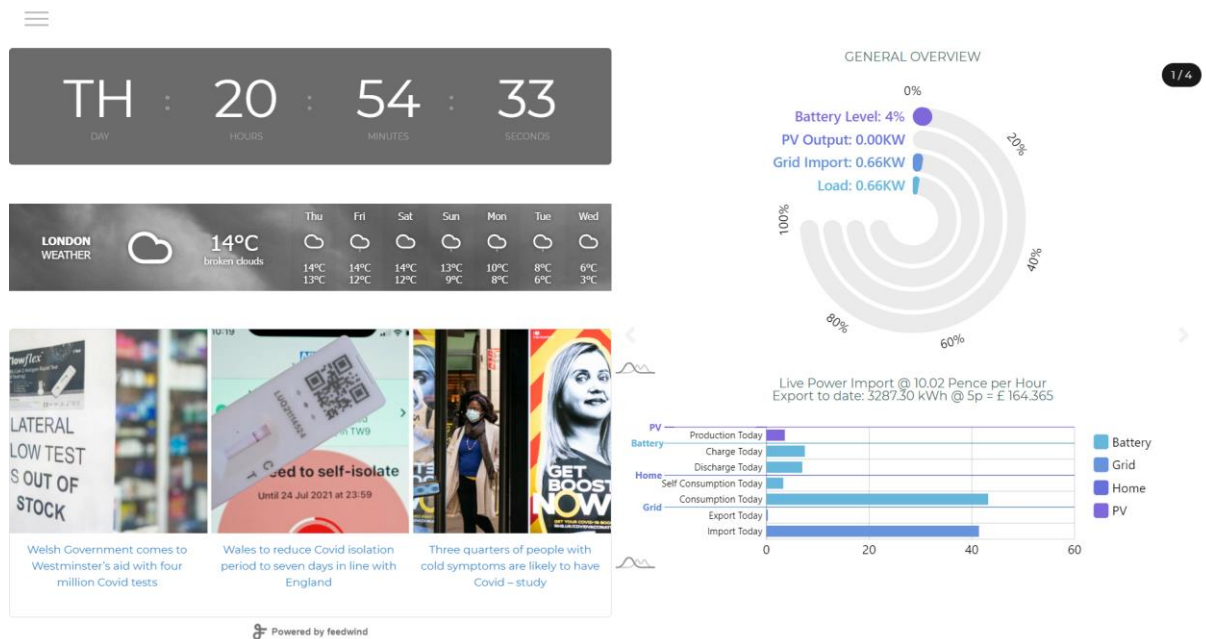


Givenergy Local Dashboard Readme



Description: This is a custom dashboard for the Givenergy API/GivTCP which outputs data in a less “busy” format and adds some extra data such as available system power, grid capacity etc...

Prerequisites:

Windows (for Powershell Script to run)

Notepad++ (Recommended to edit settings/html files)

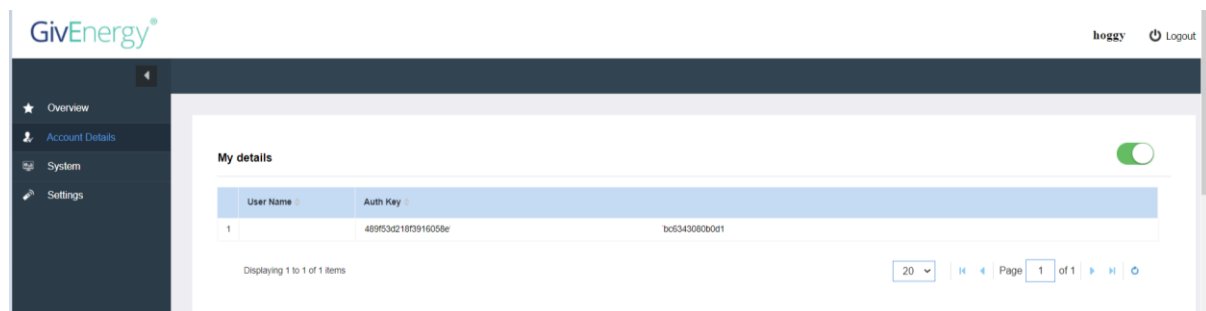
Bind **old** Givenergy API Key to **New style** Battery API (If you have never used the new style API, there is a folder named “Setup API Keys” to help link this key to the new API for you comprising of:

Bind New Key (Edit this file in notepad with your Portal API Key from the OLD portal below & then run file to bind new style API Key ready for the dashboard – should only need to be done once)

Delete Key (Deletes previous keys but you need to edit the file with the key to tell it which one)

Find Bound Keys (Edit this file with your Portal API key from the old Portal & it will return previously bound keys)

The old API Key can be found in: old portal > Account details > “Toggle” button in top right > “Auth Key” as below. Copy & use this key.



Installation

Note: The data collector is in Powershell so is designed to run in a Windows environment interfacing to either the Givenergy API or GivTCP. The page itself is HTML/Javascript so should run on most devices but if you are running the page on another device the data output from the Powershell script must point to the “Data” directory of the webpage.

1: Extract the folder to a directory of your choice

2: Open Settings Folder > Edit “Dashboard_Settings.JS” (right click > open with Notepad/Notepad++)

This file basically sets up the scaling of the graphs/icons to your setup (such as max PV installed, Inverter capacity etc) The items should be self-explanatory as below – save file when you are done:

```
Dashboard_Settings.js - Notepad
File Edit Format View Help
////////////////////////////////////
//These are purely visual to set the graph scaling limits i.e 0% to 100%//

//Inverter Rating (in KW)
var MaxCapacity = 5.2;

//Max House Import Capacity in Kw (e.g 230V x 80A Fuse = 18.4KW)
var maxImport = 18.4;

//Electricity Import Price in pence per KW
var importPrice = 15.18;

//Max Export Capacity (if limited by DNO) or Inverter Max Export Capacity (in KW) e.g 3.8 or 5.2....
var maxExport = 5.2;

//Electricity Export Price in pence per KW
var exportPrice = 5;

//Max output of PV installed in KW (remember inverter clipping etc...)
var maxPV = 5.2;

////////////////////////////////////
//***End Of User Variables***////////////////////////////////////
```

3: Open Settings Folder > Edit “Powershell_Settings.ps1” (right click > edit should open in Powershell BUT you can also edit in notepad just fine) – As above this should be self-explanatory but you will again need the **OLD PORTAL API** key here. Further note: this is the point you can setup some trigger points – don’t worry these won’t actually trigger anything other than on the webpage & dummy scripts – there is a separate “Triggers” folder where you can build your own scripts should you wish. It does log every time one is triggered in this folder however for reference.

```
Windows PowerShell ISE
File Edit View Tools Debug Add-ons Help
Powershell_Settings.ps1 X
1 #####User details here####
2
3 #Givenergy OLD Portal API Key Goes Below between " "
4 $GivenergyPortalAPI = "489F53d218f3916058ebcf101a1234567890840985097290750298502985905"
5
6 #Battery Max Power Rate (e.g 2600W or 3000W)
7 $BattRate = 2600
8
9
10
11 ##Inverter Max Power (5kw, 3kw or other) in Watts
12 $InvMax = 5000
13
14
15 ##Excess Energy Power Trigger Level (If system Capacity is above X Watts set output to true)
16 $TriggerPoint1 = 3000
17
18
19 ##Grid/Load Shedding Trigger Level (If Grid import is above X Watts set output to true)
20 $TriggerPoint2 = 17500
21
22
23 ##Sets Refresh Rate for Powershell Script (in seconds)
24 ##Recommend you don't go lower than 120sec as you'll get rate limited/ip banned
25 $refresh = 120
26
27
28
29 #####Do Not Change anything below this line####
30 #####
```

3: Test the script > Main Folder > “Givenergy_Dashboard.ps1” > Right Click > run with Powershell.

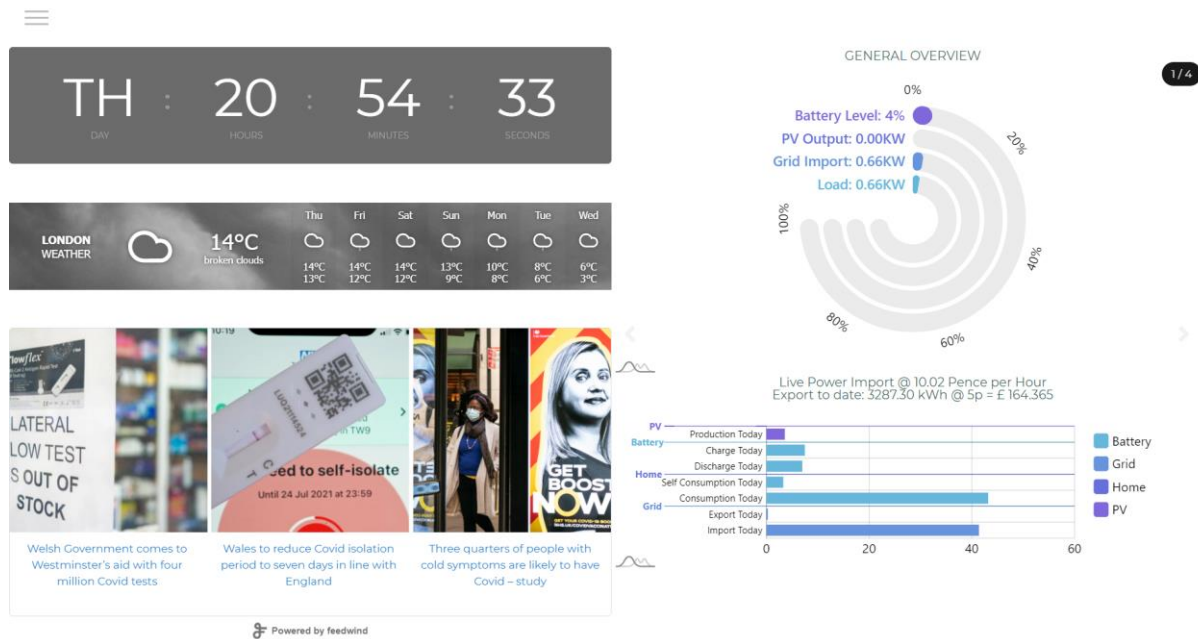
You should see the below:

```
Windows PowerShell
Givenergy Bound API Key is:
k03n1xM
Data Saved to: Plant_Data.js/json
Data Saved to: Chart_Today.json
Current Battery Discharge Power (%) is: 100
Current Battery Charge Power (%) is: 100
Battery is: Idle

State of Charge: 4 %
PV Output is: 0.00 W
System Load is: 956 W
Battery Load is: 0.00 W
PV & Battery Max Available is: 0.00 W
PV & Battery less any loads already being covered by battery: 0.00 W
System Remaining Available Capacity = 0 W
Grid = -960.00 W
Trigger Target Point Met: false
Load Shedding Trigger Met: false
Inverter is at Max Capacity: false
Sleeping for 120 Sec before refresh
```

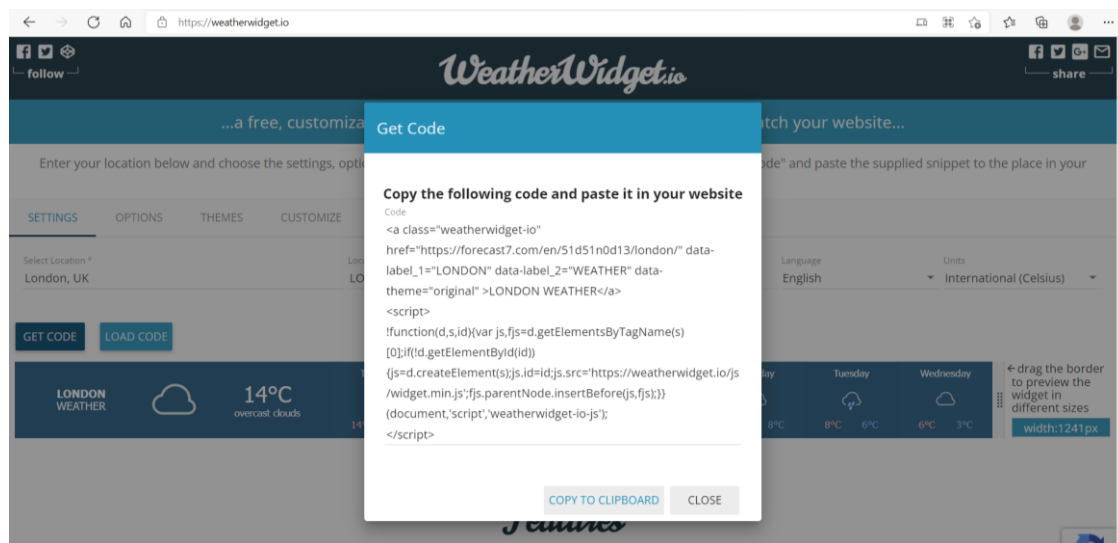
If you get a lot of red text or errors – check your portal API Key is correct and that you have bound old & new API keys as part of the pre-requisite steps.

4: All looking good? Great – open index.html & you should see the default page populated with data from the script like so:



All still good? Right now to make this a bit more personal with the weather. This is a little more complex than other steps and is where the use of Notepad++ is recommended (free download via Google)

5: **Weather** is a widget from [WeatherWidget.io](https://weatherwidget.io) : go there and input your location, change any settings/appearance etc you like, then click “get Code” then copy to clipboard.



6: Now it's time to remove my weather and put yours in. Right click “index.html” (the main dashboard page) and edit in Notepad++. Scroll down to around line 142 where you will see the below. Replace the Section in Yellow with the code you now have from WeatherwidgetIO.

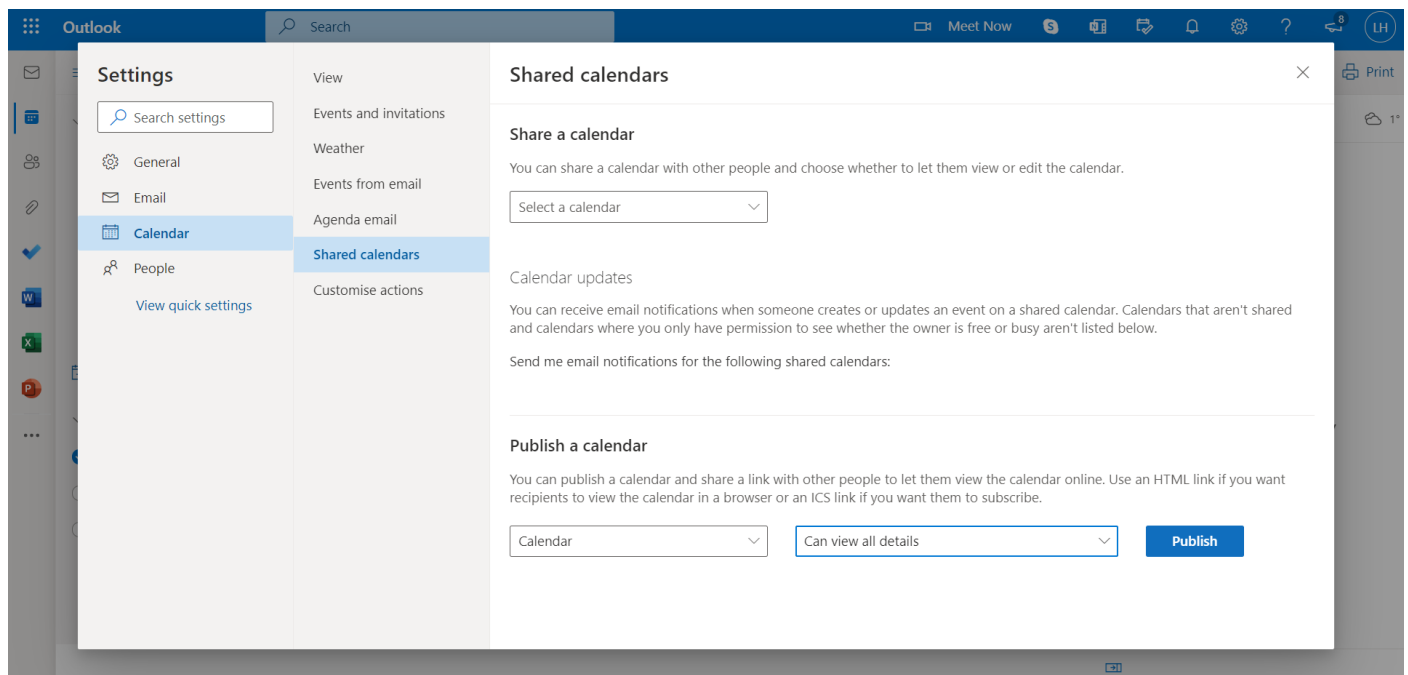
```
141 <!--Loads Weather Widget from https://weatherwidget.io/ Change as you need to your location -->
142
143 <a class="weatherwidget-io" href="https://forecast7.com/en/51d51n0d13/london/" data-label_1="LONDON" data-label_2="WEATHER" data-icons="Climacons Animated" data-theme="
144 "weather_one" >LONDON WEATHER</a>
145 <script>
146 !function(d,s,id){var js,fjs=d.getElementsByTagName(s)[0];if(!d.getElementById(id)){js=d.createElement(s);js.id=id;js.src="https://weatherwidget.io/js/widget.min.js";
147 fjs.parentNode.insertBefore(js,fjs);}(document,'script','weatherwidget-io-js');
148 </script>
149
150 <!--End of Weather Widget from https://weatherwidget.io/ -->
```

7: Save & open the page again to make sure the changes have taken & nothing else is broken. (remember you can always redownload the files again and overwrite individual files if you break anything).

8: Calendar

This is changed by editing the “Calendar.html” file. I personally have set this up as a family Outlook calendar so everyone can add items to it from their phones and it auto updates on this screen so everyone knows what’s going on. For Outlook, to share a calendar is done as follows:

Login to Outlook > Calendar > Settings (Cog top right) > View All Outlook Settings > Shared Calendars > Select Calendar & detail level > Publish > Copy the HTML Link it provides.



Then copy this html link into the below section of “Calendar.html” by editing in Notepad++.

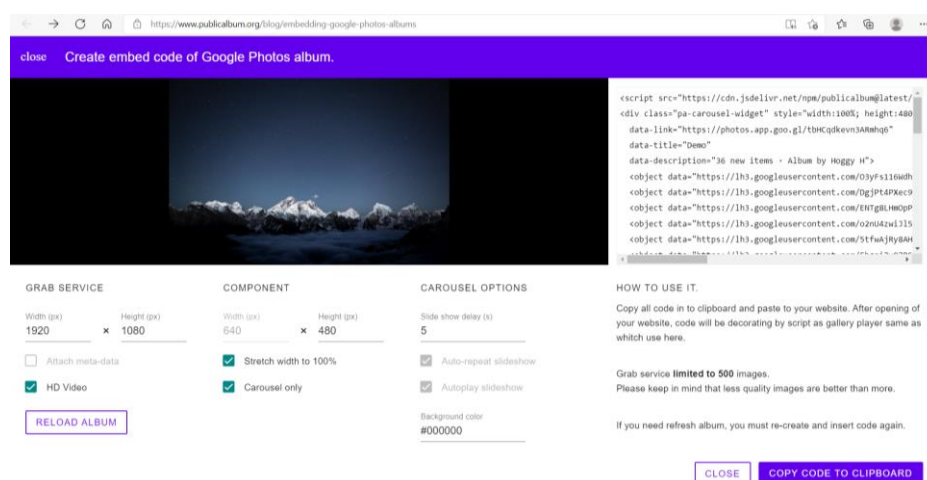
Replacing only the link shown in yellow below on line 45. (Make sure the link remains inside the inverted commas & you don’t delete the entire iframe itself.)

```
41 <!-- Outlook Calendar Here: Change link after "src="https://outlook.live.com/..... to your own public calendar url-->
42
43
44
45 <iframe src="https://outlook.live.com/owa/calendar/00000000-0000-0000-000000000000/8943c96f-643c-44c6-8c71-319c316dce3/cid-496409A258B884C8/index.html" frameborder="0"
46 style="overflow:hidden;height:100%;width:100%;padding-left: 0%" height="100%" width="100%" title="Calendar"></iframe>
47 <!-- Outlook Calendar Here -->
```

9: Digital Picture Frame (Google Photos)

There is a section for Photos, by default this is just some random images. You can change this to your own collection by uploading them to Google Photos and then following the instructions here: <https://www.publicalbum.org/blog/embedding-google-photos-albums> to create an “Embed Code” – You will ultimately end up with a page like the below:

Tip: I find selecting Carousel Only & Stretch 100% work best but your screen size may differ.



Copy Code to Clipboard & then as before, edit “Photos.html” in Notepad++ replacing everything between lines 41 & 86 with the new code above. Tip: try changing the copied line to read “style=“width:100%; height:100%; display:none;” if the photos drop off the screen!

That should be everything. Have fun & hopefully I'll add some new bits when I get time.

Other:

What About News? So this is just a feed from the Independent chosen mainly for the fact their feed has Images that aren't a blurry mess. It's semi hardcoded at present but if you really want to change it let me know and I'll see if I can do something.