttons are pressed. The LED backlight will be activated from 18:00Hrs to 6:00Hrs.

For more information about the **e2** and the **elink** software go to www.efergy.com

TECHNICAL INFORMATION

Model Name	**efergy e2**
Frequency	433.5MHz
Transmission Time	6, 12 or 18 Sec
Transmission Range	40 - 70m
Sensor Voltage Range	110 - 400V
Measuring Current	50mA - 200A
Accuracy	> 90%

INSTALLATION NOTES

Date _____

Location Installed _____

Installed By _____

Number of CTs _____

Voltage Set Point _____

Tariff Settings _____