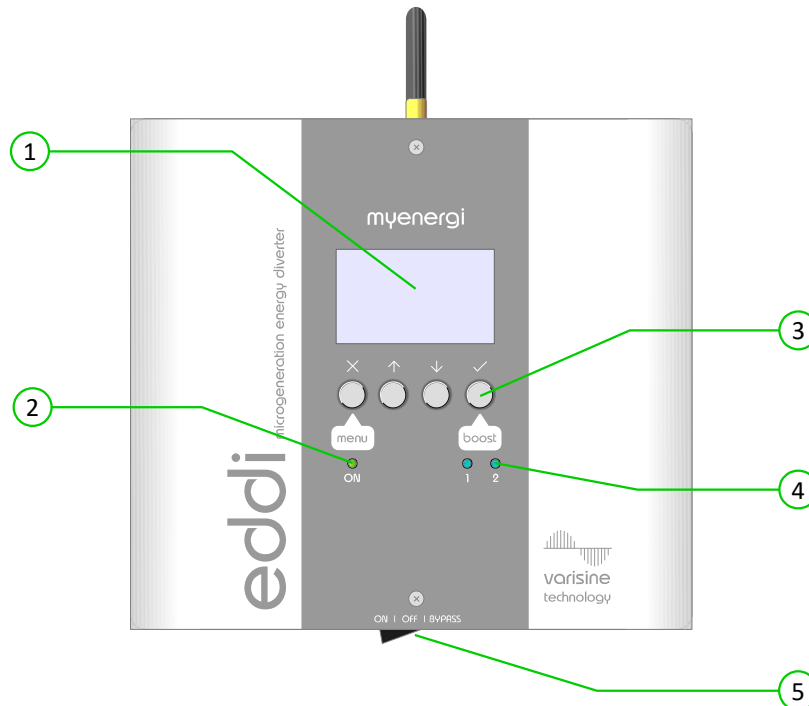




# eddi

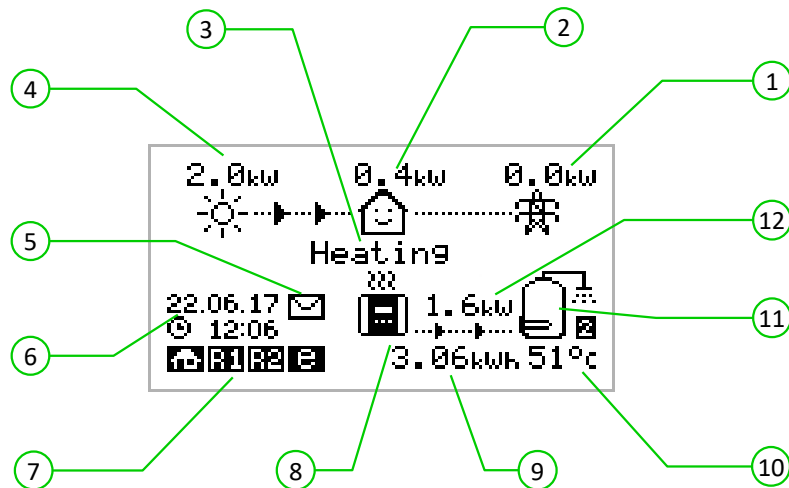
microgeneration energy diverter

## Operation Controls & Indicators































<p>1 Display</p>	<p>Graphical LCD display with LED backlight</p>
<p>2 Power on indicator</p>	<p>Illuminates when: Unit is connected to the mains supply and; the BYPASS switch is in the ON position (I)</p>
<p>3 Control buttons</p>	<p>Four tactile buttons used to navigate the menus and alter settings:</p> <ul style="list-style-type: none"> <li>⊗ Enter menu (from main screen)   Exit current menu</li> <li>↑ Move up a menu item   Increase value</li> <li>↓ Move down a menu item   Decrease value</li> <li>✓ Boost   Select item   Confirm value and move to next setting</li> </ul>
<p>4 Heater output indicators (1 &amp;2)</p>	<p>Illuminates when the respective heater output (1 or 2) is active The brightness will vary with the output voltage If both 1 &amp; 2 are lit together, both heaters are at maximum temperature</p>
<p>5 ON/OFF and BYPASS switch</p>	<p>This switch has three positions:</p> <ul style="list-style-type: none"> <li>I ON - <b>eddi</b> is on (this is the normal position)</li> <li>0 OFF - <b>eddi</b> is off (the power on indicator will be off)</li> <li>II BYPASS - <b>eddi</b> is bypassed; the mains supply is directly connected to the Heater 1 output. In this position the Power indicator will be off and the Heater 1 indicator will be illuminated</li> </ul>

## Display



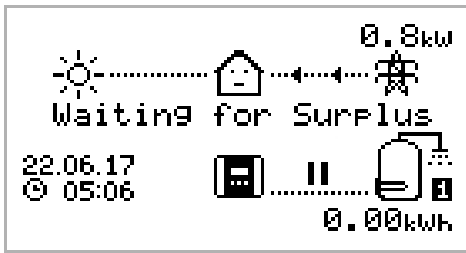
1	Import / Export Power	The power being either imported or exported from or to the grid (kW). The direction of the arrows indicate if the property is currently importing power (left) or exporting power (right) The size of arrows is proportion to the level of power. When the property is neither importing or exporting power, the figure will be 0.0kW and there will be no animated arrows. The property is then said to be 'in balance'
2	House Load Power	The power that the property is currently using in kW It does not include any surplus power being sent to the heater(s) <i>Note: This is displayed only when the Generation Sensor is installed (either connected to CT2 input or a harvi device)</i>
3	Operating Mode	The current operating mode is displayed here
4	Generation Power	The power being generated at this time in kW <i>Note: This is displayed only when the Generation Sensor is installed (either connected to CT2 input or a harvi device)</i>
5	Message Icon	When this icon is present there is a message from the myenergi server This only applies if you have the myenergi hub device
6	Date & Time	The current date and time
7	Status Icons	These icons indicate that the import limiting is active (house), a relay is on (R1 / R2) or the e-Sense input is live (e)
8	eddi Icon	This eddi unit. If there are wavy lines above the icon, the unit is thermally limiting (the output power will be temporarily reduced)
9	Energy Diverted Today	The accumulated energy that has been sent to heater(s) today Only the surplus energy is included
10	Temperature	If the optional Relay & Sensor Board is fitted and temperature probes are installed, the temperature of the active heater is displayed
11	Heater Icon	This icon represents the active heater, and next to it is the heater number
12	Power Diverting to Heater	When eddi is heating, arrows will show here along with the power in kW

## Display Icons Key

 House Consumption – Not Importing	 Heater – Top Immersion
 House Consumption – Importing	 Heater – Bottom Immersion
 Solar Generation Power	 Heater – Radiator
 Wind Generation Power	 Heater – Underfloor
 Grid Power – Import / Export	 Heater – Swimming Pool
 Power Flow Direction – Small Amount	 Relay – Relay 1
 Power Flow Direction – Medium Amount	 Boiler
 Power Flow Direction – Large Amount	 Heat Pump
 Waiting For Surplus Power	 Message Available
 Maximum Heater Temperature Reached	 Import Power Limiting Active
 eddi Device – Normal	 Relay 1 or 2 – On
 eddi Device – Too Warm (output limited)	 Economy Tariff Electricity Available
 Instantaneous Power	 Active Heater Number
 Accumulated Energy Today	 DSR Mode Active

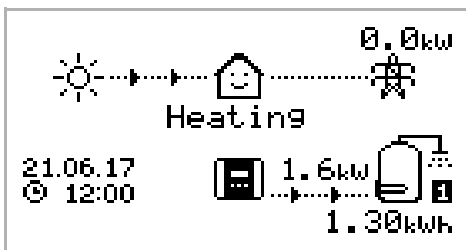
## Operating Modes

### Waiting for Surplus



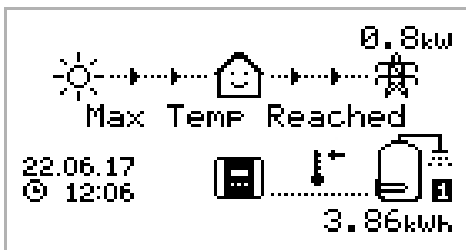
**eddi** is waiting for surplus power from the microgeneration system. The house in the centre is straight faced as grid electricity is being used by the house (**0.8kW** is this example). We can see that **eddi** hasn't started heating with surplus power yet today as there is no accumulated energy; the **0.00kWh** under the water cylinder symbol.

### Heating



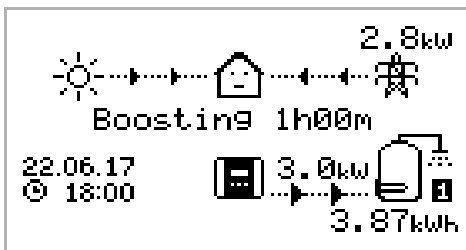
**eddi** is now diverting power to the heater. The heater currently being heated is shown by the icon on the right and the small number (1 in this case) corresponds to the heater number. The amount of power being diverted at any one moment is shown between the **eddi** icon and the heater icon (in this screenshot the diverted power is **1.6kW**). All of the surplus energy which has been set to the heater today is displayed under the heater icon (**1.30kWh**) in this example. Now the house is smiling because there is no grid electricity being used.



### Max Temp Reached



The heater is now at maximum temperature. Now there are no arrows or power figures for the heater and a thermometer symbol is shown. As **eddi** is no longer able to divert the surplus power to the heater and so this is now exported to the grid (**0.8kW** in this example). If there is a second heater present (connected to Heater 2), **eddi** will switch over to start heating Heater 2.

### Boosting




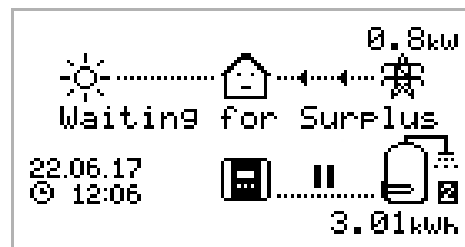
Boosting means **eddi** is giving maximum power to the heater, irrespective of available surplus power. The arrows going to the heater are large and the power figure (**3.0kW** in the example screen) is the heaters' maximum power level. During a boost, it is likely that there will be power imported from the grid (**2.8kW** here). The timer starts at (**1h00m**) and will count down until the boost ends. The boost duration may be altered with the  or  buttons.




## Manual Boost

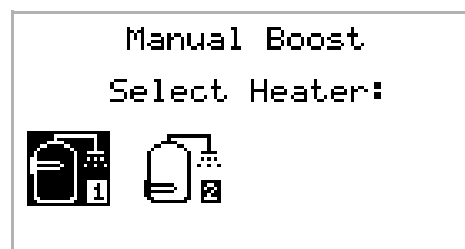
A heater can be 'boosted' to full power for a short period regardless of the amount of available export power, this function is called Manual Boost and is activated from the main screen. Once the boost starts, the remaining boost period will be displayed, this will start with a duration of 1 hour, this can be adjusted during the boost. The boost can be cancelled at any time.



### Activating Manual Boost

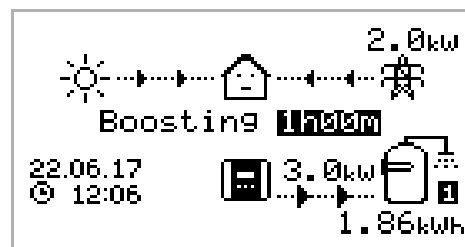
1. From the main screen, press 



2. If there is more than one heater you may select which heater you wish to boost by pressing  or  to change heater. Press to  start boost

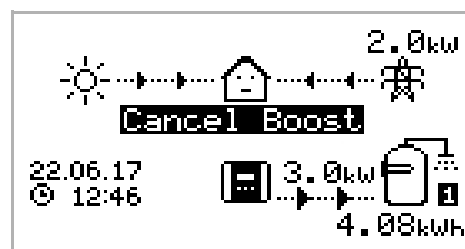


3. The boost duration may be altered by pressing  or  during the boost



### Cancelling Manual Boost

The boost can be cancelled by pressing  twice



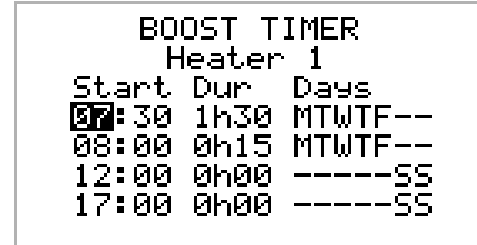
## Boost Timer

eddi can be programmed to 'boost' the heating for each heater at certain times. Boost, means that the heater will be at full power regardless of the amount of available export power. This means that power may be drawn from the mains grid supply during boost times.

- There are four editable time slots for each heater.
- Setting the duration to 0h00 will make the boost inactive.

### Programming Boost Times

1. From the main screen, press to enter Main Menu
2. Select **Boost Timer** by pressing until the option is highlighted, then press
3. Select the heater you wish to program the boost times for (e.g. **Heater 1**) and press
4. The **BOOST TIMER** screen is then shown.
5. The boost can now be edited: Use or buttons to highlight the time slot you wish to change. The screen above shows the start hour being edited:
6. Alter the start hour with the or buttons and then press to move to minutes.
7. Edit the duration in the same way and then press again to edit the days of the week you want the boost to be active for; each day of the week and toggled on/off with or buttons, press to go to the next day. Pressing on the last day (Sunday) will confirm the boost time slot and whole line will be highlighted again.
8. Press to exit the **BOOST TIMER** screen.

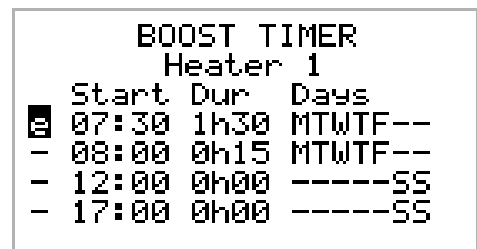


### Economy Tariff Boosting

Boosting only when economy rate electricity is available can be achieved in one of three ways:

1. Setting the boost timer to coincide with the economy tariff times. This option should be used only if the electricity meter is a dual-rate meter (modern meters usually are multi-rate).
2. Boost only at set times AND if economy rate electric is available\*
3. Automatically boost whenever the economy tariff rate electricity is available, regardless of the boost times\*

\* Options 2 and 3 are available only when using the eSense input on the Relay & Sensor Board. The Relay & Sensors menu will be available when a Relay & Sensor Board is fitted inside the unit.



For option 2, the **eSense Input** in the **Relay & Sensors** menu option should be set to the appropriate **Boost Enable** setting. With the **Boost Enable** function set, the **BOOST TIMER** screen will include an extra column (see screenshot). The e can be toggled on/off, if e is present, the boost will activate only when the boost times are valid and the economy rate tariff is available.

Alternatively the **eSense** input can be used to activate the boost whenever the economy tariff rate electricity is available, regardless of boost times (option 3). To do this, the **eSense Input** in the **Relays & Sensors** menu should be set to **Boost 1**, **Boost 2** or **Boost 1&2**. When using this option, the Boost Timer is not needed.

### Boost Time Conflicts

Both heaters cannot be active at the same time and so if the boost times are conflicting, the higher priority heater will take precedence. If one or more boost times conflict for one heater, the boost will follow the latest time or longest duration.

### Cancelling Boost

The boost can be cancelled by pressing twice during a boost.