ENcombi



ECcloud

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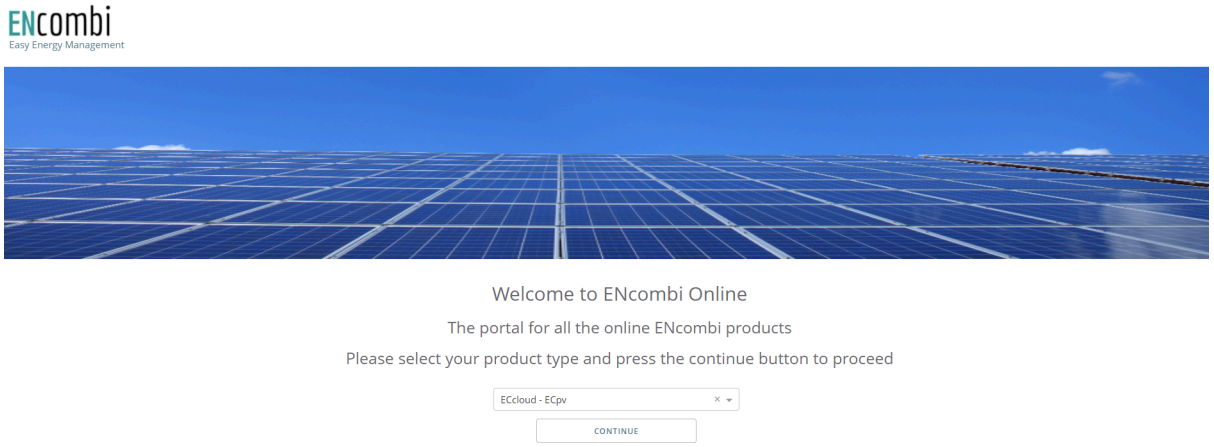
License **58**

Document change log

2019-09-24	First version
2020-01-18	Updated for version 1.06.0
2020-03-30	Updated for version 1.09.0
2020-05-19	Updated for version 1.14.0
2020-06-12	Updated for version 1.17.0
2020-07-09	Updated for version 1.20.0
2021-01-08	Updated for version 1.24.0
2021-02-07	Updated for version 1.25.0
2021-03-11	Updated for version 1.28.0
2021-04-26	Updated for version 1.30.0
2022-01-19	Updated for version 1.36.0
2022-02-07	Updates made about ENcombi Online
2022-02-28	Update made for site history delete
2022-05-20	Update made for FTP
2022-08-02	Update made to executive page
2023-02-13	Added section about Load
2023-03-06	Added DC coupled PV
2023-04-25	Updated Sitepage with status indication and current production from PV and eventually ESS

Introduction

ECcloud is the ENcombi web app for live and historical data visualization and analysis of your ENcombi controlled plants. ECcloud is part of ENcombi Online and is found at **www.encombi.online**. From here you will be guided to the actual ECcloud portal associated with the specific ENcombi product that you are able to monitor. Just select the cloud product type in the drop down menu and click the Continue button.



ECcloud runs on any platform and in any web browser.
Register your ENcombi product and you get the first 90 days free of charge. You can set yourself, your team and any outside partner as a user and create your own passwords. If you have access to multiple sites, you will automatically have access to them all after logging in. With the ENcombi **ECcloud** you will always have an overview of your plants performance from your PC or mobile device.

ECcloud features

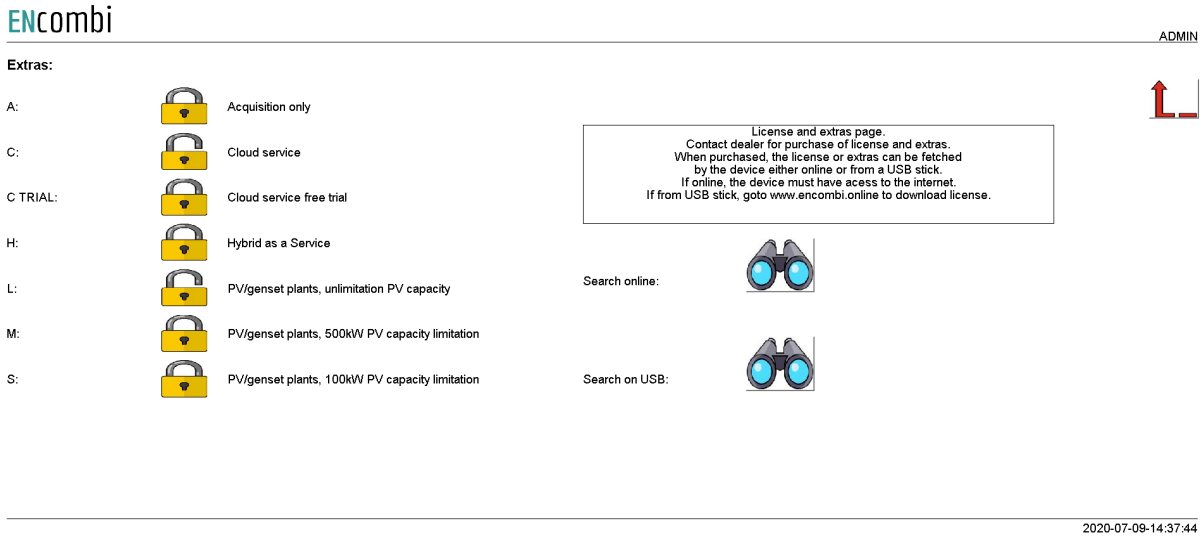
- Easy and straightforward user interface and menu system
- Use it with almost any brand of PV inverter, power meter and genset controller.
- Past 24 hours graphs of production, references and measures from inverters, power meters, gensets, sensors etc.
- Past 30-days, 12 month & 10-years analyses of energy generated and curtailed, revenues, savings etc.
- Automatically generated reports via email.
- Alarm & events notifications via email.
- Automatic forward of data to up to two FTP servers.
- Manual download of data.
- 5 days ahead weather report from the site location.

ECcloud is plug and play monitoring meaning that it automatically adapts to a given site in terms of numbers and vendors of genset controllers, power meters, inverters, sensors etc.

The data that is visualized in ECcloud differs from product to product but the overall layout, the various features and the way of navigating etc. are common for all of them. This manual uses the ECpv portal part of ECcloud as a basis but the manual applies for them all.

Requirements

Every ECcombi controller comes with a 90 days free of charge ECcloud trial period included. Hereafter the C-extra “Cloud Service” software option needs to be present in the controller. The C-extra “Cloud Service” comes with a yearly fee. If the C-extra is not included initially in an ECpv, upgrading it post delivery can be done easily.



The controller needs to have a connection to the internet in order to feed data to ECcloud.

For SW upgrades please contact ENcombi on sales@encombi.com.

Account structure

Each controller needs to be registered individually in ECcloud.
You can only become a user in ECcloud either by registering a controller or by being invited by an administrator of a site (controller). The user registering a controller in ECcloud automatically becomes an administrator of that site (controller).
An administrator of a site (controller) can grant an infinite number of users access to view the same site (controller) free of charge. The administrator can assign the users to be either administrators or viewers.

Data set

The data set pushed to ECcloud is the full MySQL data set described in the MySQL documentation on ENcombi website:
http://www.encombi.com/products/ecpv/
http://www.encombi.com/products/ecpvh/
http://www.encombi.com/products/ecpvx/

The controller will push data for the configured devices. This means, for example, that if 10 inverters are present for instance, it will only push data for 10 inverters and not the full 32 (16) inverters.

Prior to new site registration

Before a controller can be registered in ECcloud it must have commenced the logging of data. Prior to initiating the actual data logging some identifiers need to set

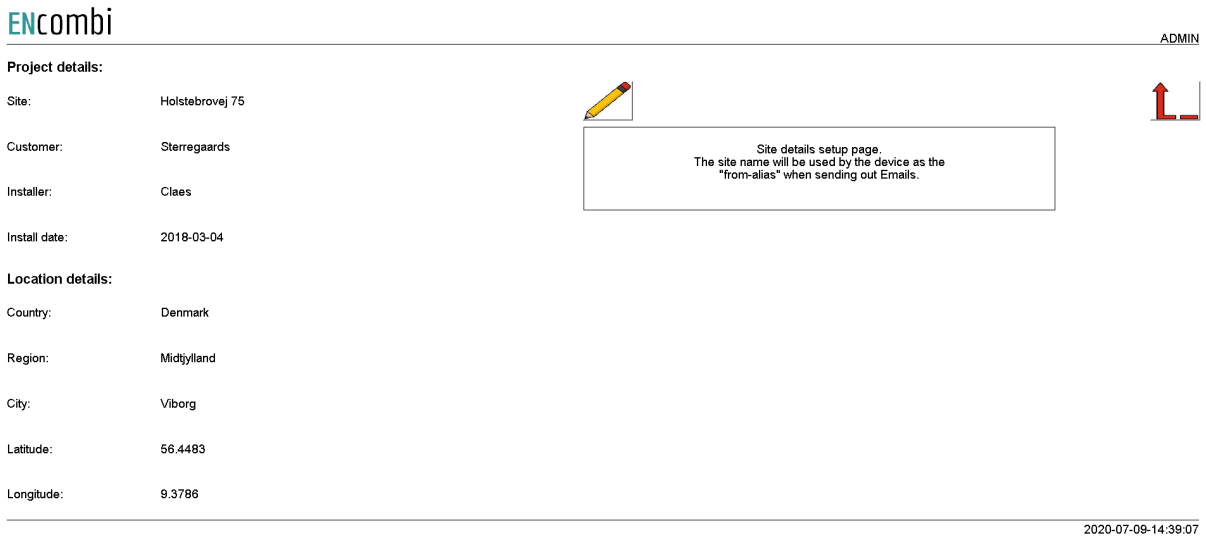
Identifiers

To be able to register a controller some identifiers need to be known. This ensures that only the right full owner can register the controller.

project settings

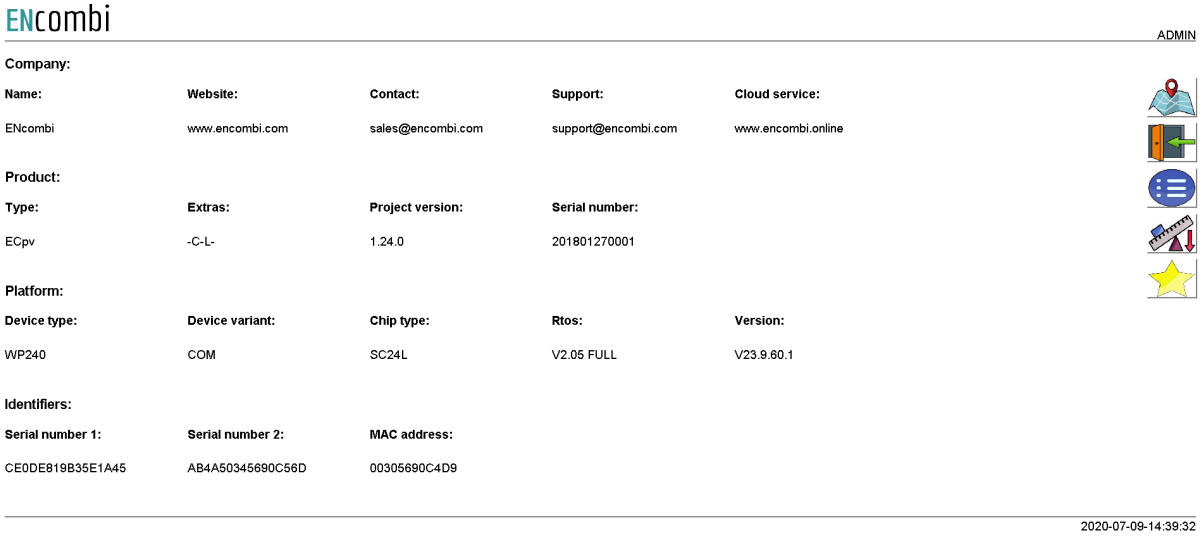
Some of the project settings are used for registration of the controller in ECcloud. These are:

- Site
- Latitude
- Longitude



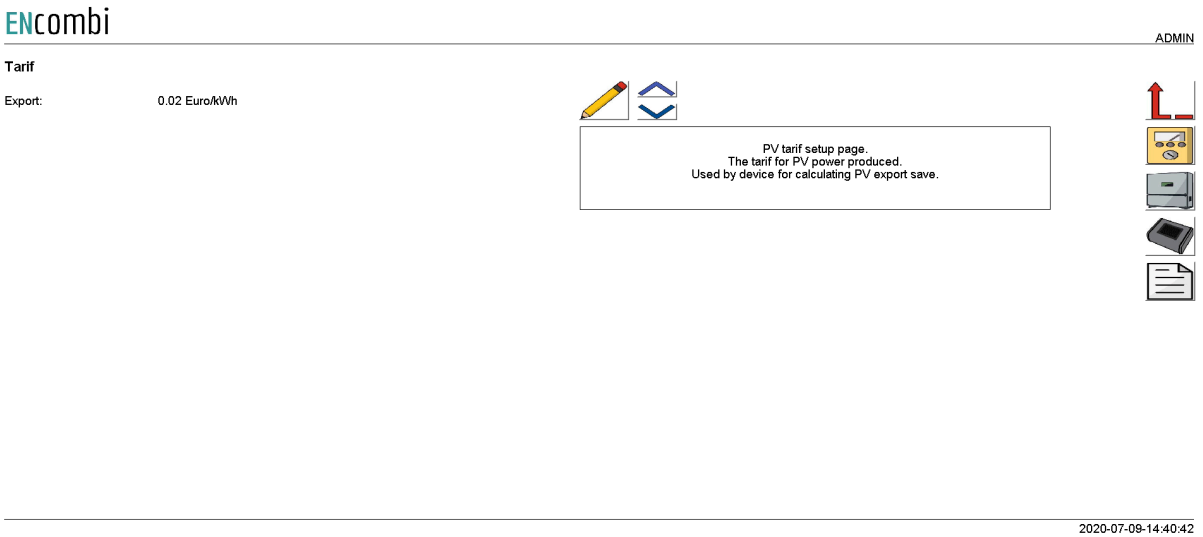
MAC address

Besides the project settings also the MAC address if the ECpv needs to be known when registering a controller in ECcloud.



Tariffs

Various Tariffs can be set up in the controller upon which various financial counters are based. The financial analysis in ECcloud is based on these counters. The tariffs will have to be set up correctly in order to get a valid analysis in ECcloud. Note that the analysis is still to be treated as indicative only.



ENcombi

ADMIN

Tarif

Efficiency:	0.25 liter/kWh
Price:	1.25 Euro/liter
Emission:	2.64 kg/liter



Genset tarif setup page.
Efficiency is used for calculating
fuel volume consumed by the gensets
as well as fuel volume saved by the PV plant.

Price is used for calculating
fuel expense of the fuel volume consumed
by the gensets as well as
for the fuel expense spared by the PV plant.

Emission is used for calculating
the CO2 emission generated fuel volume consumed
by the gensets as well as
for the CO2 emission spared by the PV plant.



2020-07-09-14:41:18

ENcombi

ADMIN

Tarif

Import:	0.08 Euro/kWh
Export:	0.02 Euro/kWh



Mains tarif setup page.

Import is used for calculating
expense for the energy imported
by the utility as well as
for the import savings generated by the PV plant.

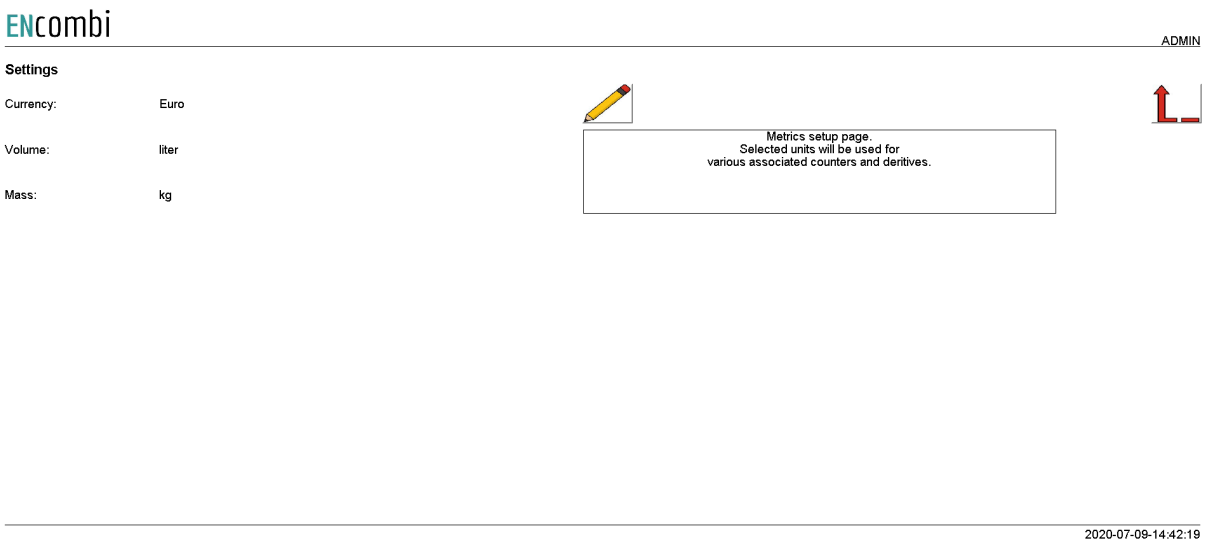
Export is used for calculating
earnings for the energy exported to the utility.



2020-07-09-14:41:57

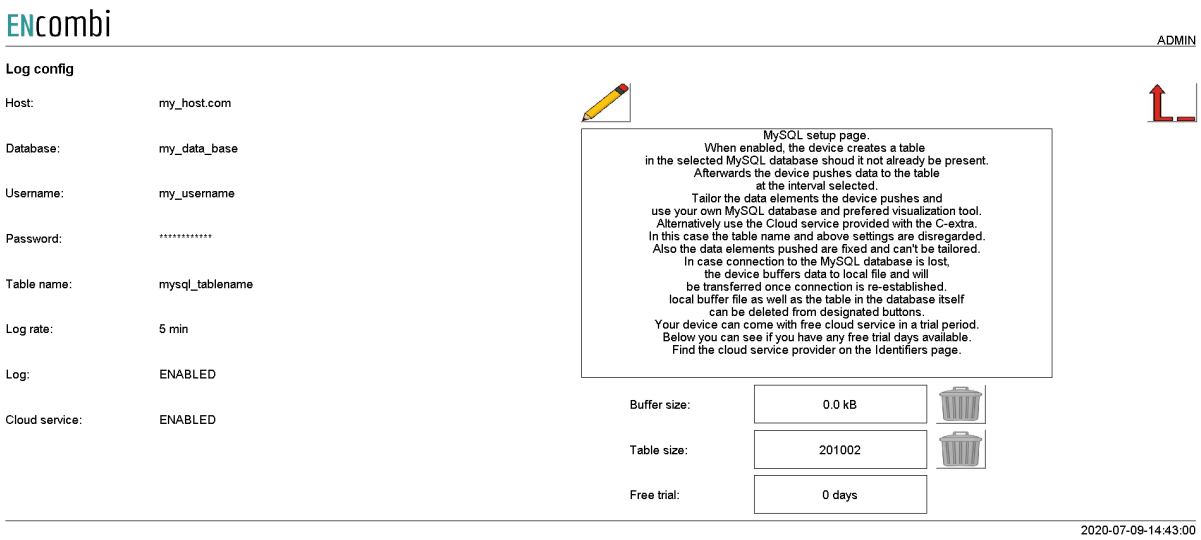
Tariff metrics

The tariff currency and units are configured and will be displayed in the financial analysis in ECcloud accordingly.



Enabling of the data logging

Once the project and tariff settings are made the logging can be enabled.



To enable data logging to ECcloud only the two settings, mentioned below, need to be enabled.

- Log
- Cloud Service

When “Cloud service” is enabled all settings from “Table name” and upwards are ignored. These are relevant when logging data to a 3rd party system only.

Log rate

The time interval with which the data is pushed is per default 5 min with the fastest rate being 1 min. Note that with big data sets (which is equivalent with a setup of many devices), the fast update rates may not be achievable. Lower update rate than 5 min is only intended for testing purposes. For continued logging the rate should be kept at 5 min. Data stored that is older than one year will be trimmed to one hour resolution.

Buffer size

In case ECpv loses connection to the internet it will buffer up the data locally on the SD-card. Once connection is re-established it will empty the buffer to ECcloud. The buffer size is displayed. Under normal operation there is no data buffered and the buffer size will display 0kB. In case a buffer exists, the controller will reduce the log rate to 5 min temporarily until the buffer has been emptied. The buffer is emptied at a rate of approximately 1:8. This means that 24 hours of data logged will take approximately 3 hours to transfer to ECcloud.

Table size

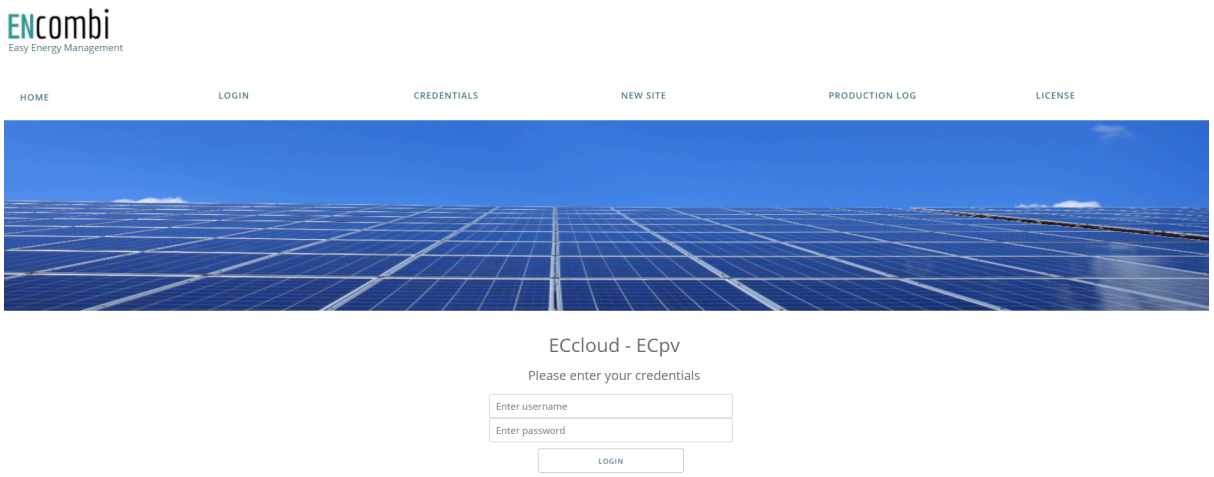
The table size informs about the amount of data stored in ECcloud. If the log rate is 5 min and Table size is 100 there is a data history of 500 minutes stored. Note that this example only applies for the first year of operation as data older than one year will be trimmed to one hour resolution.

Free trial

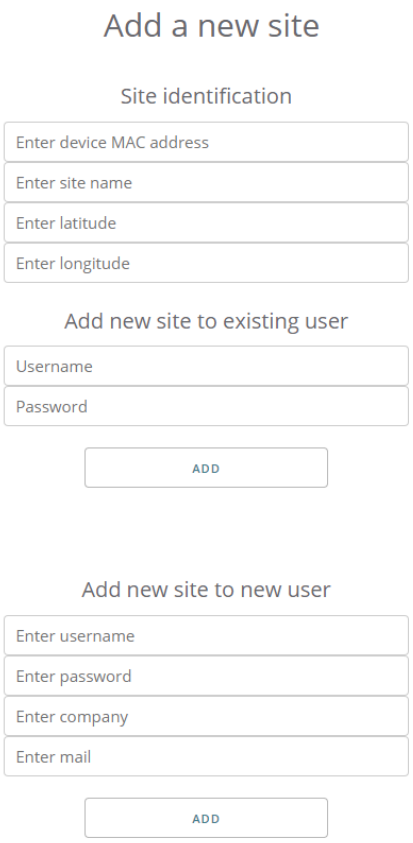
The days left of the free trial period are displayed. The free trial period is counted down only in case that data logging and data service is enabled and the C-extra is not present in the controller.

New site registration

Go to https://www.encombi.online/ and pick your product type (in this case an ECpv) and you are taken to the below page. Note that the registration below is only possible once the Encombi controller has logged the two or more table entries to the cloud storage. The number of o logged table entries can be seen on the controller in the log page.



Select “New Site” on the front page. This will lead to the registration page with the below options.



Site identification

Under site identification you type in the four identifiers described previously.

Existing user

Are you already a user of ECcloud then register the ECpv to your existing account by typing in your credentials and press “ADD”.
Note that if you do not already have access to a ECpv site and if this is the first time you register an ECpv, then you are considered a new user by ECcloud - even though you might have other product types registered already.

New user

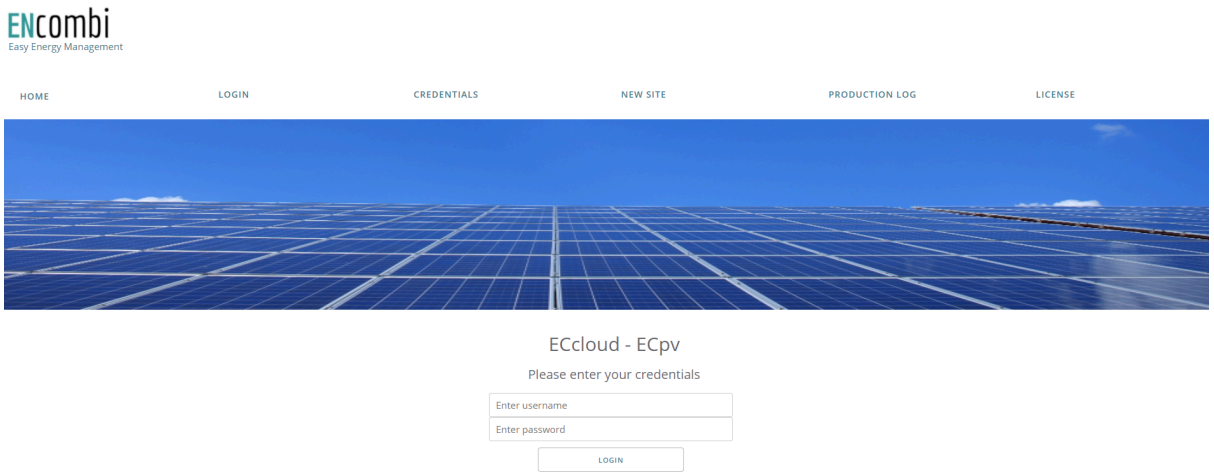
Are you a new user of ECcloud then type in your preferred credentials, company and email and press “ADD”

Successful registration

Upon successful registration a notification will be sent to the registered email address stating that the ECpv has been registered. After receiving the email you can login to ECcloud and view the data from the site.

Login

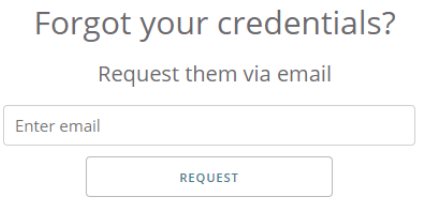
To login to ECcloud go to https://www.encombi.online/ and pick your product type (in this case an ECpv) and you are taken to the below page.



Enter your credentials and press “LOGIN”.

Request your credentials

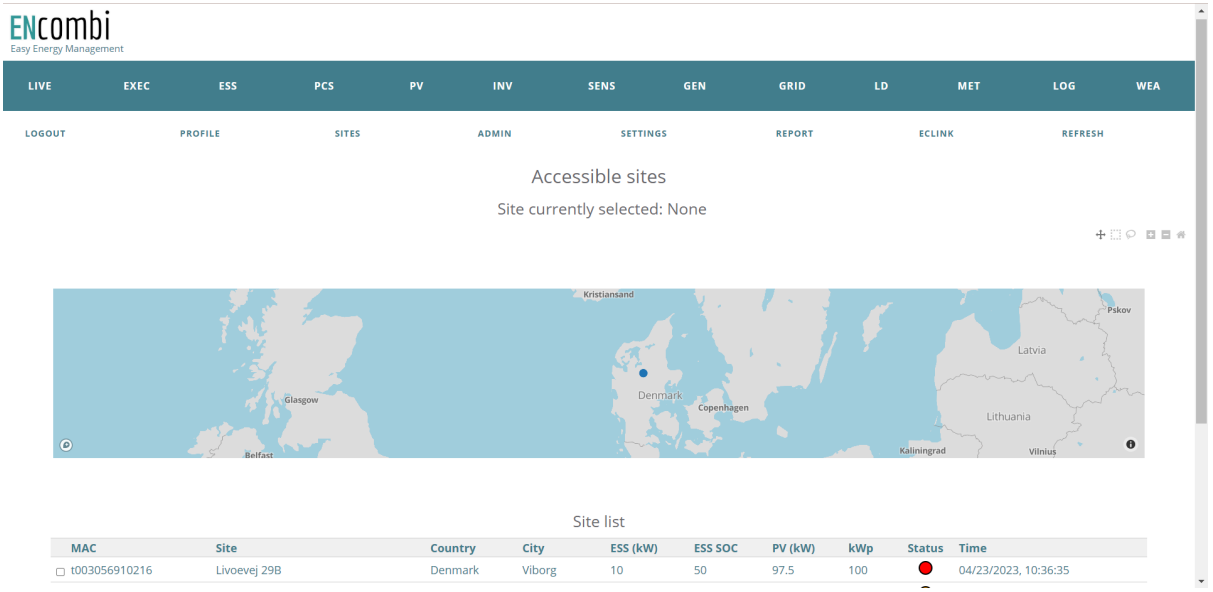
In case you have forgotten your credentials you can request to have them sent to the email address you used when registering. To do so select “Credentials” on the front page. This will lead to the page with the below options.



Type in the email used when registering and press “REQUEST”. You will then receive an email with your credential details.

Sites

Upon successful login you are automatically taken to the Sites page which provides a map and a list of available sites accessible to you.



Select which site you want to monitor either by clicking the map or selecting in the table below. Once a site is selected, you can use the top navigation bar to browse around and analyze the site.

All the pages automatically adapt to the selected site in terms of number and vendor of genset controllers, power meters, inverters and sensors.

Multiple sites can be selected at the same time forming a virtual power plant. In a virtual power plant the data from the sites included are aggregated and displayed as was it in one single site. When viewing a virtual power plant the pages Inverter, Sensor and Meter will not display any data.

The site table contains the current production from PV and, if relevant, ESS. Furthermore, a status of the site is displayed by means of a traffic light icon; green means that everything is ok, yellow means that there is an alarm or warning on the controller and red indicates that the flow of data from the site has stopped.

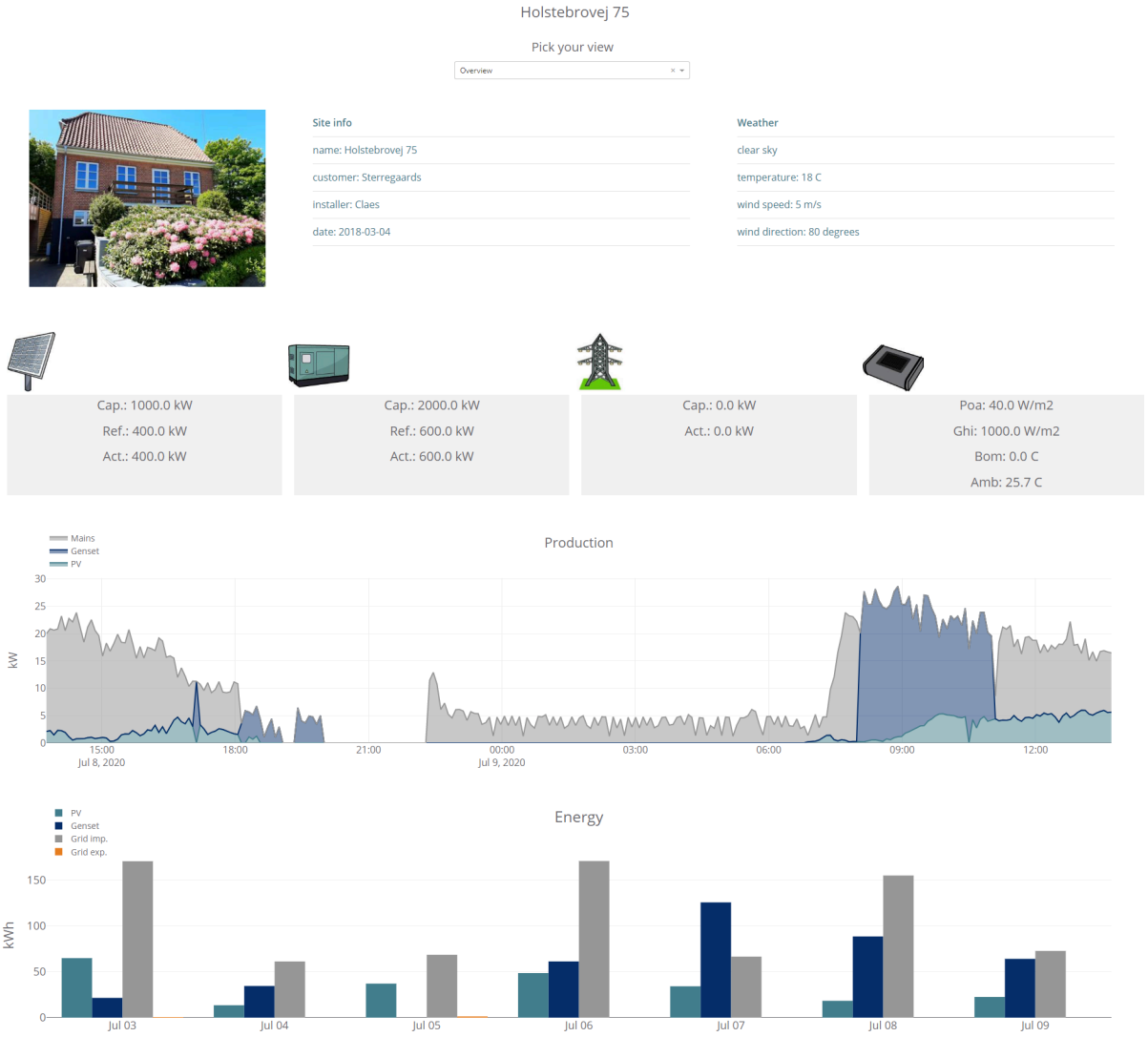
Live page

The live page provides two views:

- Overview.
- Concept SLD.

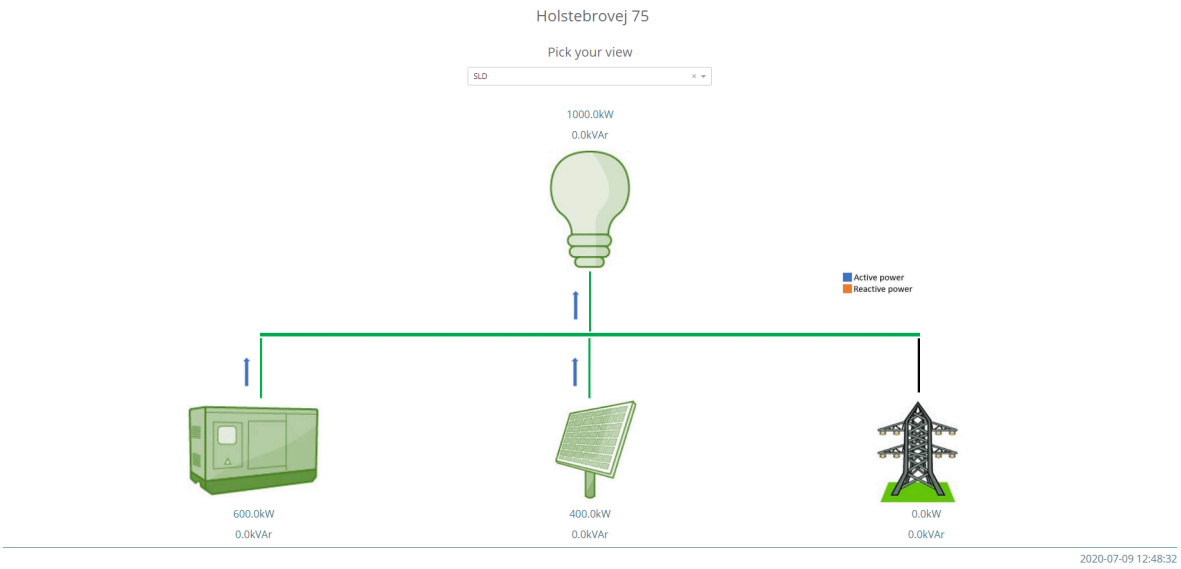
The default view is the “Overview” providing.

- Site photo.
- Weather info from site location.
- Live and past 24 hours power production split between the sources.
- 7 days energy production split between the sources.

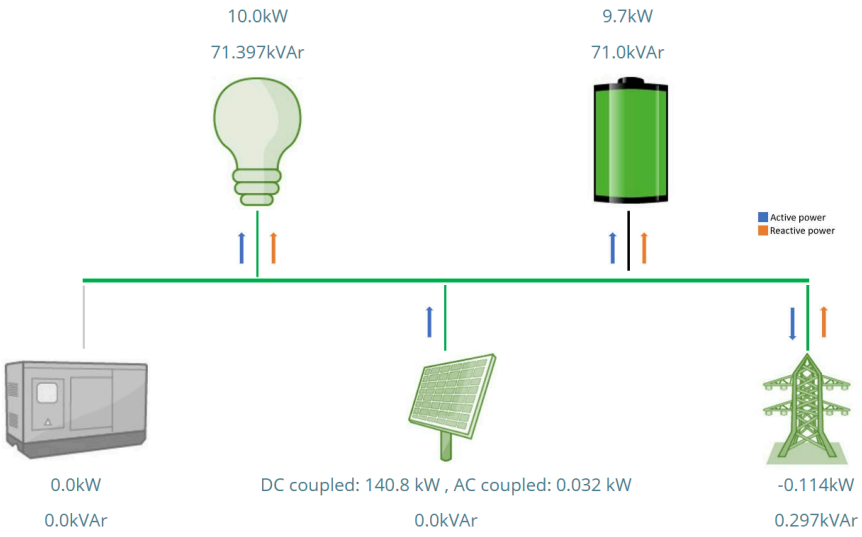


The “Concept SLD” view below is providing the following.

- Live power and reactive production split between the sources.
- status text notifications.

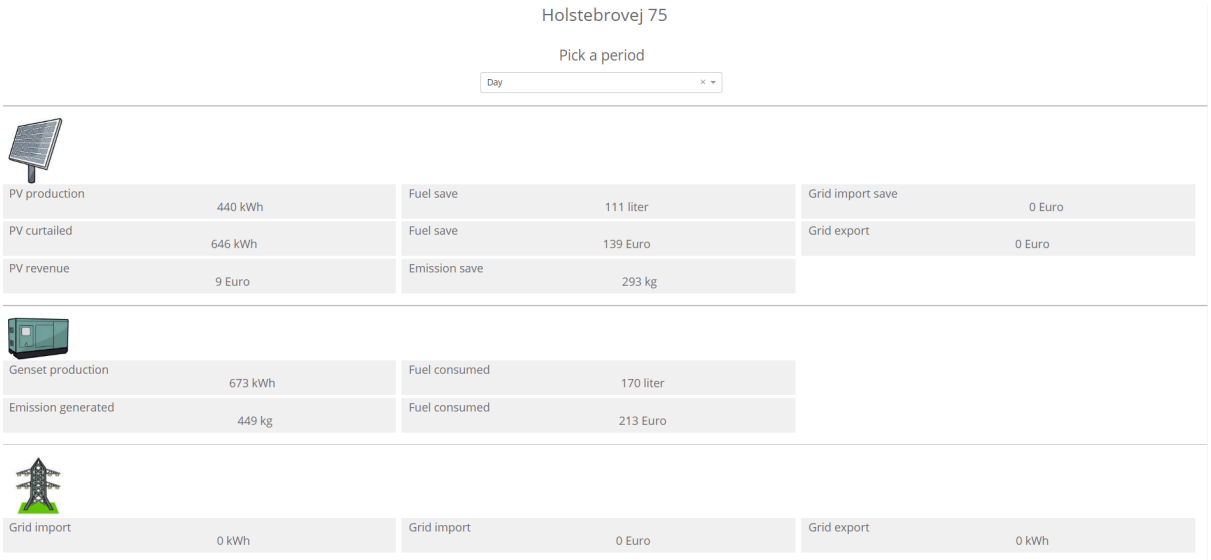


For the ECpvX also a battery icon is shown in the SLD page as shown below.
In some cases the battery is controlling a PV setup independently. In such a situation the PV is said to be DC coupled. Typically sites have AC coupled PV where the ECpvX is controlling the PV directly, but in some cases there is also DC coupled PV which is only partially controlled by the ECpvX as it is the ESS setup that handles such PV power sources.



Executive page

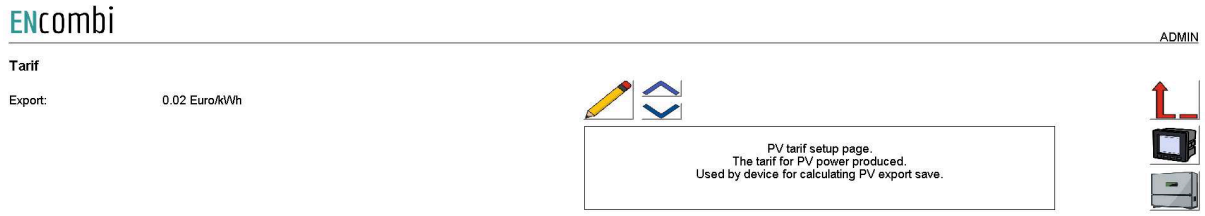
The executive page gives information about site key numbers on a daily, monthly, yearly and total basis.



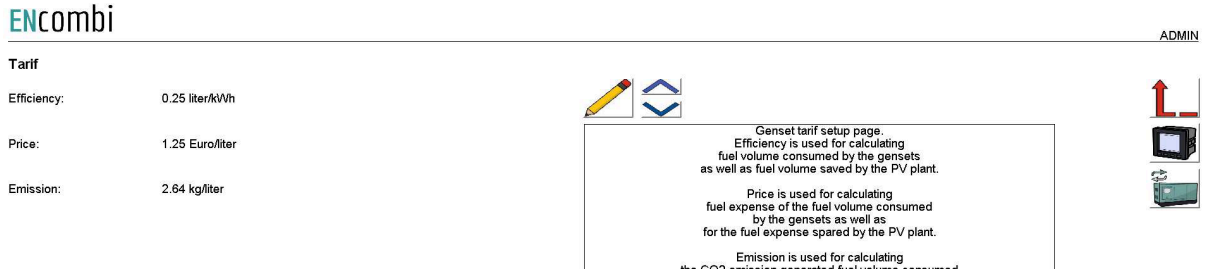
Key numbers and formulas

The key numbers are calculated on the basis of the various Tariffs that are set up in the ECpv controller itself.

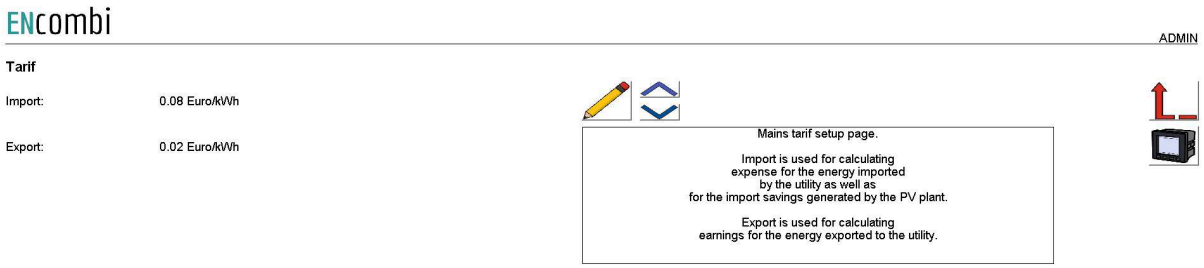
PV production Tariff:



Fuel Tariffs:



Grid import/export Tariffs:



Below is an explanation of how the individual numbers are calculated - in the example below it is for the total production ever generated.



The values in the screenshot above are explained in the following table. The variables in the Calculation column that are given captions, are from the MySQLTable. The values only the ENcombi controller are given in low letters; for example are all tariff values only in the controller.

Value	Calculation	Description
PV production	PV_KWH_TOTAL	Energy produced by the PV devices
PV curtailed	PV_KWH_CUR_TOTAL	Energy lost as a consequence of setting the PV setpoint lower than possible
PV revenue	PV_KWH_TOTAL * pv_export_tariff	Value of the energy produced by the PV devices. Note the taríff is set only in the controller directly.
Fuel save (volume)	PV_FUEL_SAVE_TOTAL = kWh_PV_genset * fuel_efficiency_tariff	Volume of the generator fuel saved by energy production by means of PV devices
Fuel save (value)	PV_FUEL_EXPEN_SAVE_TOTAL = Fuel save [volume] * fuel_price_tariff	Value of the generator fuel saved by energy production by means of PV devices
Emission save	PV_FUEL_EMISS_SAVE_TOTAL = Fuel save [volume] * emission_tariff	Kilo of Co2 saved by energy production by means of PV devices instead of a diesel generator

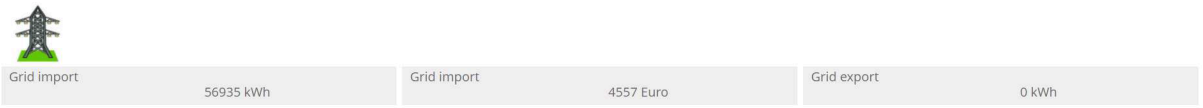
Grid import save (currency)	MAINS_IMP_SAVE_TOTAL = kWh_PV_grid * grid_import_tariff	Value of the energy produced by the PV devices if that energy instead had to be imported from the main grid
Grid export (currency)	PV_EXP_SAVE_TOTAL = kWh_PV_grid_export * grid_export_tariff	Value of the PV generated power exported to the main grid. Note this is based on the assumption that the diesel generator is not exporting to the main grid.
PEN [%]	PV_KWH_TOTAL/LOAD_KWH_ _TOTAL * 100	The percent of the load consumption that was delivered by the PV devices.
PERF [%]	PV_kWh_total/(PV_kWh_available – PV_kWh_curtailed) * 100	The percent of the energy that actually was produced by the PV devices divided by what could have been produced by these devices. If this value is less than 100 it reflects that the PV production for some reason (e.g dust on panels) was lowered.



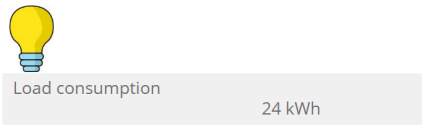
Genset production	0 kWh	Fuel consumed	0 liter
Emission generated	0 kg	Fuel consumed	0 Euro

Value	Calculation	Description
Genset production [kWh]	DG_KWH_TOTAL	The energy production by the diesel generator (genset).
Emission generated [mass]	DG_FUEL_EMISS_CON_TOTAL = Fuel consumed [volume] * emission_tariff	The number of kilo of Co2 produced by the genset.
Fuel consumed [volume]	DG_FUEL_CON_TOTAL = kWh_genset_total * fuel_efficiency_tariff	The volume of fuel consumed by the genset

Fuel consumed [currency]	DG_FUEL_EXPEN_CON_TOTAL = Fuel consumed [volume] * fuel_price_tariff	The value of the fuel consumed by the genset



Value	Calculation	Description
Grid import (kWh)	MAINS_KWH_TOTAL	The energy imported from the main grid
Grid Import (currency)	MAINS_IMP_CON_TOTAL	The value of the energy imported from the main grid
Grid export	MAINS_KWH_EXP_TOTAL	The energy exported to the main grid.



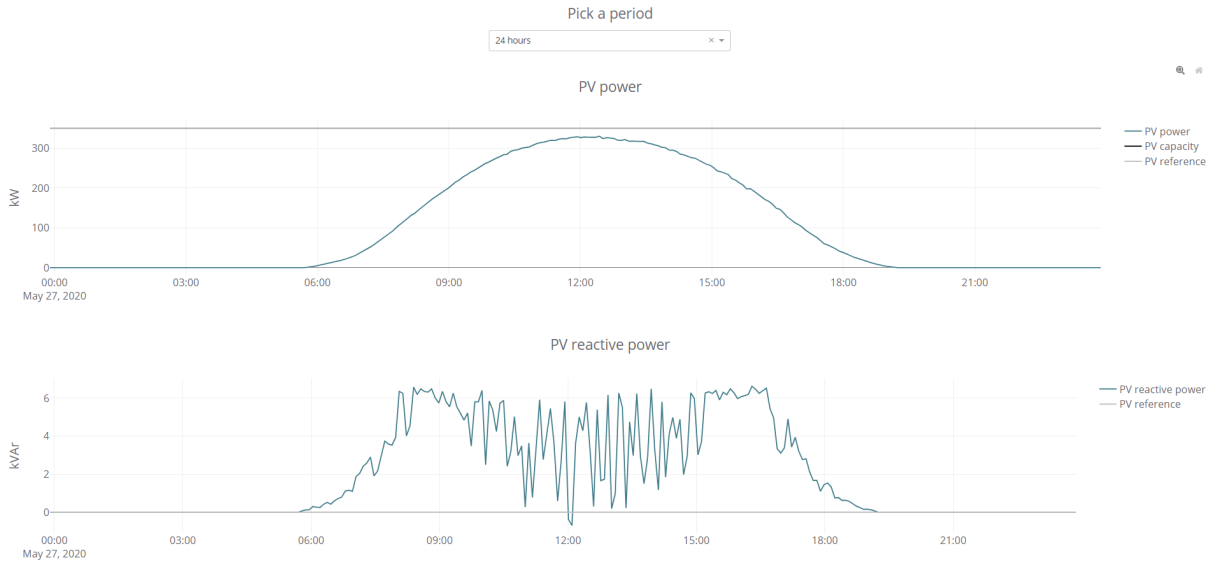
Value	Calculation	Description
Load consumption	LOAD_KWH_TOTAL	The accumulated load consumption is calculated by the controller and uploaded to the cloud as LOAD_KWH_TOTAL. Note that, for example, the active power consumed by the load as function of time in 24 hours is instead calculated as POWER_P_PV_TOTAL+ POWER_P_DG_TOTAL+ POWER_P_MAINS_TOTAL This calculation is used for the graph of P displayed on the Load page. Similar calculation is used for Q.

PV page

The PV page provides the views below:

- 24 hour history of kW, kVar, PV generating capacity, target reference etc.
- 30 day history of revenue, savings, energy produced etc.
- 12 month history of revenue, savings, energy produced etc.
- 10 years history of revenue, savings, energy produced etc.
- This day's history of kW, kVar, PV generating capacity, target reference etc.
- This month's history of revenue, savings, energy produced etc.
- This year's history of revenue, savings, energy produced etc.

Below are a few examples.





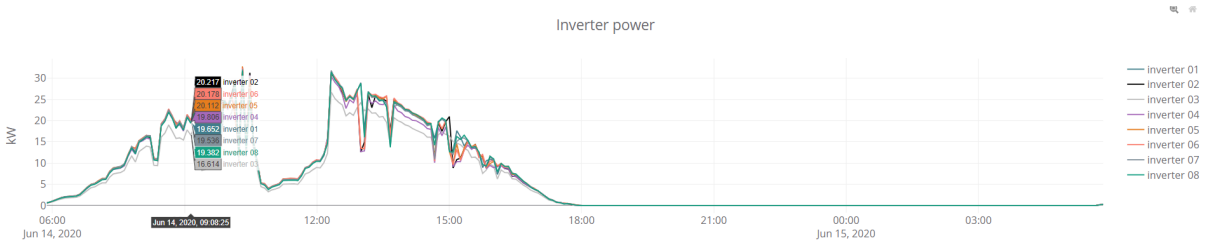
For the ECpvX controller there might be DC coupled PV. In such a situation a battery is directly controlling a PV power source. Additionally there might be AC coupled PV which is PV the ECpvX is controlling directly. The values on the PV page are either a sum of AC and DC coupled PV or given separately - see the following table.

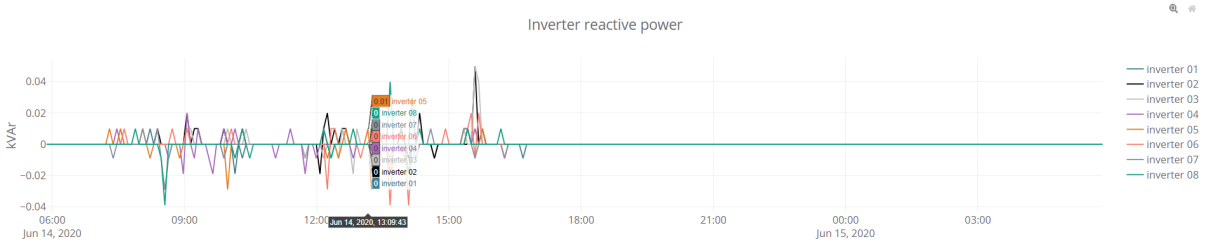
Value in PV page	DC coupled PV is included	AC coupled PV is included
PV generation (energy)	yes	yes
PV curtailed (energy)	no	yes
DC coupled PV (power)	yes	no
PV reference (power)	no	yes
PV power	no	yes
PV capacity (power)	yes	yes
Curtailment active	no	yes
Performance index	no	yes
PV reference (reactive power)	no	yes
PV reactive power	no	yes
PV apparent power	no	yes
PV PF	no	yes

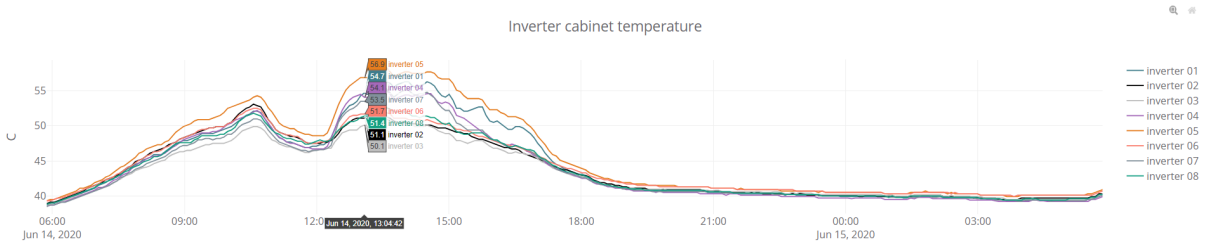
Inverter page

The inverter page provides information about the 24 hour history of inverter key data.
Which data is available depends on the inverter vendor and model.
Consult the Modbus master documentation on ENcombi website for details:
http://www.encombi.com/products/ecpv/
http://www.encombi.com/products/ecpvh/

Below are a few examples.


Inverter power
kW
30
25
20
15
10
5
0
20.217 inverter 02
20.178 inverter 06
20.112 inverter 05
19.936 inverter 04
19.652 inverter 01
19.536 inverter 07
19.382 inverter 08
16.614 inverter 03
06:00
Jun 14, 2020
Jun 14, 2020, 09:08:25
12:00
15:00
18:00
21:00
00:00
Jun 15, 2020
03:00
inverter 01
inverter 02
inverter 03
inverter 04
inverter 05
inverter 06
inverter 07
inverter 08


Inverter reactive power
kVAr
0.04
0.02
0
−0.02
−0.04
0.01 inverter 05
0 inverter 06
0 inverter 07
0 inverter 08
0 inverter 04
0 inverter 03
0 inverter 02
0 inverter 01
06:00
Jun 14, 2020
09:00
12:0
Jun 14, 2020, 13:09:43
15:00
18:00
21:00
00:00
Jun 15, 2020
03:00
inverter 01
inverter 02
inverter 03
inverter 04
inverter 05
inverter 06
inverter 07
inverter 08

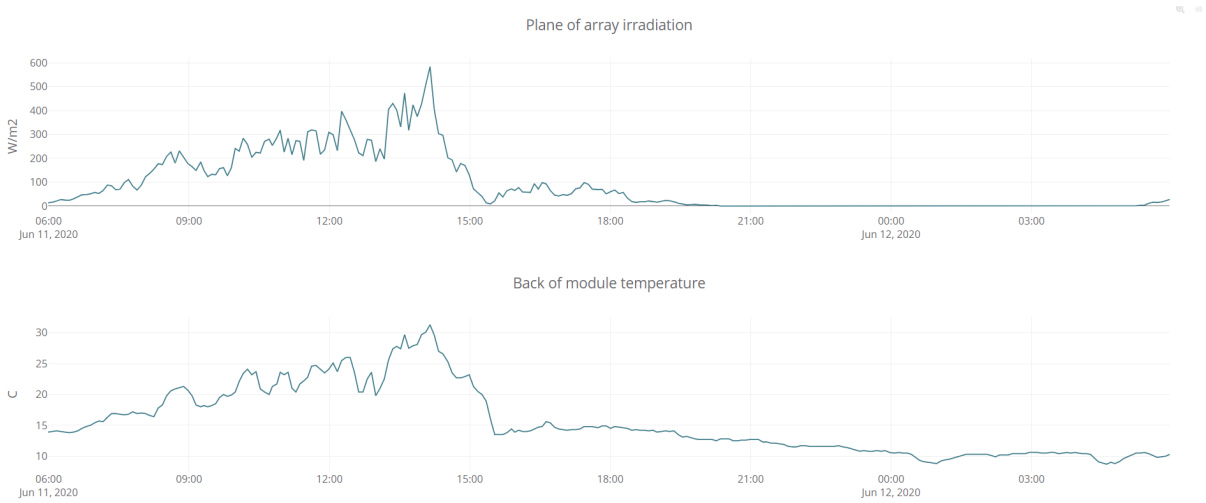

Inverter cabinet temperature
C
55
50
45
40
54.5 inverter 05
54.7 inverter 01
54.4 inverter 04
53.5 inverter 07
51.7 inverter 06
51.4 inverter 08
51.1 inverter 02
50.1 inverter 03
06:00
Jun 14, 2020
09:00
12:0
Jun 14, 2020, 13:04:42
15:00
18:00
21:00
00:00
Jun 15, 2020
03:00
inverter 01
inverter 02
inverter 03
inverter 04
inverter 05
inverter 06
inverter 07
inverter 08

Sensor page

The sensor page provides information about the 24 hour history of the sensor. Which data is available depends on the sensors installed. Sensors supported are:

- Plane of Array irradiance.
- Back of Module temperature.
- Global horizontal irradiance.
- Ambient temperature.
- Wind speed.
- Relative humidity.
- Barometric pressure.
- Wind direction.
- Rainfall.

Below a few examples.

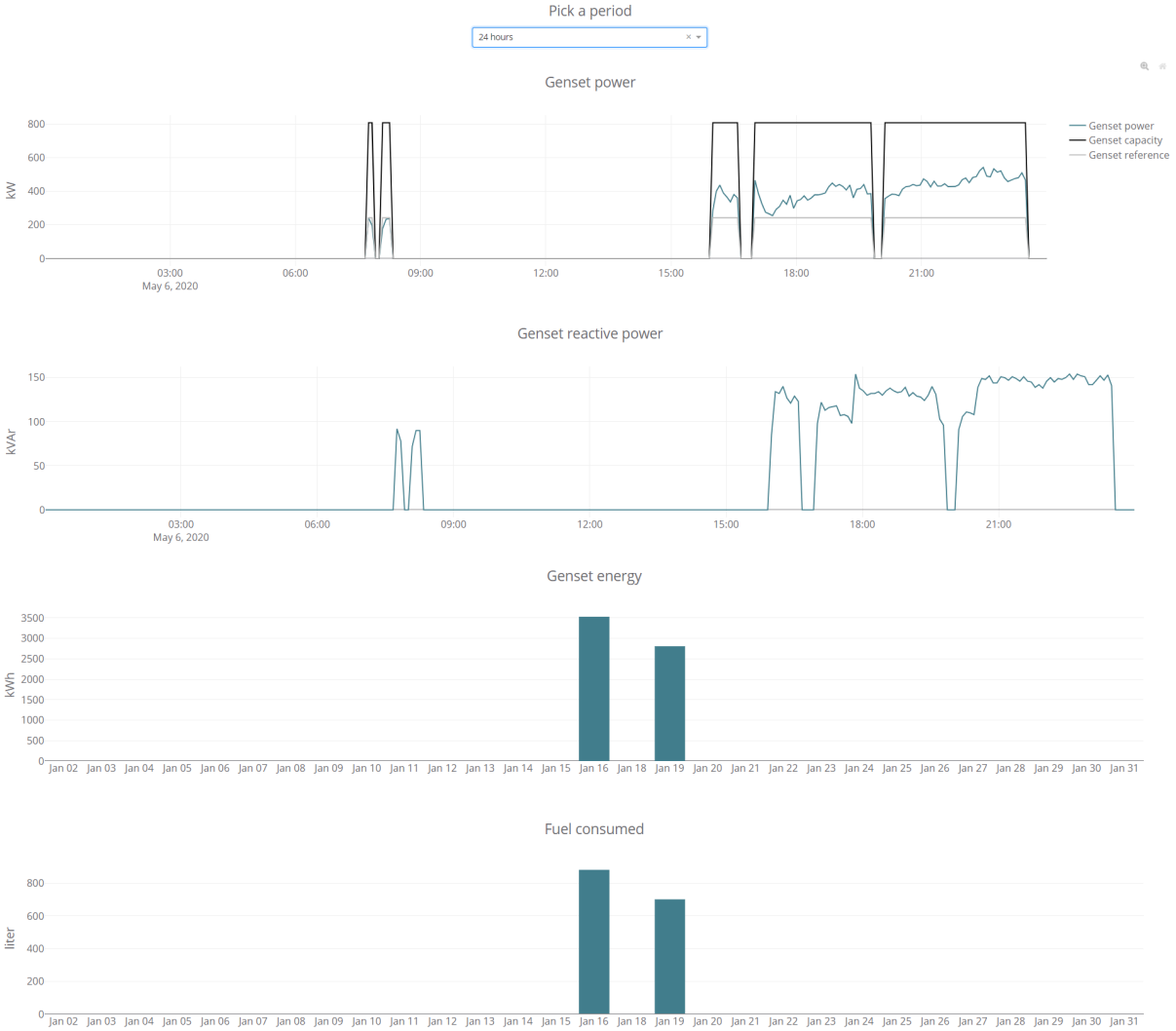


Genset page

The Genset page provides the views below:

- 24 hour history of kW,kVar, genset generating capacity, target reference etc.
- 30 day history of fuel expense, CO2 emissions, energy produced etc.
- 12 month history of fuel expense, CO2 emissions, energy produced etc.
- 10 years history of fuel expense, CO2 emissions, energy produced etc.
- This day’s history of kW,kVar, genset generating capacity, target reference etc.
- This month’s history of fuel expense, CO2 emissions, energy produced etc.
- This year's history of fuel expense, CO2 emissions, energy produced etc.

Below are a few examples.




Pick a period
12 months
Fuel expense
Euro
2000
1500
1000
500
0
May 2019
Jun 2019
Jul 2019
Aug 2019
Sep 2019
Oct 2019
Nov 2019
Dec 2019
Jan 2020
Feb 2020
Mar 2020

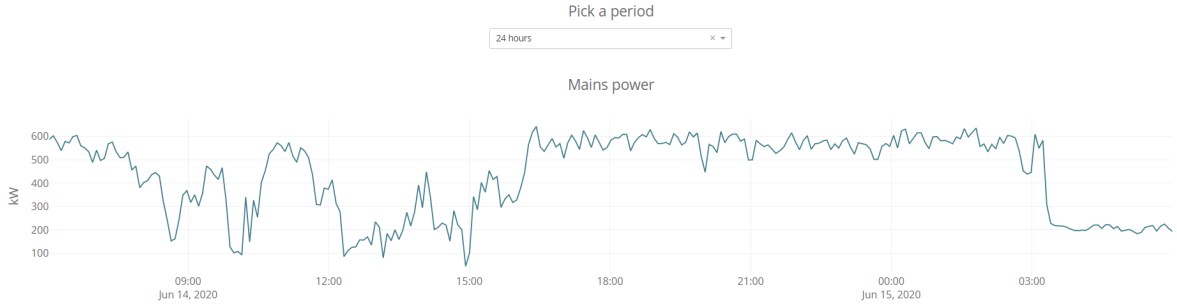
Genset energy
kWh
6000
5000
4000
3000
2000
1000
0
May 2019
Jun 2019
Jul 2019
Aug 2019
Sep 2019
Oct 2019
Nov 2019
Dec 2019
Jan 2020
Feb 2020
Mar 2020

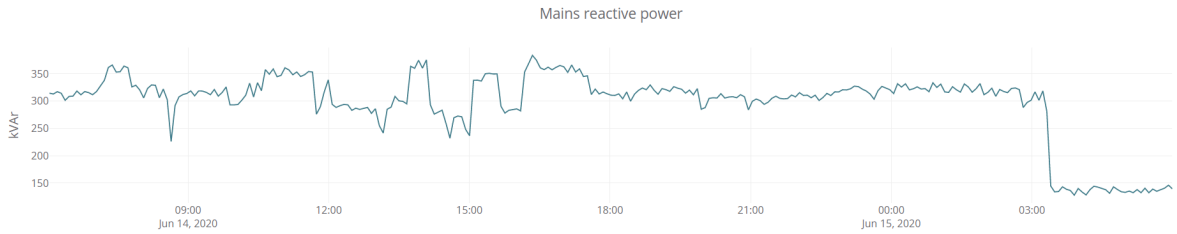
Grid page

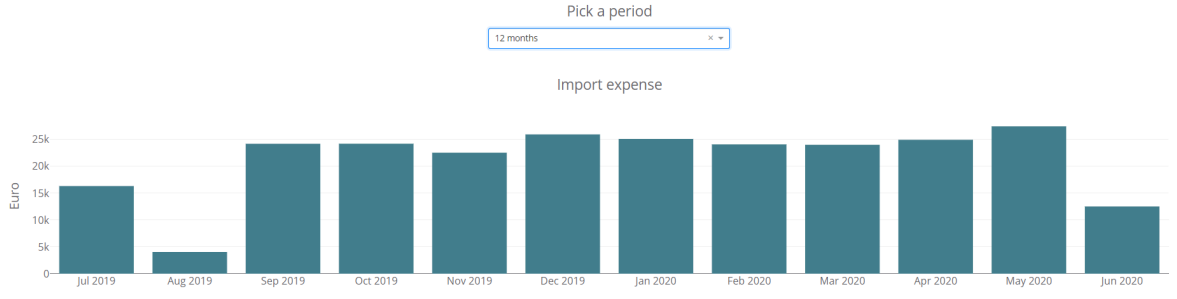
The Genset page provides the views below:

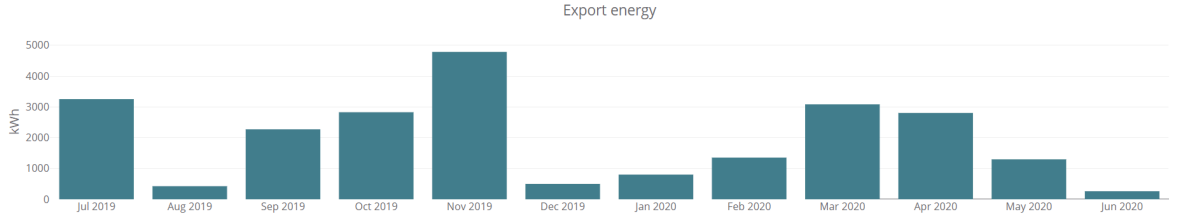
- 24 hour history of kW and kVar.
- 30 day history of imported energy, exported energy and import expenses.
- 12 month history of imported energy, exported energy and import expenses.
- 10 years history of imported energy, exported energy and import expenses.
- This day's history of kW and kVar.
- This month's history of imported energy, exported energy and import expenses.
- This year's history of imported energy, exported energy and import expenses.

Below are a few examples.







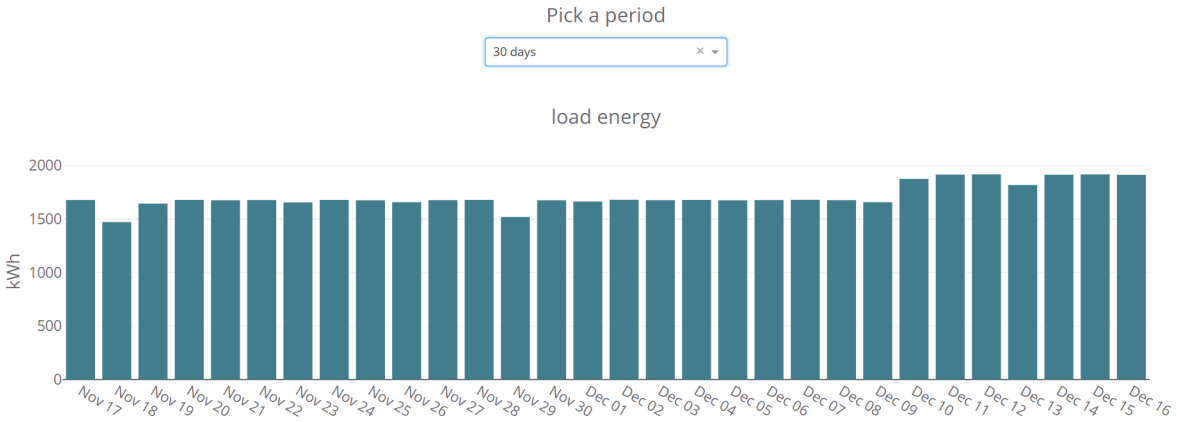


Load page

The Load page provides the views below:

- 24 hour history of energy consumption, active power, reactive power, apparent power, power factor
- 30 day history of energy consumption
- 12 month history of energy consumption
- 10 years history of energy consumption
- This day's history of energy consumption
- This month's history of energy consumption
- This year's history of energy consumption

Below is an example.

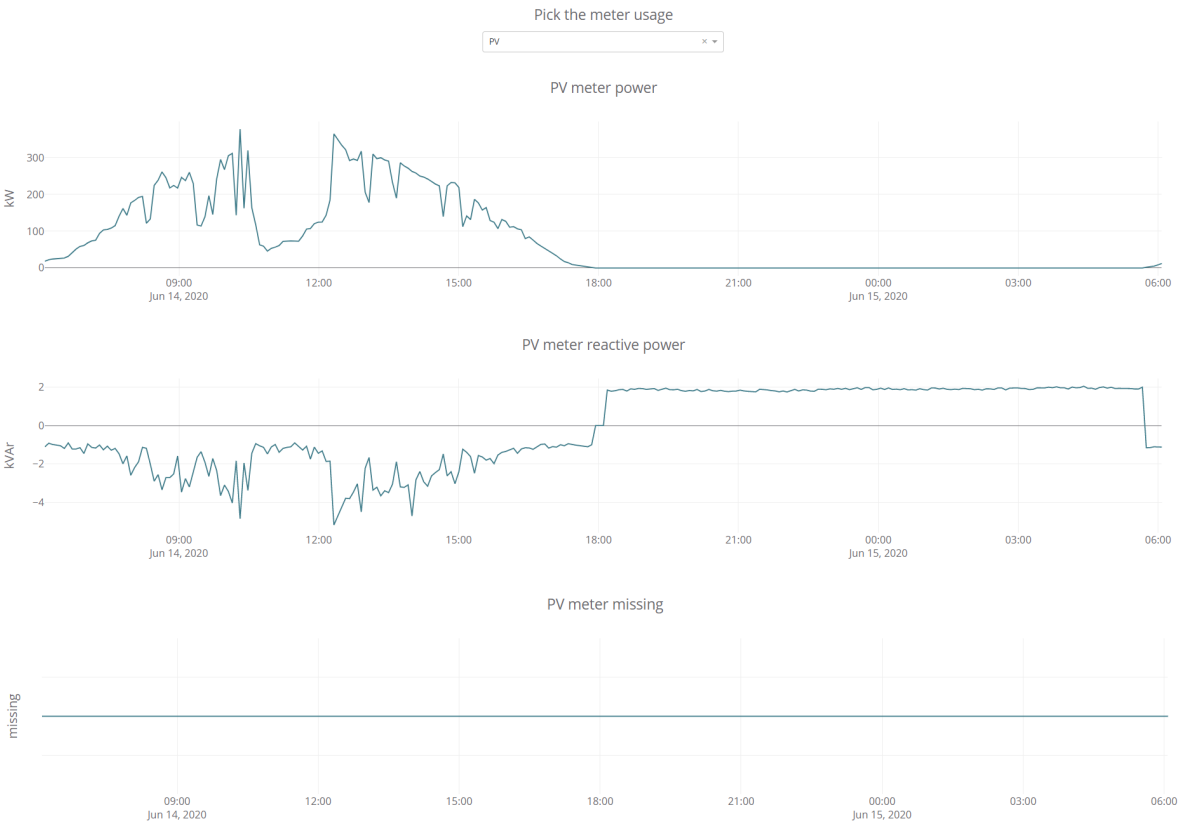


Meters page

The meters page holds 24h history graphs of the power meters present.
This being for both genset, grid and PV sensing.
Data available is:

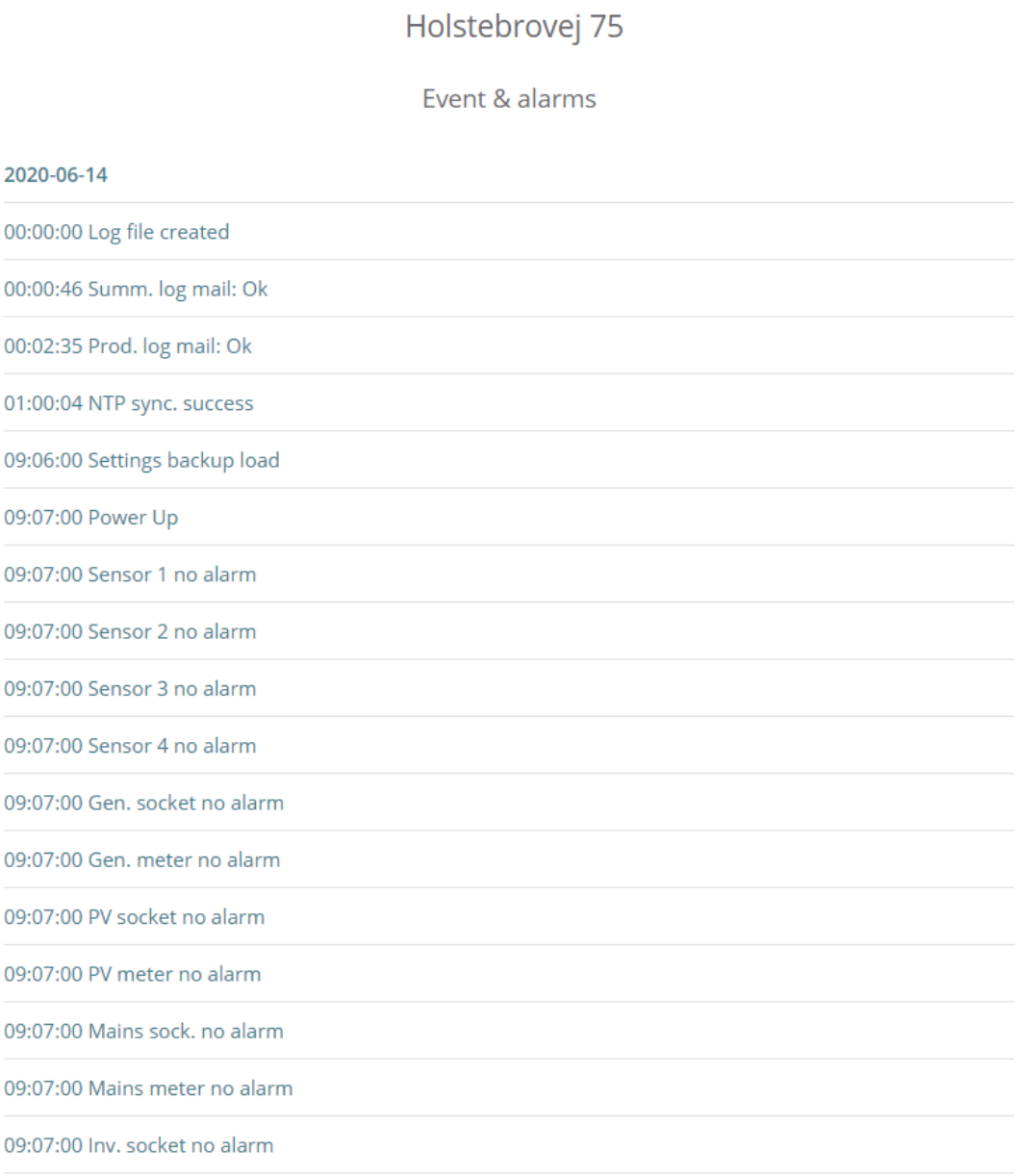
- Active power.
- Reactive power.
- Meter missing status (communication supervision).

Below examples of PV meter.


Pick the meter usage
PV
PV meter power
kW
300
200
100
0
09:00
Jun 14, 2020
12:00
15:00
18:00
21:00
00:00
Jun 15, 2020
03:00
06:00
PV meter reactive power
kVAr
2
0
−2
−4
09:00
Jun 14, 2020
12:00
15:00
18:00
21:00
00:00
Jun 15, 2020
03:00
06:00
PV meter missing
missing
09:00
Jun 14, 2020
12:00
15:00
18:00
21:00
00:00
Jun 15, 2020
03:00
06:00

Log page

The log page displays the event logs generated in the controller.



Weather page

The weather page gives a 5 day ahead weather forecast on site location. The weather forecast is provided with a 3 hour resolution interval.

Below is a partial example of a forecast.

Holstebrovej 75

Forecast for Viborg Kommune

2020-06-15

Time	Symbol	Description	Temperature [C]	Wind speed [m/s]	Wind direction [Deg]
09:00:00		clear sky	18	2	255
12:00:00		clear sky	20	2	288
15:00:00		clear sky	21	2	315
18:00:00		clear sky	19	1	341
21:00:00		clear sky	13	2	337

2020-06-16

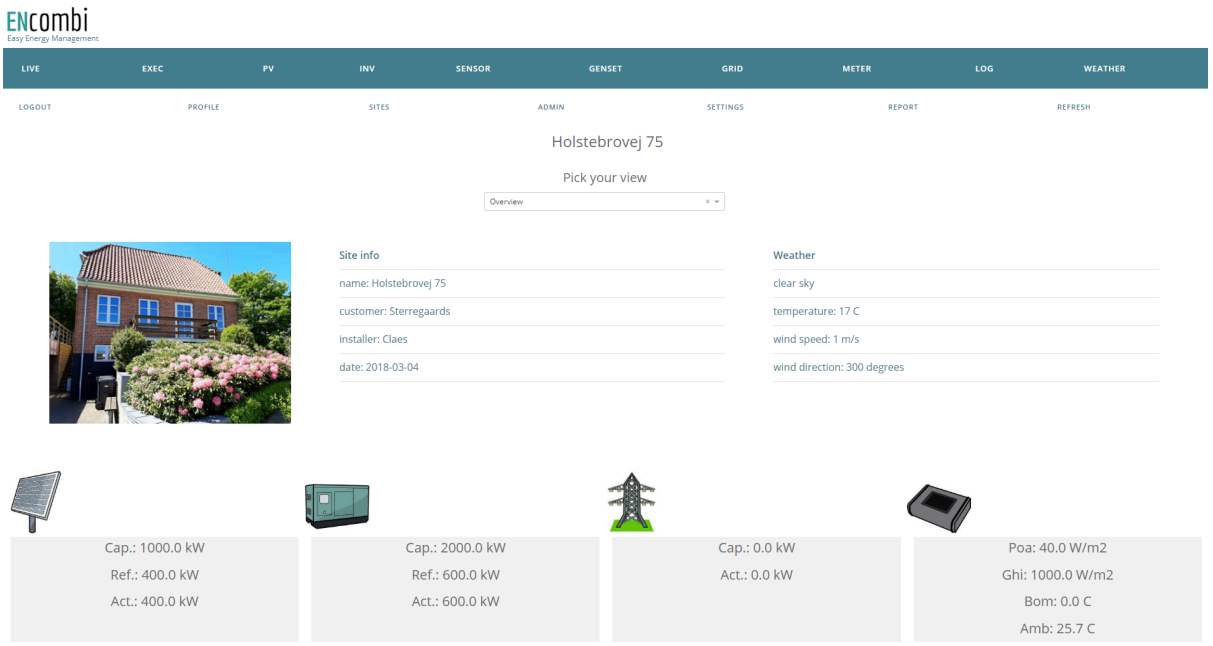
Time	Symbol	Description	Temperature [C]	Wind speed [m/s]	Wind direction [Deg]
00:00:00		clear sky	10	1	341
03:00:00		clear sky	10	2	282
06:00:00		few clouds	15	2	290
09:00:00		broken clouds	19	3	291
12:00:00		broken clouds	22	2	318
15:00:00		scattered clouds	22	2	331
18:00:00		few clouds	20	2	345
21:00:00		few clouds	14	1	19

2020-06-17

Time	Symbol	Description	Temperature [C]	Wind speed [m/s]	Wind direction [Deg]
00:00:00		clear sky	13	0	11
03:00:00		scattered clouds	12	1	33
06:00:00		few clouds	17	1	50
09:00:00		broken clouds	21	2	17
12:00:00		light rain	22	4	358
15:00:00		light rain	21	3	8
18:00:00		light rain	20	3	19
21:00:00		broken clouds	14	2	52

Refresh

When navigating around on the top bar pages doing analysis of a site, the page in focus can be refreshed by clicking the refresh button in the sub navigation bar.

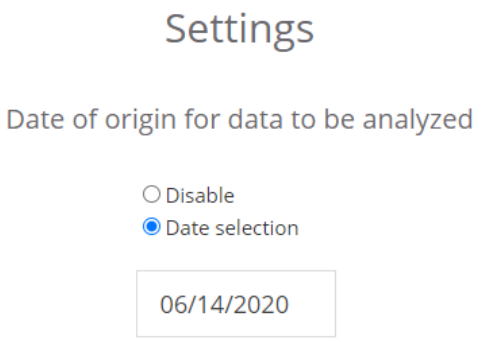


Settings

Various settings are added that will impact on the data displayed on the site pages.

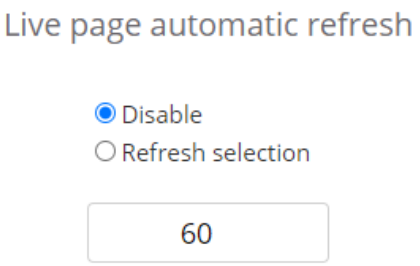
Date of origin

With the date of origin the user can select the point in time from which he/she will conduct the analysis. If selection is disabled the analysis will be from the date and time of the most recent data logged.



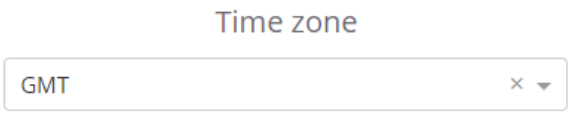
Live page automatic refresh

The Live page can be set up to update the data automatically at a selectable time interval. If disabled the data can be refreshed manually using the Refresh button as described previously.



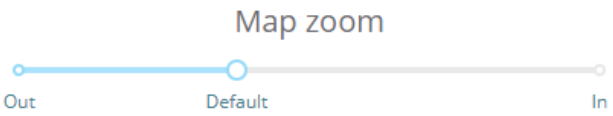
Time zone

The weather forecast is provided in GMT.
Select the GMT zone for the site to get the weather forecast displayed with local time.



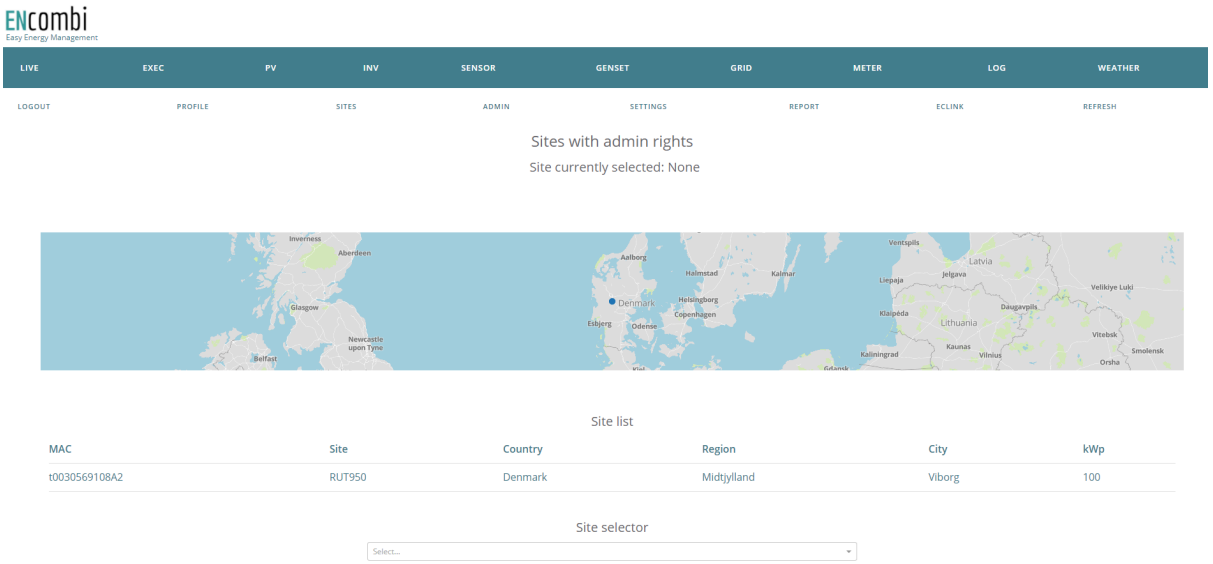
Map zoom

The initial map zoom used when landing on a page in ECcloud that features a map can be set. The zoom can always be adjusted manually on the pages afterwards.



Admin

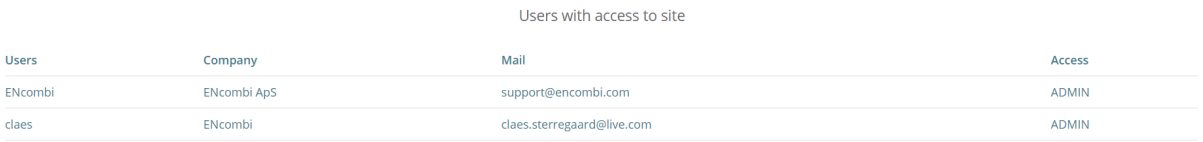
On the Admin page a map and a list of the sites for which the user has administrator rights are presented.



When a site is selected a list of users with access to that specific site is automatically populated along with various options.

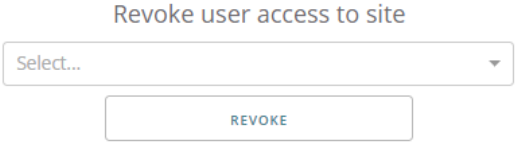
User list

Below an example of a user list.



Revoke user access

Here a user can be revoked access to the site. The user being revoked access will be notified by email.



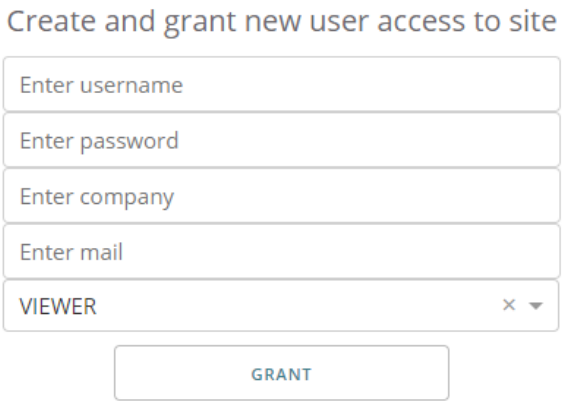
Grant existing user access to site

Here an existing user can be granted access to the site. The user being granted access will be notified by email.



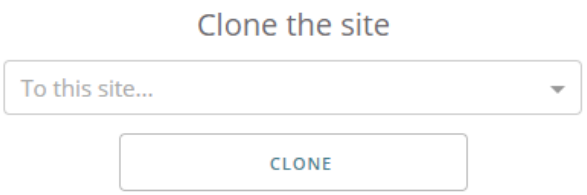
Create and grant new user access to site

Here a new user can be granted access to the site. The administrator will create the user's profile and credentials for initial login. The user can after login change their profile so that the password is no longer known to the administrator. The user being granted access will be notified by email.



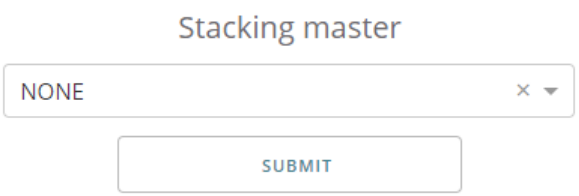
Clone the site

This is used in case of replacing an ECpv on site. Once the new ECpv is in place and registered in ECcloud it can inherit the data logged by the ECpv being replaced. This is done by initially selecting the old ECpv as the site to work on when entering the Admin page and then afterwards selecting the new ECpv in the drop down below. Then, when the “Clone” button is clicked, all the data logged by the old ECpv will be copied to the history of the new ECpv.

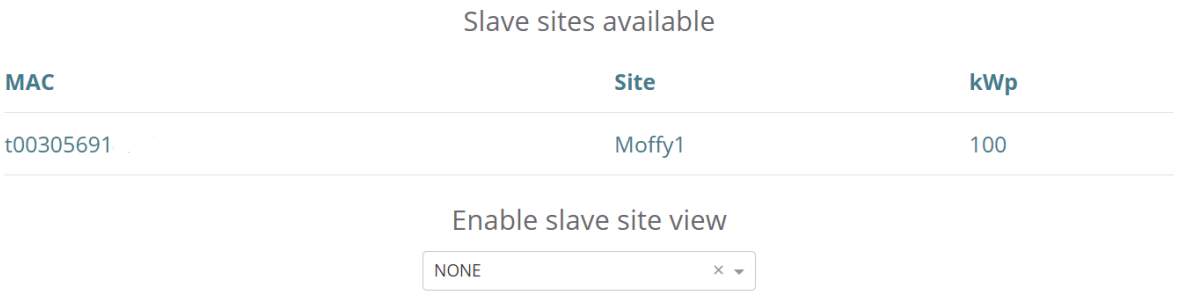


Stacking master

Here an ECpv slave can be linked to its ECpv master. This is used in case of the ECpv being a slave to a master ECpv in a stacking site. In the Stacking master dropdown the sites to which the user has access, are listed. By selecting one of the identifiers in the dropdown and pressing submit, the selected site is now slave to the site currently logged into.



In case an ECpv is linked as slave to a master it will no longer be displayed on the Sites page as an individual site. Only the associated ECpv master will be shown on the Sites page and the data from the ECpv slave will be inherited as part of the ECpv master data visualization. This means, for example, that on the PV page the user can choose to see data from the master or any slaves simply by choosing the site identifier in the “Enable slave site view” dropdown as illustrated below. If “None” is chosen, the data for the master is shown.

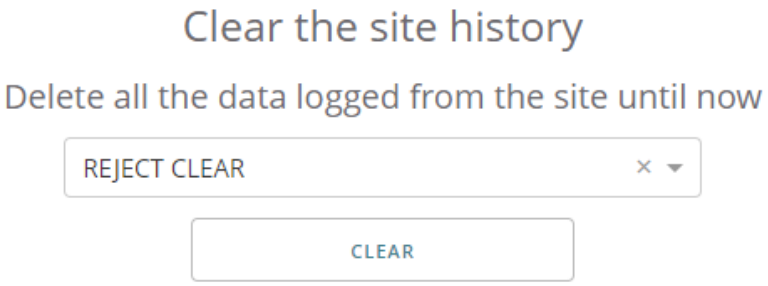


The stacking concept also applies to batteries if the setup is based on ECpvx. This takes that the ECpvX cluster controller is used to link the communication between the master ECpvX and any slave ECpvX controllers. Note that the ECpvX Cluster controller is not listed among the controllers in the ECcloud portal as it is only facilitating the communication between ECpvX controllers.

If the master - slave relationship between controllers needs to be broken/canceled, the Stacking master dropdown must be set to None while being on the admin page for the slave. Once doing that, the former slave is again listed in the Sites page.

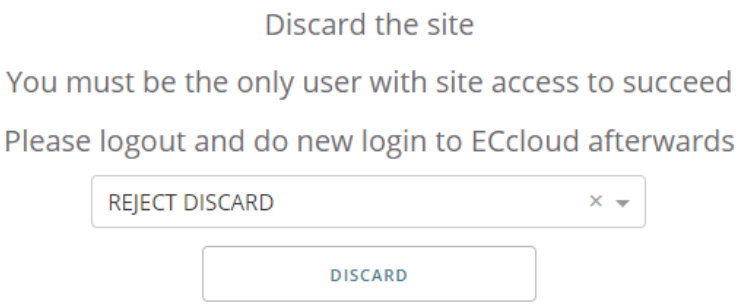
Clear the site history

This will delete the data logged from the site. The site will remain - only the data logged from it so far will be deleted.



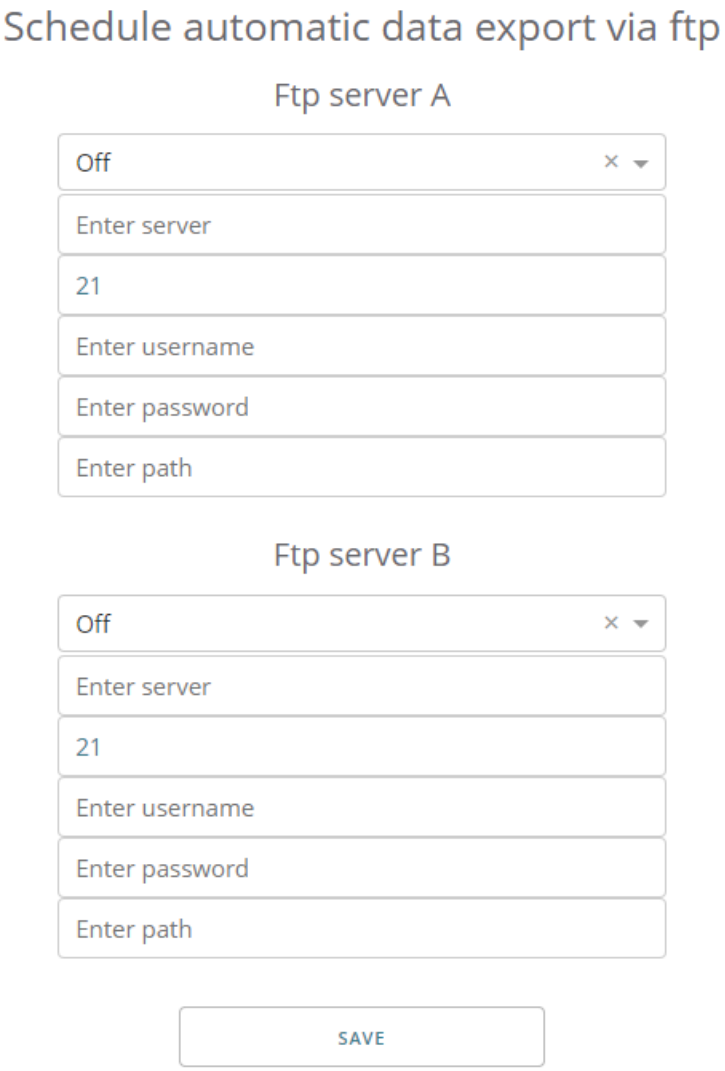
Discard the site

This will delete the entire site. You must be the only user of the site to execute this command. First the drop down must be set to “Accept Discard“ and then the “Discard” button must be clicked to issue the command.



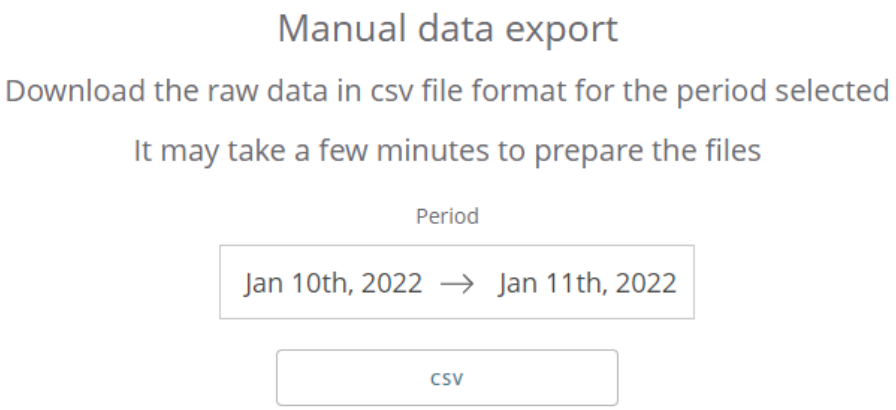
Schedule automatic data export via ftp

Here data export from ECcloud to up to two different ftp servers can be set up. The various methods to use regarding file format and content is accounted for in the separate document “ENcombi_API.pdf”. The port to use is per default 21 but can be changed as per the requirement of the specific ftp server.


Schedule automatic data export via ftp
Ftp server A
Off
Enter server
21
Enter username
Enter password
Enter path
Ftp server B
Off
Enter server
21
Enter username
Enter password
Enter path
SAVE

Manual data export

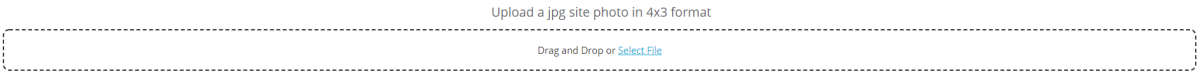
Here the data can be downloaded manually. The period to download data for is selected by the date picker. Maximum one month of data can be downloaded at a time. Each day of data will have its own csv file. The files are packed together in a zip file for download.



The structure of the csv files and its content are accounted for in the separate document “ENcombi_API.pdf” as Method1.

Site photo

Here a site photo for the Live page can be uploaded. The photo must be a jpg file and will be fitted to 4x3 format.

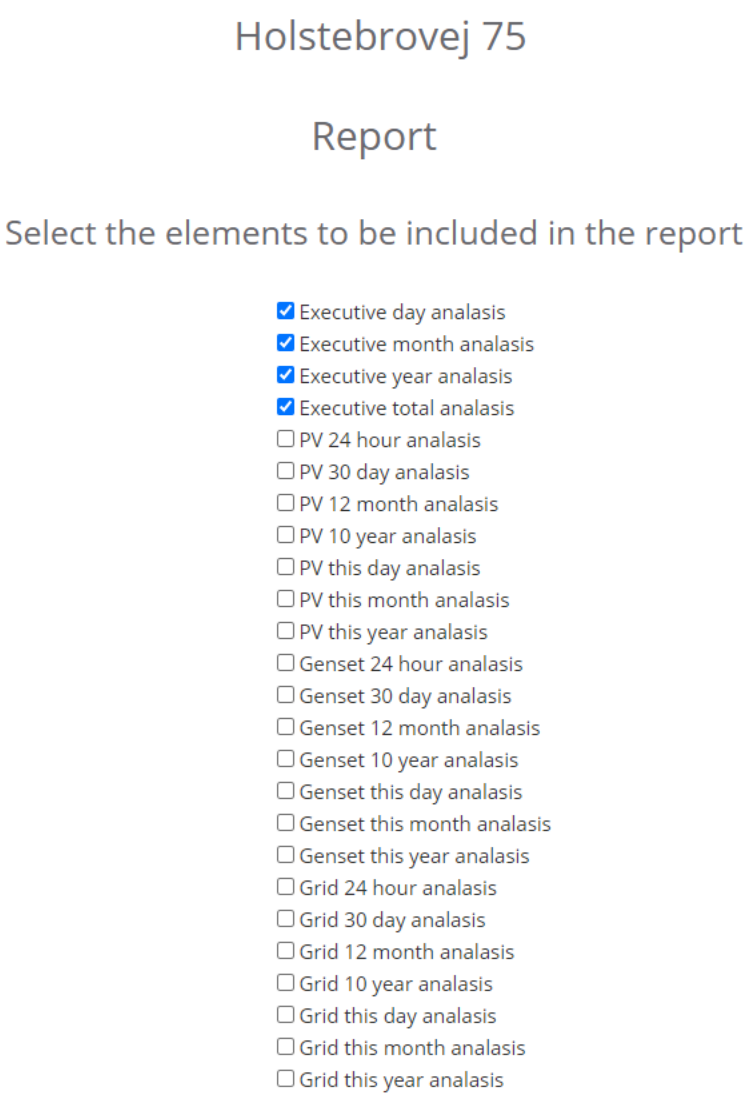


Report

On the Report page reports and site notifications can be set up.

Manual report

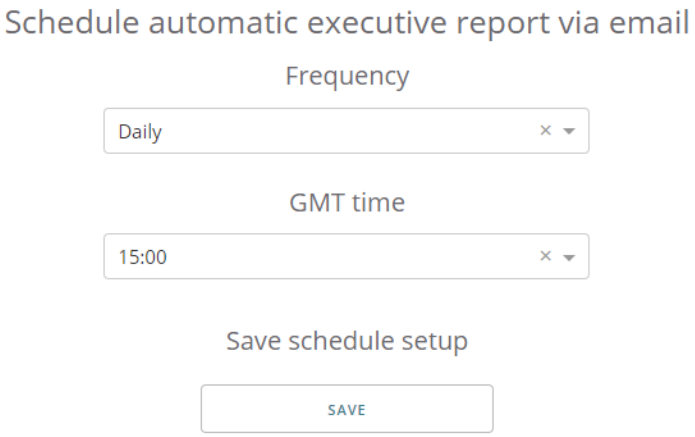
The content of the report can be tailored, created and downloaded manually.



The date of the report's origin is set up on the Settings page.

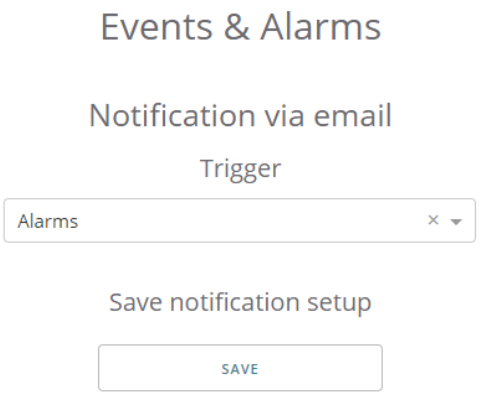
Scheduled report

Use the scheduler to receive a report from the site automatically via email. The automatically generated reports are fixed in their content and hold the Executive analysis only.



Event & alarm notifications

Besides reports also mail notification via email can be set up in case of any event or alarm occurs on site.



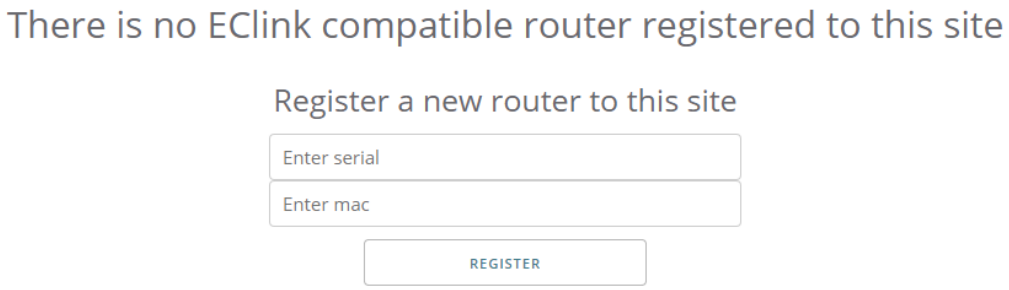
EClink

EClink enables you to make a remote connection to your ECpv(s) from outside of the local network. This way you can access the ECpv(s) from anywhere in the world and adjust settings etc. EClink is an optional feature for which you will have to have a 4G router from ENcombi installed. When this is in place you can, when being the Admin user of a site, go to the EClink page and create links for remote connections both to the webserver of the router itself as well as to the ECpv(s) connected to the local network behind the router.

The routers compatible with EClink are various models from Teltonika. See which models are available on our website on the link below.
www.encombi.com/products/accessories-3/4gmodem/.

Register a router

You register the router in EClink by first selecting the site on the Admin page to which you want to link the router. Thereafter you go to the EClink page. If there is no router already linked to this site, you will get the entry fields for router serial number and router MAC address below. On the router label you will find information of serial number and MAC address. Just type in the numbers and click on the Register button.

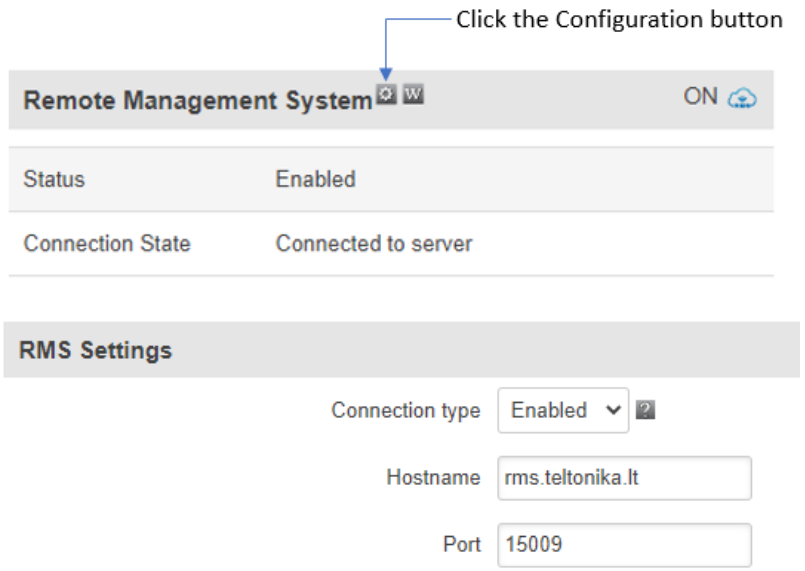


Note that, in order to be able to register and use a router with EClink it needs to be purchased from ENcombi.

Furthermore the “RMS Connect” setting in the router must be enabled. This is done via the router's web interface (WebUI). The default login details are:

- IP address: 192.168.1.1
- Username: admin
- Password: admin01

When on the Overview page, click the “Configuration” button as shown below. That takes you to the RMS Settings where the “Connection type” must be set to “Enable”. Keep the default values for the Hostname and the Port settings.



Note that this setting can’t be enabled from an EClink connection but must be enabled from a LAN connection or otherwise.

Device information

After initially selecting an Admin site, on the Admin page, and there is a router registered to the particular site, then when going to the EClink page you will find information about the router status at the top. In the information table you can see the Site ID of the Admin site to which the router is currently linked to. Below the table you have the option of unregistering the router. Furthermore there is the option of releasing the router from its current Site ID and linking it to the new Site ID using the site selector below the table.

EClink

Router information

Label	Value
Site ID	0030569108A2
Model	RUT950
ID	384904
Serial number	1106447523
MAC	001E423528E6
Status	Online
Connection state	connected
Connection type	LTE
SIM state	inserted
PIN state	READY
Operator	TDC Mobil
Credit expire data	2022-03-02 07:24:08
Auto credit renewal expires	2026-10-07 07:15:34
Auto credit renewal expired	FALSE

Unregister the router

DELETE

Link the router to another site

To this site...

SAVE

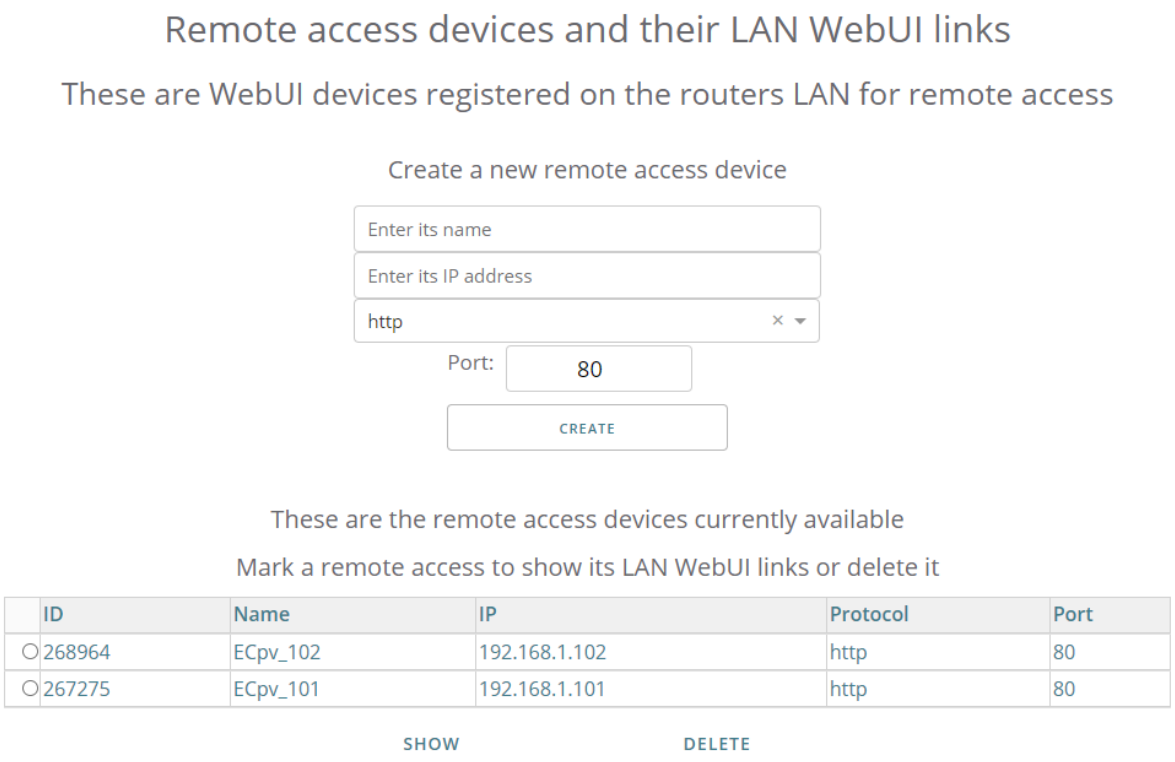
WebUI links

WebUI links are links for connecting to the webserver of the 4G router itself. A new WebUI link is created as shown below. The period for how long the link should be active is set in hours. A table with the currently active WebUI links and their remaining validity period is shown. Each WebUI link can be selected in the table and be either sent to the user's email address by clicking the respective buttons below the table.

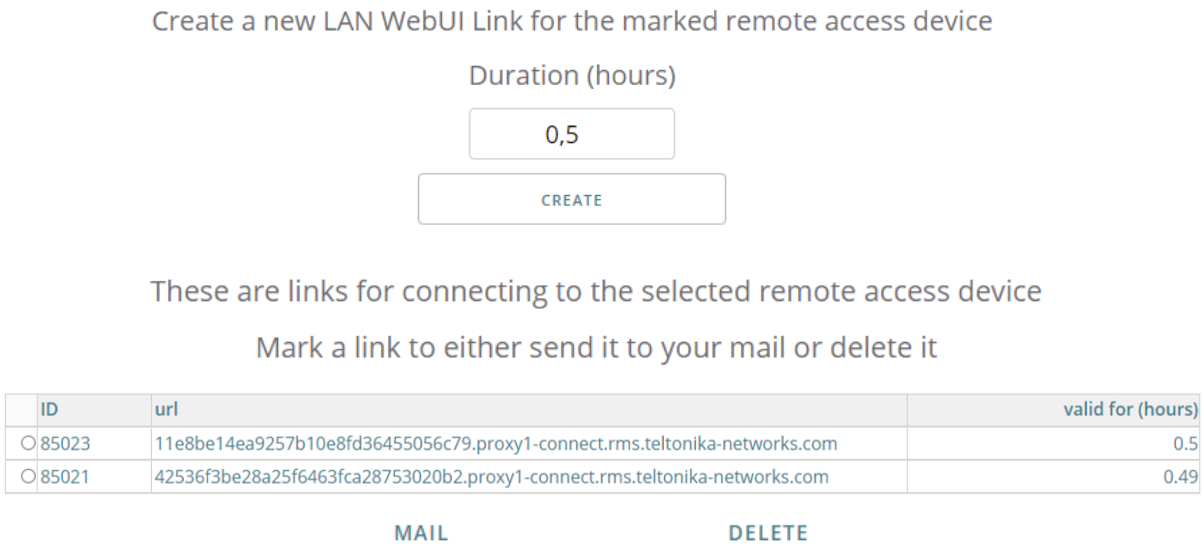


LAN WebUI links

WebUI links are links for connecting to the ECpv(s) connected to the local network behind the 4G router. As multiple ECpv(s) can be present, each ECpv is to be created as a remote access device. The LAN WebUI links can then be created to the respective ECpv. A table with the currently available remote access devices is shown. Each remote access device can be selected in the table and its currently active LAN WebUI links can be shown or the remote access device can be deleted.



When clicking show then a LAN WebUI link creation option appears together with a table of the selected remote access devices LAN WebUI links and their remaining validity period is shown. Each LAN WebUI link can be selected in the table and be either sent to the user's email address or be deleted by clicking the respective buttons below the table.



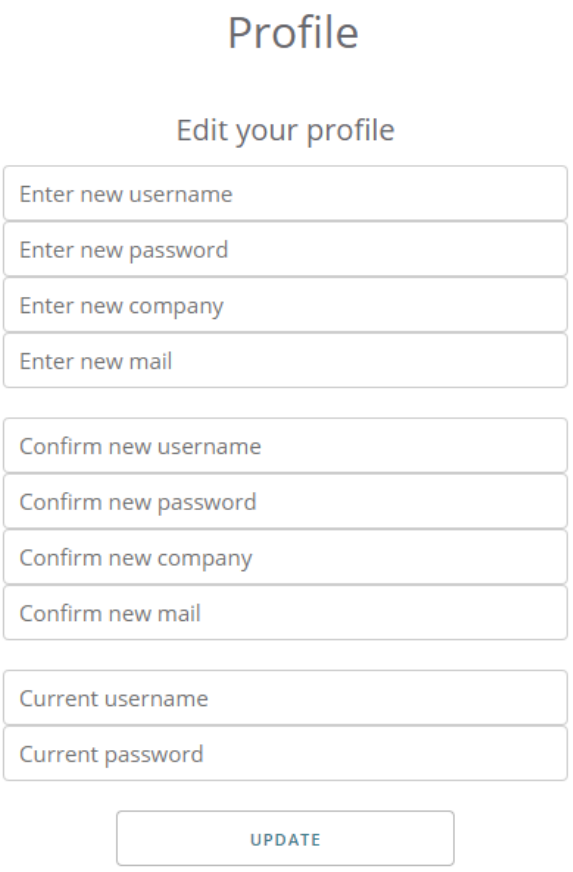
List all registered routers

You can get a list of all your routers registered, presented in a table. The way to do this is by not having any site selected on the Admin page. Thereafter, go to the EClink page.



Profile

On the Profile page a user can update his/her profile.

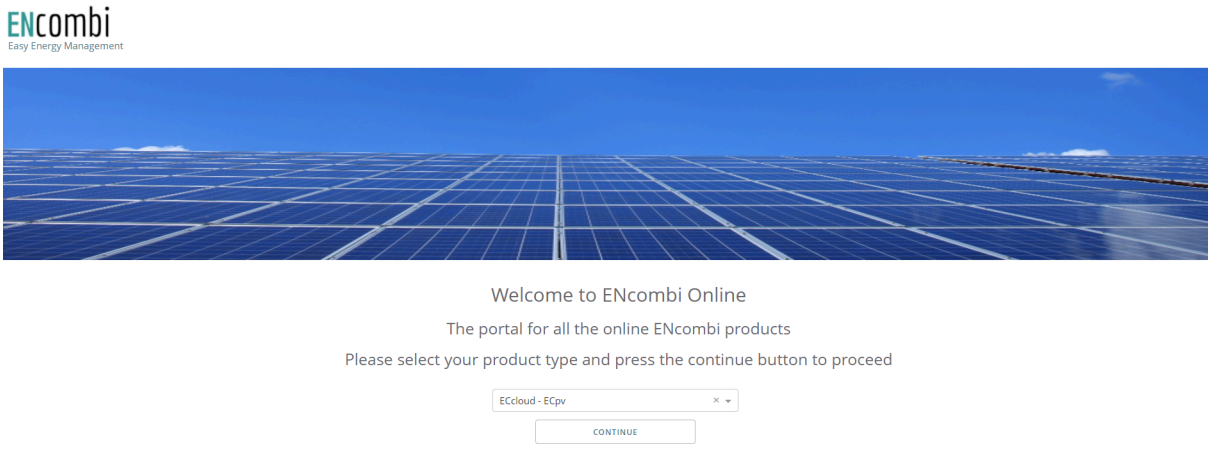


Logout

On the Logout button the user can logout. ECcloud will then revert to the Login page.

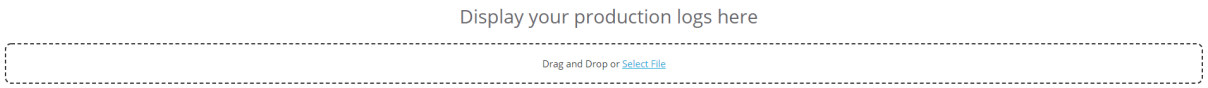


To return to the ENcombi Online start page from where you can pick the product type, you must click “Home” in the navigation bar.



Production log

On the Production log page the production logs generated by an ECpv can be displayed in graphical manner. The Production log page is accessible without being logged into ECcloud and is hence available to all ECpv customers. On the Production log page the user can select the production log he/she wants to have displayed.

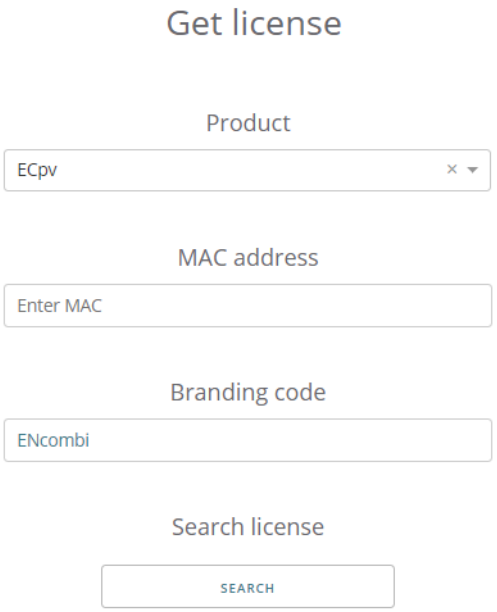


When a file is selected ECpv will display the content as below examples.



License

On the License page the SW licenses and the associated Extras for a controller can be downloaded. The License page is accessible without being logged into ECcloud and is hence available to all customers.



Type in the MAC address of the ECpv for which you want to download the SW license. Type in the branding code. The default branding code is “ENcombi”. Leave it at that if you do not have a branding code issued. Press the search button to find the license.

Download the SW license on the populated link. Unzip the content of the downloaded file to the root of a USB stick. Insert the USB stick in the USB port of the controller and initiate the SW license search via ECweb by pressing the “Search on USB” binoculars button.

