



Push Controls

Module: NERO

Version 1.1

www.pushcontrols.com

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Version History

Version No.	Date	Description
1.0		Initial release of documentation
1.1	07/10/2016	Add Gen IV theme guidelines

Step 1: Getting Started – Setting Up Your Hardware

The hardware setup for controlling Nero through Push is as simple as connecting the NERO Bridge and Push controller on the network (see Figure 1). NOTE: NERO functions within macros are only supported on PC1 and PC2 controllers **not** PC4s.



Figure 1 - Connecting Nero Bridge and Push PC4 to a router

Step 2: Setting Up Your Project – Configuring the Push Controller

This documentation assumes you already have a Push controller (PC1/PC2/PC4) already within your project. Due to the nature of the NERO module there is no special configuration of the controller required, all configuration necessary is contained within Step 4: Configuring the NERO Module.

Step 3: Setting Up Your Project – Importing the Nero Module

Import the Nero module by completing the following actions:

- Right click on 'PROJECT' at the top of the tree and select 'Import Module'. *Refer to Figure 2*
- Locate and select 'Nero_X.pemod' (where X is the current version number)

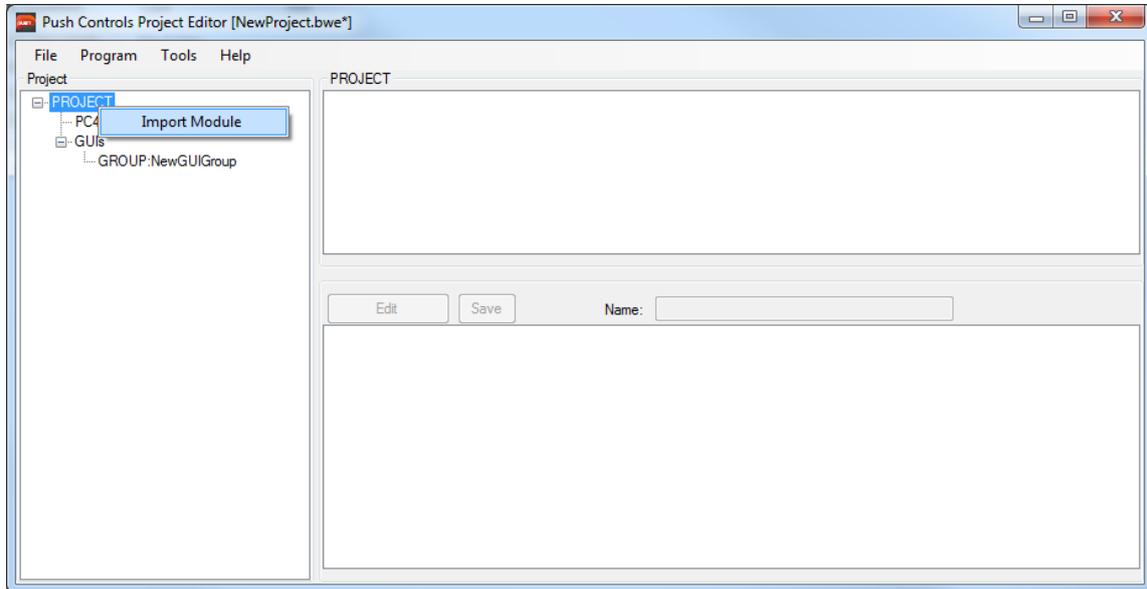


Figure 2 – Right click on PROJECT, inside the project tree, to import a module.

The selected module will now appear in the module browser window (See Figure 3), where you can see everything that is included in the module.

Note: A GUI group must be available in the GUI's section of the Project Editor, in order to import the Nero module.

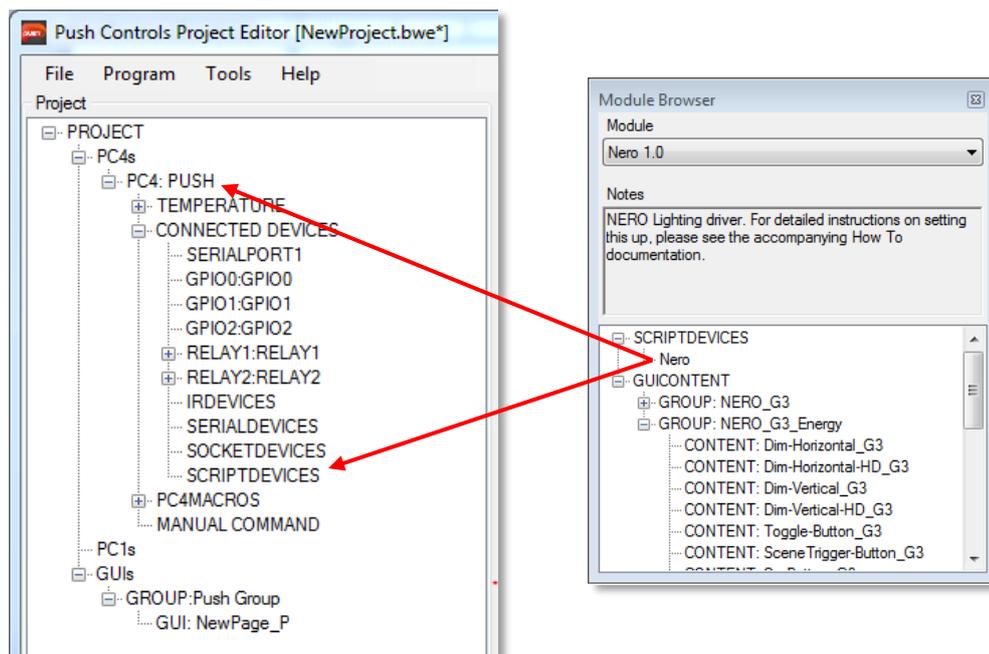


Figure 3 – Dragging and dropping scripts from the Module Browser window

GUI Themes

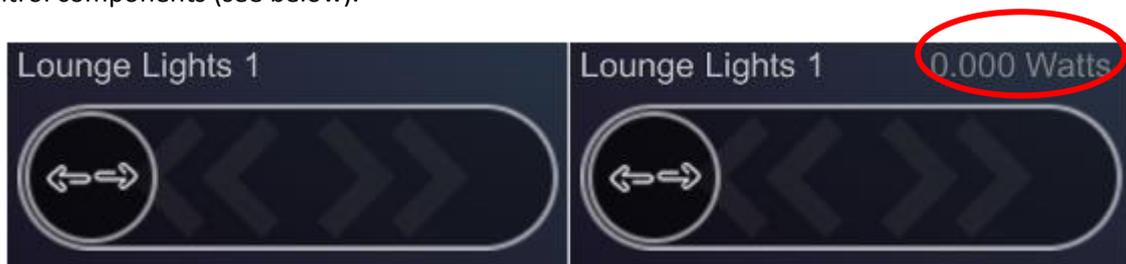
Themes Available

The Nero module contains Gen IV and Gen III themes, each theme is grouped into a GUI Group as follows:

- Nero_G4: contains GUI components with Gen IV theme for iPad/tablets
- Nero_G4_Energy: contains GUI components (including energy readings) with Gen IV theme for iPhone 5/6/6+ and phones with an aspect ratio close to 16:9
- Nero_G3: contains GUI components with Gen III theme for iPad/tablets
- Nero_G3_Energy: contains GUI components (including energy readings) with Gen III theme for iPhone 5/6/6+ and phones with an aspect ratio close to 16:9

Energy Readings

Each theme contains two GUI groups to choose elements from; the regular NERO_Gx elements and the NERO_Gx_ENERGY elements. The difference between the two is the latter components all include energy readings on components you add into your project, whilst the former only includes control components (see below).



Adding a GUI Component to a GUI page

Each of the elements contained in the module need to be dragged and dropped into their respective positions within the project. The items under the SCRIPTDEVICES category need to be dragged onto the desired controller. The GUICONTENT area can include any number of the following items POPUP, CONTENT or SCRIPT and are imported in the following manner *Refer to Figure 3:*

- POPUP content can be dragged directly into an existing GUI group
- CONTENT requires an existing page to be dragged in to. To include content you can either drag it onto the page name (see Figure 3) or drag onto an open GUI page (hold down shift to drag the content to any position on the page). Some modules will have examples of a full page and will have '_P' or '_L' appended to the content name, which denotes Portrait or Landscape. To import whole page content a page needs to be made, which matches the resolution of the page being imported.

Note: items should be imported in the order that they appear inside of the Module Browser window due to the dependencies certain modules contain.

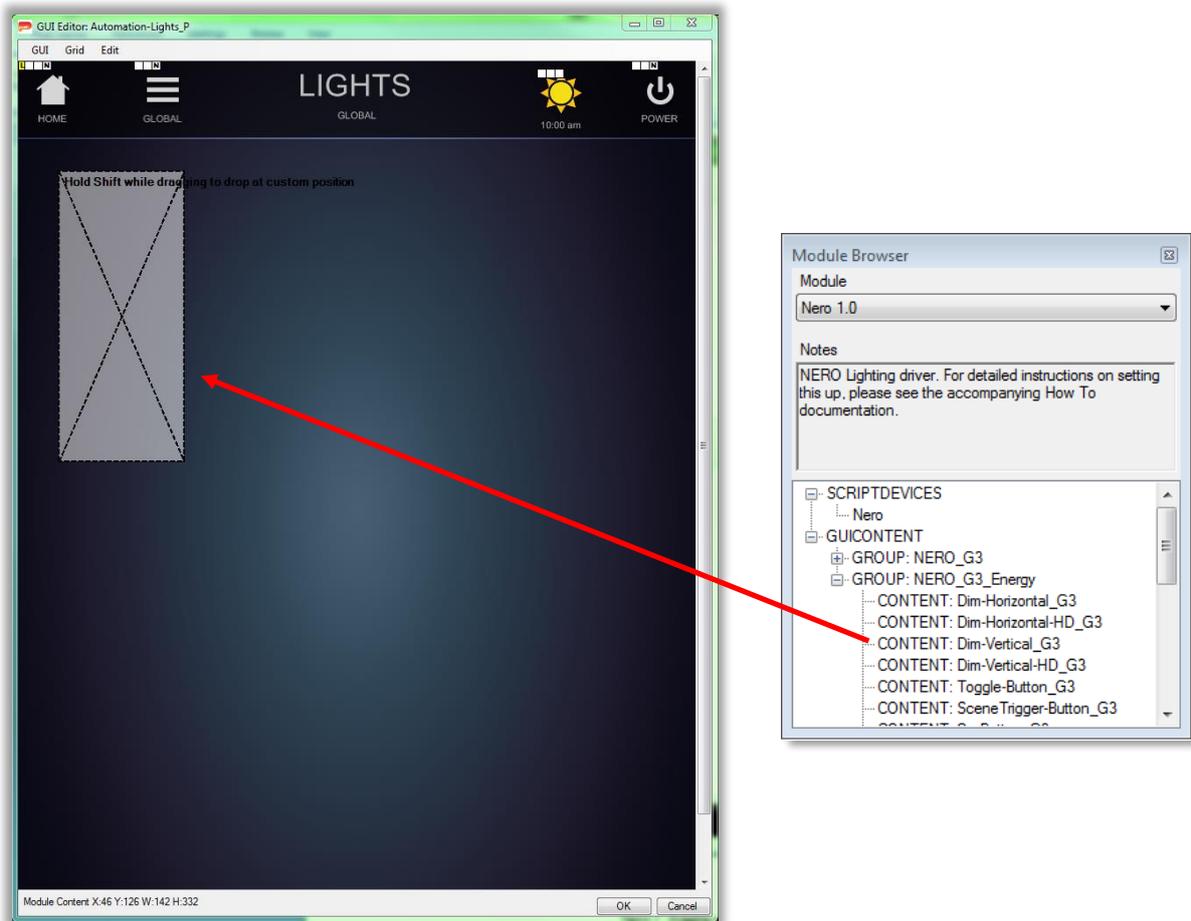


Figure 4 - Dragging content onto a GUI page

Each of the GUI content elements (except for demo pages) will prompt you to enter parameters required to program the content to the Nero module. For example in Figure 4 the Dim-Vertical content is dragged onto the page, whilst holding down shift to move its position. Once the mouse button is released a dialog box will open asking for parameters to be provided (Figure 5). In the case of the Dim-Vertical element the following data is required:

- Nero Device Number: The device number of the Nero device you wish to control, this can be found in the settings tab of the device properties panel in the Nero online manager (see Figure 6)
- Nero Dimmer Name: The name of the Nero dimmer device you wish to control (should correspond to the name associated in the Nero configuration)

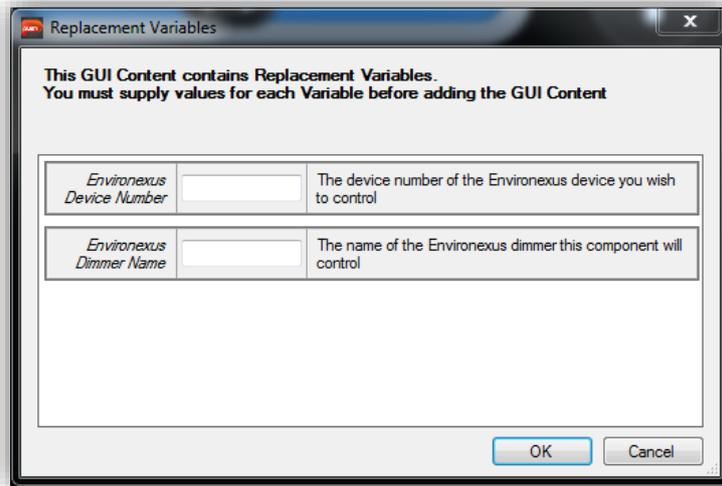


Figure 5 - GUI Content parameter dialog box

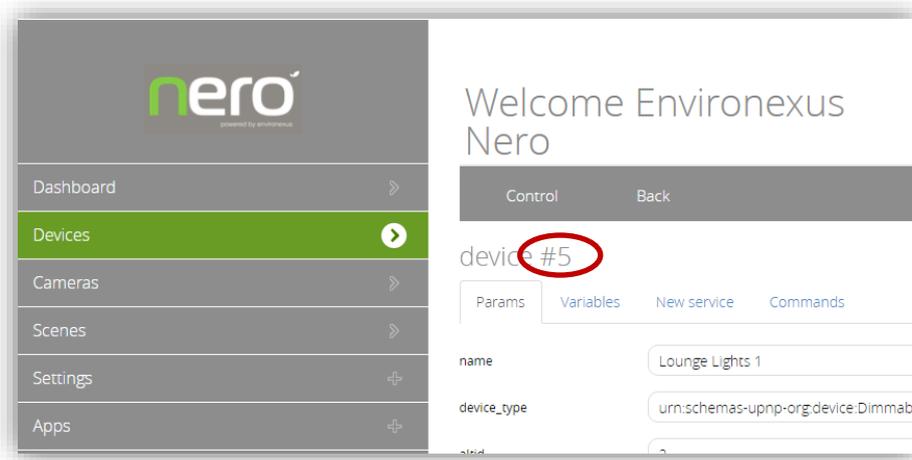


Figure 6 - Highlighting the device number required to integrate with Push, accessible under Advanced tab of device properties

Step 4: Configuring the NERO Module

Local Control

To successfully connect and control the Nero system you need to enter the IP address and port number address of the unit. To do so complete the following steps:

- Open the properties of the Nero script device, by right clicking on the Nero script device and selecting 'Properties'

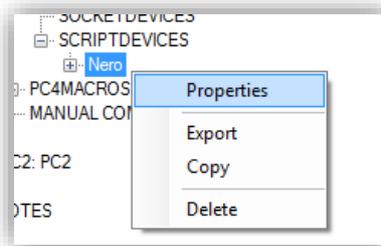


Figure 7 - Properties of the Nero script device

- Select User Settings Tab and enter the details into the following fields:
 - IP: the IP address of the Nero bridge surrounded by double quotation marks
 - E.g. "192.168.1.30"
 - Port: the port number to connect to the bridge, which the default is 3480

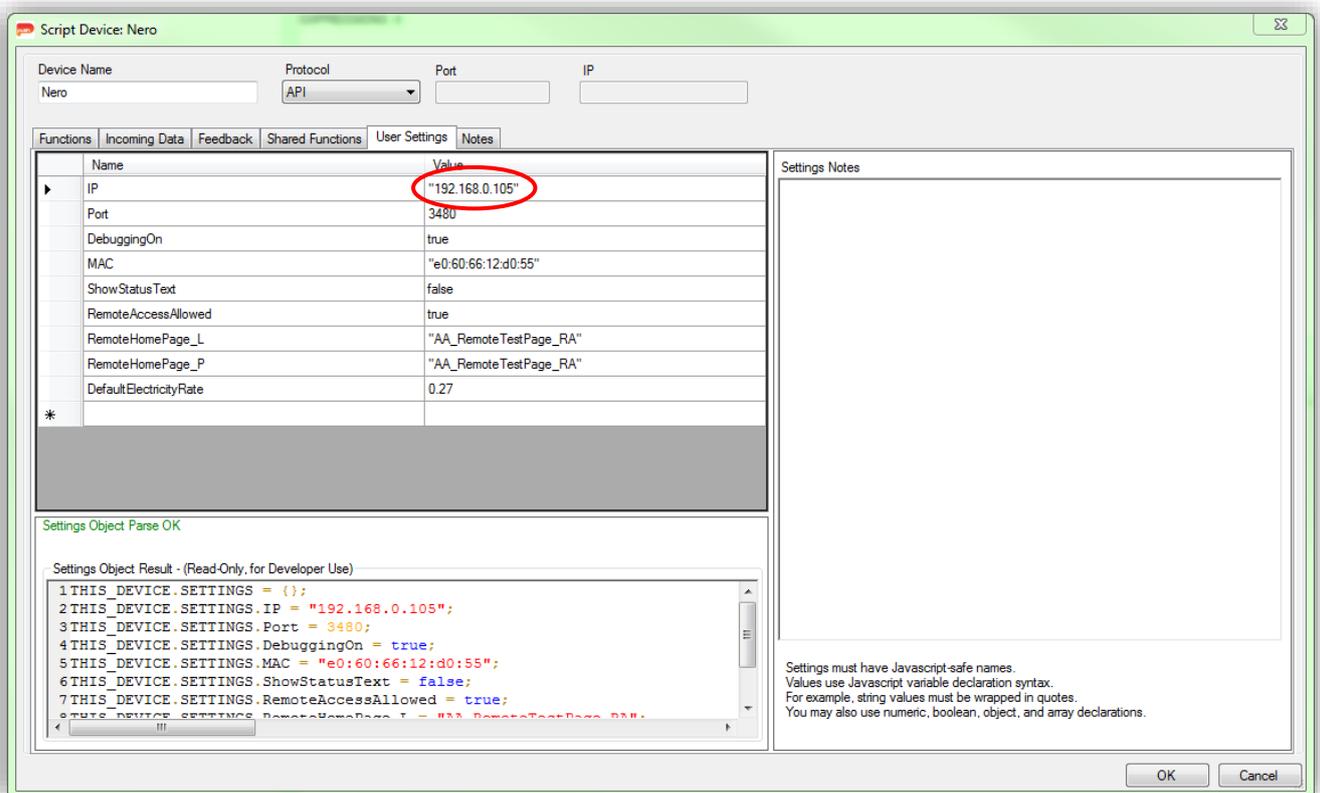


Figure 8 - User settings demonstrating IP and Port settings

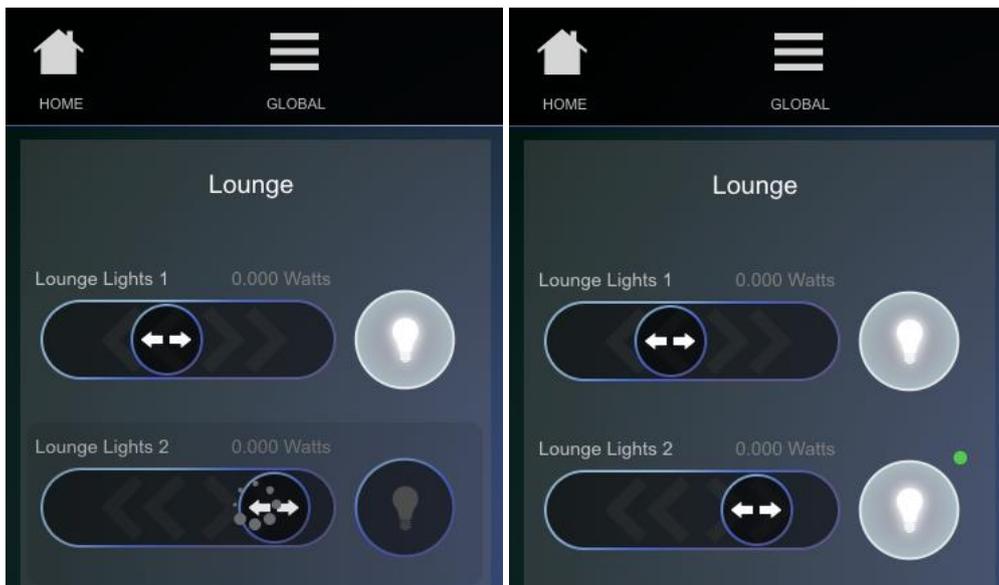
Remote Control

The NERO module allows users to access their system remotely through the Push application. When accessing the system remotely users are presented with a login dialog box that asks for a username and password (see below). The credentials used to login can be any users that have been setup to access the system within the NERO online commissioning tool (reference NERO documentation at environexus.com.au for information on setting up user accounts).



The module, after remote access has been detected, will automatically change pages to the RemoteHomePage_L (if app is being accessed in landscape orientation) or RemoteHomePage_P (if being accessed in portrait orientation). The functionality exposed to them when accessing their system remotely is fully customisable based on the elements included in the remote home page and pages that can be navigated to from the base home page.

When controlling the NERO system remotely two new features have been implemented to provide extra information to users of the system, a loading overlay will be presented when an action is being processed by the cloud/controller and a status indicator is shown to indicate whether the action was successful (green) or if there was an error (red). See image below, which demonstrates the new status features.



The settings that need to be configured within user settings to allow remote access are as follows:

1. Enter the MAC address of the controller to be accessed remotely surrounded by quotation marks and using ':' as a separator between each octet against the MAC variable, e.g. "e0:60:66:12:d0:55"

MAC	"e0:60:66:12:d0:55"
-----	---------------------

2. Set the RemoteAccessAllowed variable to true

RemoteAccessAllowed	true
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3. Enter the name(s) of the remote home page(s) surrounded by quotation marks, note you only need to enter one page name if your interface has been designed as one orientation only, i.e. only RemoteHomePage_L needs to be entered if you have a landscape only interface. If you are using a phone interface only enter a page name against RemoteHomePage_P.

RemoteAccessAllowed	true
RemoteHomePage_L	"AA_RemoteTestPage_RA"
RemoteHomePage_P	"AA_RemoteTestPage_RA"

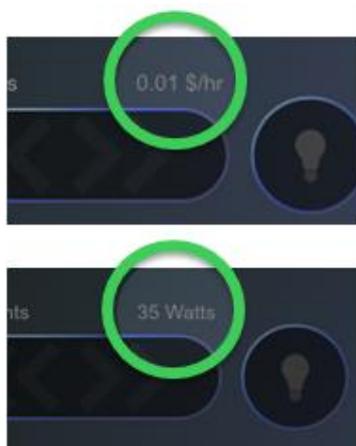
NOTE: that all pages to be accessed remotely require "_RA" (abbreviation of Remotely Accessible) to be appended to the page name, and should not be linked to by any pages within the regular Push interface, i.e. the remote interface pages should be treated as a separate interface. For example there is a local control page for "Lounge_Lights", if you wish this page to be accessed remotely it should be copied and the name set to "Lounge_Lights_RA". The remote access home page should also have "_RA" appended to the file name.

Energy Monitoring

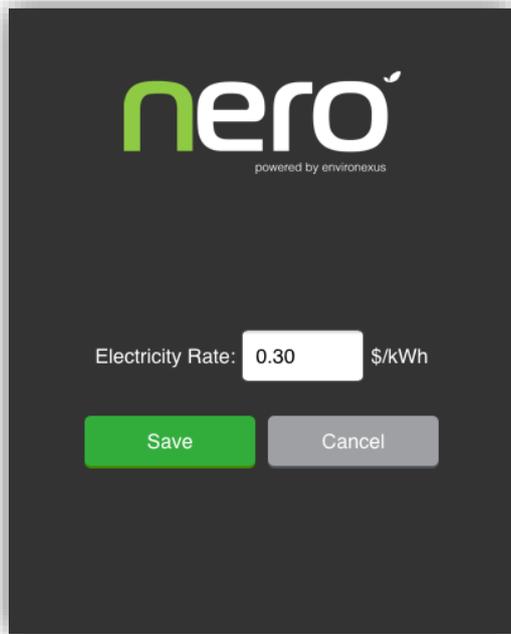
There are three types of energy monitoring values available for use within the NERO module, and they are accessible using the feedback ID formats described below:

1. Device Energy (Watts) - ENVIROINSTANCE_0_ENERGY_[DEVICE_NUM], where device number is replaced with the number of the device you wish to display e.g. for device #4 the feedback ID to use is: ENVIROINSTANCE_0_ENERGY_4
2. Device Energy (\$/hr) - ENVIROINSTANCE_0_ENERGY_COST_[DEVICE_NUM], where device number is replaced with the number of the device you wish to display e.g. for device #4 the feedback ID to use is: ENVIROINSTANCE_0_ENERGY_COST_4
3. Total Energy (Watts) – Provides the total energy consumption calculated by the addition of all device energy values contained within the system, and displayed using the following feedback ID: ENVIROINSTANCE_0_TOTAL_ENERGY
4. Total Energy (\$/hr) - Provides the total energy consumption calculated by the addition of all device energy values contained within the system, and displayed using the following feedback ID: ENVIROINSTANCE_0_TOTAL_ENERGY_COST

All feedback labels can be toggled between Watts and \$/hr by touching the label within the interface. The \$/hr value is calculated using a user definable tariff value, which uses the default specified within user settings at the time of install (currently set to 0.27). NOTE: This value is only an estimate as some homes have on-peak/off-peak/shoulder tariffs at different times throughout the day.



The tariff used for the calculation can be changed at any time by the user by long-pressing on any of the energy labels, which will cause the tariff dialog box to be displayed (see below).



To change the tariff value, enter a numerical value into the provided field, and press save to save and close the dialog box. If you wish to only view, or cancel the changes you have made touch on the cancel button.

Example Energy Value Interface Elements



Integrating Multiple Bridges

On occasion you may be required to program a job with multiple Nero bridges on the network. To integrate multiple bridges ensure that you setup any additional bridges as slaves to a master bridge, and make sure that the settings of the script device reference the details of the master bridge. Refer to documentation available at environexus.com.au on how to setup a project correctly with multiple bridges.