

OVERBOARD



User Manual

The OverBoard cloud software is developed and constantly updated by Over.

The web service is used to monitor, manage and optimize the energy consumption of associated plants.





**THE LEADING TECHNOLOGIES
FOR A SUSTAINABLE TOMORROW**

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1. BACKGROUND INFORMATION

1.1 GENERAL TERMS AND CONDITIONS OF THE SOFTWARE LICENSE AGREEMENT

1. Introduction

The User who uses the Software and the Services covered by this document, granted license of use by OVER S.p.A. (hereinafter "OVER S.p.A." or more simply "OVER"), declares having read the software information, or having been sufficiently informed regarding its operation and its main functions, as well as having read and accepted these Terms and Conditions (called "Conditions") currently in effect, which are subject to modification without prior notice by OVER. OVER is not liable for suspensions of the Services for any reason, even referring to OVER, unless otherwise agreed in writing between OVER and the User (hereinafter referred to individually as the "Party" or jointly as the "Parties").

The User must read and save these Conditions before completing the purchase and/or acquisition procedure license for one or more services. The forwarding of the order confirmation of the Service and/or the Software in question therefore implies the User's full knowledge and acceptance of the Conditions. The User must therefore save or print these contractual clauses for keeping. The present conditions also apply to licenses that may be granted to the User for non-remunerative purposes.

2. Definitions

- 2.1 - OverBoard: web software typically installed in Cloud, developed by OVER, usable through a web-browser.
- 2.2 - Obox: a gateway produced by OVER that can be used for all systems based on the EDS 2.1 bus.
- 2.3 - Bus EDS 2.1: the wired bus line used by OVER systems for communications to and from other field devices such as OMeter and NanOMeter.
- 2.4 - OMeters: an Over S.p.A. device equipped with 8 power outputs with 230V and 16A interrupted wattmeter and 16 contact inputs with communication on EDS Bus.
- 2.5 - NanOMeter: a three-phase wattmeter by Over S.p.A. with communication on EDS Bus.
- 2.6 - Ethernet: the wired network connection bus between PC and other IP (Internet Protocol) devices.
- 2.7 - 3G or UMTS: the third-generation cellular network or later generations such as LTE.
- 2.8 - Network port: refers to the concept of port as defined in computer networks on IP protocol.
- 2.9 - Contract: this document.
- 2.10 - User: a person who purchases the license to use the OverBoard software, or its user, or the person using the OverBoard software according to the provisions of this Contract.
- 2.11 - Equipment or device: used in the Contract as a synonym for OBox.
- 2.12 - Debian: a Linux distribution among the most wide spread in the world of embedded software systems.
- 2.13 - Over S.p.A. o OVER: in the following, "OVER" is the company that owns all the rights on the OverBoard software, based in Rome, via Maffio Maffii, 11, 00157 with VAT./F.C 12065001005.
- 2.14 - Cloud or cloud service: in this Contract, refers to any service reachable through an internet connection, whose availability and reachability are guaranteed by high redundancy and automatic replication services.
- 2.15 - Stable release: a version of the software that has passed all the functional verification tests and therefore is used without further Major Reviews (see 2.16).
- 2.16 - Major Review: a substantial change to one or more features of the software that is necessary for its correct use.
- 2.17 - Minor Review: a non-substantial change or that does not impact or prevent the use of the main features of the software but that is necessary for its correct use.
- 2.18 - Connected System: any device whose data is transmitted on OverBoard directly or through a gateway. For example, two OMeter connected to the OBox that transmits data to OverBoard are two Connected Systems.

3. Trademark Licensing

- 3.1 - The OverBoard software is the property of OVER. OVER is the sole exclusive owner of all rights and interests for the OverBoard software and any related intellectual property, including the developments arising therefrom.
- 3.2 - The trademark, the distinctive signs of the visual identity and all the trademarks contained within the OverBoard software are the property of OVER and/or its commercial partners, it is therefore forbidden to copy, unauthorized reproduction, even partial and dissemination in violation of intellectual property rights.
- 3.3 - The software is licensed for use by the User who may use it via any compatible web browser from any machine connected to the Internet.
- 3.4 - The use of the software by the User does not in any way constitute the transfer of intellectual property, even if the User has actively participated in the development of new features.

4. Description of software and services

- 4.1 - OverBoard is a software for in Cloud management of data coming from one or more systems connected to it. The systems connected to the OverBoard software can include:
 - 4.1.1 - data transmitted by the OBox gateways installed in the field;
 - 4.1.2 - data transmitted by NanOMeter devices with native 3G connection;
 - 4.1.3 - data transmitted and/or taken from third-party systems (such as climate data from public weather stations);
 - 4.1.4 - data loaded in batch mode from well-formed files (such as CSV files).

- 4.2 - In addition to data management and representation, the OverBoard software can also allow direct management of the systems from which it receives data. In some cases, the data transmitted by OverBoard to the systems in the field is aimed at their programming and configuration. Direct management of the OVER brand systems connected to OverBoard is always possible. Direct management of third-party systems is not guaranteed and is often subject to custom development for consideration to be agreed upon with the User through an ad-hoc agreement.
- 4.3 - The OverBoard software is organized in three main macro-areas described below:
 - 4.3.1 - Main Dashboard: it is a screen that contains a general statistical overview of the data contained within OverBoard associated with the specific User who logs in. The minimal information contained in the dashboard are: alert, a synoptic map containing information on the systems in the field, statistical data comparing year on year;
 - 4.3.2 - Analysis: it is an area of the software that can be organized in multiple sections and functionality that allows the display and export of the data stored according to filters set by the user;
 - 4.3.3 - Maintenance: it is an area of the software with which it is possible to directly manage the systems in the field as required by 4.2.
- 4.4 - the software and services offered by OverBoard are installed in the Cloud and therefore are installed in innovative platforms that guarantee the availability and persistence of the data. The platforms used by OVER can be owned by OVER itself or by third parties such as Amazon AWS or Microsoft Azure, at the total discretion of OVER.

5. Warranty

- 5.1 - The persistence of the data stored and managed by the OverBoard software is ensured through replication techniques that OVER will have to manage and maintain for the duration of the contract. At the end of the license period, OVER shall be free to keep the data with replication, store the data on a different non-replicated support - in other word, delete the data.
- 5.2 - The OverBoard software is always supplied updated to the last Stable Release "as is" and "as available". OVER does not provide any guarantee on the accuracy of the data contained in the software (it is archived as received, any errors must be put in to the systems connected to the OverBoard software as described in 4.1), nor does it provide any guarantee that the software can meet the User's needs, that it never suffers interruptions or is free of errors, viruses, or bugs that make subsequent Minor Reviews necessary.
- 5.3 - OVER will endeavor to ensure that the OverBoard software is continuously available 24/7, without prejudice to the right of OVER to suspend the availability of services in the event of maintenance or repairs, or for reasons out of OVER's control in cases of force majeure or for events that can compromise the software security (at the discretion of OVER).
- 5.4 - The User who accesses the OverBoard software is the sole and exclusive party responsible for the data transmitted on the application (for example through a CSV file) while using the software and declares that it has full ownership of the data and, if referring to third parties, of the freedom to process them.
- 5.5 - The User shall not hold OVER responsible for the unlawful distribution of third-party data or from any use of the OverBoard software in ways contrary to the law or to these Terms of Use.
- 5.6 - The User declares to be aware that the usability of the OverBoard software is linked both to the work of OVER and to the availability of third network connectivity to OVER, and is connected to the availability of Cloud services eventually offered by sub-suppliers. Therefore, the user shall not hold OVER responsible for any liability that may derive from network problems and/or problems arising or caused entirely by documented OVER sub-suppliers.

6. Privacy and Data Ownership

- 6.1 - The data managed within the OverBoard software is the property of the User who uploads them; in others words they belong to the Owner of the devices that transmit the data within the platform.
- 6.2 - The User authorizes OVER to use and process the data through mathematical and statistical models to develop benchmarks provided by the platform and for anonymous use by third parties to guarantee the calculation of benchmarks comparing homogeneous data. The User declares to be aware that this authorization is necessary in order to use the platform.
- 6.3 - Any personal data provided by the User for the creation of the User profile will be treated exclusively to perform contractual and legal obligations, to carry out surveys for the detection of customer satisfaction in anonymous or aggregate form. Furthermore, data will only be forwarded with the consent of the User, for sending promotional and advertising material also via SMS, fax, telephone, and email.
- 6.4 - All administrative and technical data will be processed using manual, computerized and/or telematic tools in a manner strictly limited to the purposes of internal and external processing management of the following subjects: commercial consultancy, sales network management, back-office area and billing, commercial and marketing field, measurement and purchasing field, and data mining field. The data may therefore be communicated to external companies and/or consultants for the performance of economic activities (pursuant to GDPR) for the fulfilment of legal obligations and of this Contract.
- 6.5 - The customer may contact the privacy service at OVER to verify their data and have them integrated, updated and rectified, and/or to exercise the other rights provided.
- 6.6 - The User declares to know that in order to provide the services, a mobile phone number may be requested. The User accepts that OVER manages this sensitive data without which the services may not be provided.
- 6.7 - OVER guarantees that all services provided under the present license, even those provided by third parties, are GDPRcompliant. All data is managed and stored within the EU territory, with OVER free to choose the hosting country the services.

7. Confidentiality Obligations

- 7.1 - OVER pledges to keep any data or information it has knowledge or awareness of strictly restricted and confidential and not to disclose them to third parties, except to the extent strictly necessary for supplying the software, in any form whatsoever and/or on any platform.
- 7.2 - Without prejudice to the general obligation of confidentiality referred to in point 7.1, OVER recognizes here on out on the confidential nature of the User's data, information, and documents it has knowledge of and recognizes that any right directly or indirectly connected to their use is and will remain the exclusive property of the User.
- 7.3 - OVER pledges to guarantee that all third parties, in accordance with article 1381 of the Civil Code, to whom confidential information will be made available for the purposes of the execution of the contract, act in compliance with the confidentiality obligations.

8. Stipulation, Conclusion, Conditions Validity, Duration

- 8.1 - The license agreement is concluded by compiling and sending of the order form or through the registration process described in 8.2.
- 8.2 - As soon as OVER receives the order from the User, it sends a confirmation e-mail or an image of a web page of confirmation and order summary in printable format, in which the order details are listed.
- 8.3 - The Conditions are not considered automatically in effect between the parties at the point mentioned in the previous clause.
- 8.4 - OVER may totally or partially modify or update these Conditions. The User acknowledges and agrees that any changes to these Terms will apply to orders sent by Users after the date of notification of modification of the Conditions. The User is therefore encouraged to read the Conditions every time they access the Application, and it is advisable to print a copy for future reference.
- 8.5 - In order to use the OverBoard software, Users must register providing all the data requested in the relevant registration form accurately and fully, and accept these Terms in full.
- 8.6 - The User is responsible for remembering their login credentials. It is understood that OVER may not be held liable under any circumstance for the loss, dissemination, theft, or unauthorized use by third parties of Users' access credentials for any reason.
- 8.7 - These conditions apply from the moment of registration as described in 8.2, or they start the moment the order form is signed.
- 8.8 - This License Agreement starts from the terms defined in 8.7 and ends on 31st December of the stipulation year.
- 8.9 - This Contract is automatically renewed at the end of 12 (twelve) months for an additional 12 (twelve) months unless otherwise agreed between the Parties. This clause is without prejudice to the right of withdrawal defined in article 10.

9. Price, Payment Method, Billing

- 9.1 - The software license is free if there are fewer than 10 (ten) devices connected to OverBoard. It is subject to payment when more than 10 (ten) devices are connected. The annual license cost is defined in the order form, as mentioned in the contract. The annual license payment may not be split, even if the license cost is indicated as a monthly value.
- 9.2 - The invoice date and acceptance for the first annuity is considered to be the same date the order form is accepted by OVER.
- 9.3 - The invoicing of subsequent years may take place at the same time as the renewal date or in advance within of 30 (thirty) days.
- 9.4 - Any delay in the issuance of the invoice for the years following the first with respect to the renewal terms described in point 9.3 does not in any case constitute a change in the terms of duration defined in 8.8 and 8.9.
- 9.5 - Where the payment was made in advance of the invoice issue date, OVER shall send the Customer a copy of the invoice within 60 (sixty) days from the date of payment (as attested by the value date).
- 9.6 - If OVER issues an advance invoice, but the User requests a withdrawal from the Contract in accordance with the terms of renewal referred to in paragraph 8.9 and the terms mentioned in article 10, OVER must issue a credit note within 60 (sixty) days.
- 9.7 - All the invoiced amounts will be subject to the VAT rate due.
- 9.8 - All invoices will be sent in digital format. The Customer consents to such transmissions with the signing of these General Conditions.
- 9.9 - Any complaints about the amounts invoiced must be sent to OVER no later than one calendar week after the invoice is sent. In the absence of a prompt complaint, the invoices are considered accepted by the Customer. The submission of the complaint does not exempt the Customer from paying the uncontested amounts invoiced before their deadline.
- 9.10 - The payment of the sums due and invoiced must be made through traceable methods (e.g. bank transfer).
- 9.11 - Unless otherwise agreed between the Parties, the payment methods are set at 60 days EOM.

10. Contract Termination

- 10.1 - Both Parties may terminate the Contract in accordance with the following:
 - 10.1.1 - The User has the right to withdraw from this Contract at any time, even without just cause, but without the right to compensation for the months not actually used;
 - 10.1.2 - OVER has the right to withdraw from this contract at any time, even without just cause, while guaranteeing the User compensation equal to the accrual not used under the license paid by the User. It is understood that if the User has not paid any sum because they are in arrears or because there is free casework as foreseen in 9.1, no compensation will be due;
 - 10.1.3 - The withdrawal can be implemented electronically by LEGAL E-MAIL sent to the counterparty. The email must contain all the information necessary to accurately identify the Contract to be terminated. Failing this, the withdrawal request will be deemed void.

11. Presumption of Knowledge, Applicable Laws and Jurisdiction

- 11.1 - The User shall be notified about this Contract by digital means at the time of registration and first access to the OverBoard software, as well as by an e-mail sent to the e-mail address provided by the User during registration. The User is then considered notified pursuant to article 1341 of the civil code.
- 11.2 - These Conditions and all disputes regarding execution, interpretation and validity are governed by Italian law.
- 11.3 - Unless otherwise agreed between the Parties, the competent Court is that of Rome.

1.2 System Requirements

The use of the OverBoard platform does not have any particular minimum system requirements and does not require installation. Since it is a web-based platform, the installation of a browser on the PC is necessary. Below is a diagram showing the compatibility of various browsers on the market.

The OverBoard's browser compatibility is verified and guaranteed with Google Chrome at any version more recent than 66. It does not represent restrictive constraints because OVER works constantly to give maximum usability of the content and data collected by the monitoring systems. Modifications can be developed upon request to align with the compatibility of unsupported browsers.

2. SOFTWARE LOGIN SET-UP

Access to the platform is available from the website www.overttechnologies.com. New account registration or login for already enabled users is allowed from the landing page.

2.1 CREDENTIALS AND LEVELS

The security and access levels are safeguarded by two different levels of authentication:

LEVEL 1 – USERNAME AND PASSWORD

The first access level consists of the User's username and password.

At this level, the User can access services that require secure identity verification, but that do not show sensitive data in the first place. Generally speaking, security level 1 is used when the risk linked to incorrect authentication is moderate.

LEVEL 2 – ONE TIME PASSWORD (OTP)

Level 2 allows access to services via username and password, along with a temporary code that is sent to the User by email or through allowed mobile app. This procedure is typically known as 2FA (two factor authentication).

The enabling of the 2FA is strongly recommended in order to enhance the account security, helping moreover to avoid unwanted accesses even in case of username and password theft.

2.2 FIRST ACCESS

At the first access after the registration of the account, the portal will redirect the User to the own account management page, as shown in the following screenshot (Figure 2.1):

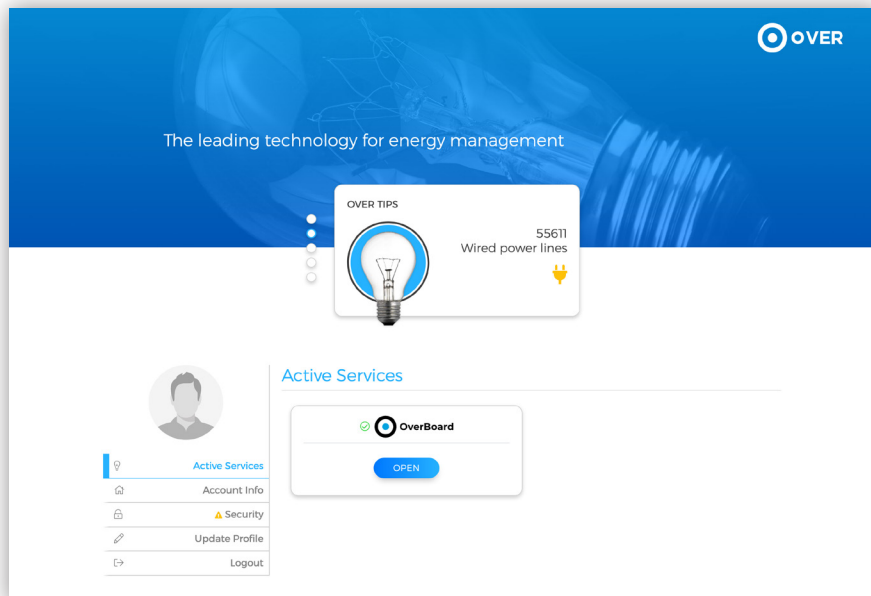


Figure 2.1

This portal displays active services, profile information, security information, and an option to update e-mail, passwords, or authentication methods. The Profile Info (Figure 2.2) section contains the following::

- Username
- E-mail address
- Phone number
- Date of birth
- Any warning or alert messages

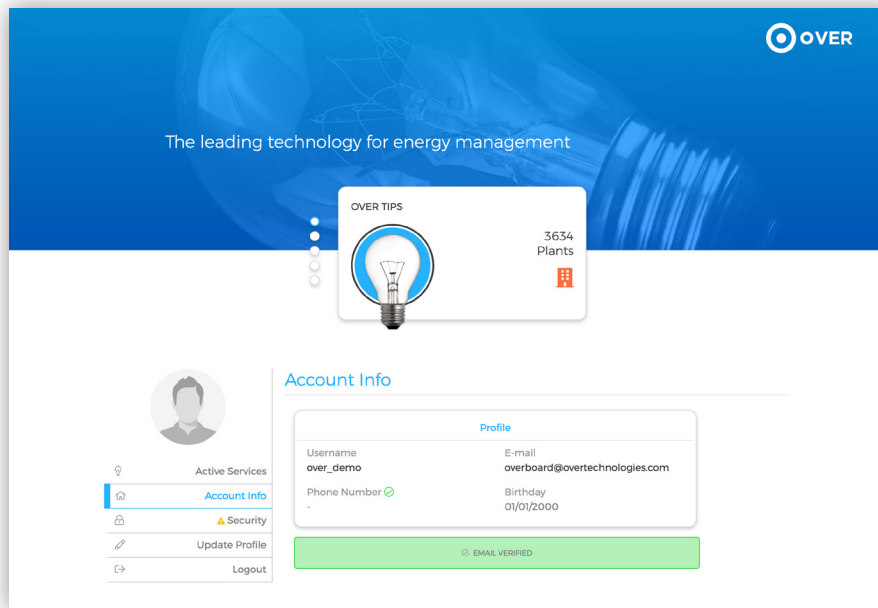


Figure 2.2

The Security Section (Figure 2.3) contains the following:

- Information on authentication mode
- Password modification

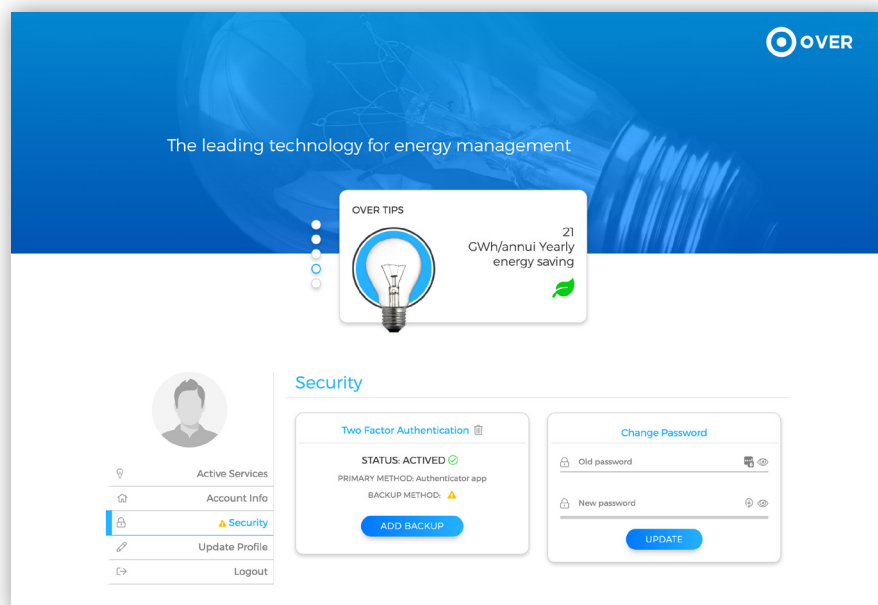
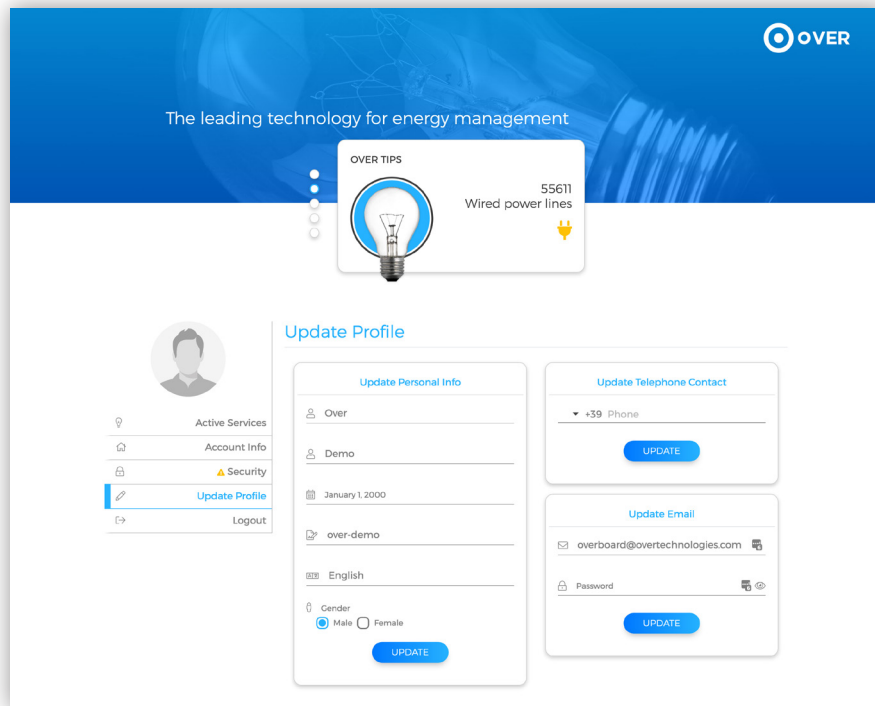


Figure 2.3

The Update Profile (Figure 2.4) section contains the following:

- Personal data modification
- Phone number modification
- E-mail address modification



The screenshot displays the OVER software interface. At the top, a blue header features the OVER logo and the tagline "The leading technology for energy management". Below the header, a "TIPS" box shows a lightbulb icon and the text "55611 Wired power lines". The main content area is titled "Update Profile". On the left, a sidebar menu includes "Active Services", "Account Info", "Security", "Update Profile" (highlighted), and "Logout". The "Update Profile" section is divided into three panels: "Update Personal Info", "Update Telephone Contact", and "Update Email". The "Update Personal Info" panel contains fields for "Over" (name), "Demo" (username), "January 1, 2000" (date of birth), "over-demo" (email), "English" (language), and "Gender" (Male/Female). The "Update Telephone Contact" panel has a "+39 Phone" field. The "Update Email" panel has an "overboard@overttechnologies.com" field and a "Password" field. Each panel has an "UPDATE" button.

Figure 2.4

3. HOME PAGE

After logging in OBOARD service, the User will land in the HOME page (Figure 3.1). The navigation bar on the top changes according with the allowed features for the specific User. It is composed by 4 tabs over than the settings and User pages.

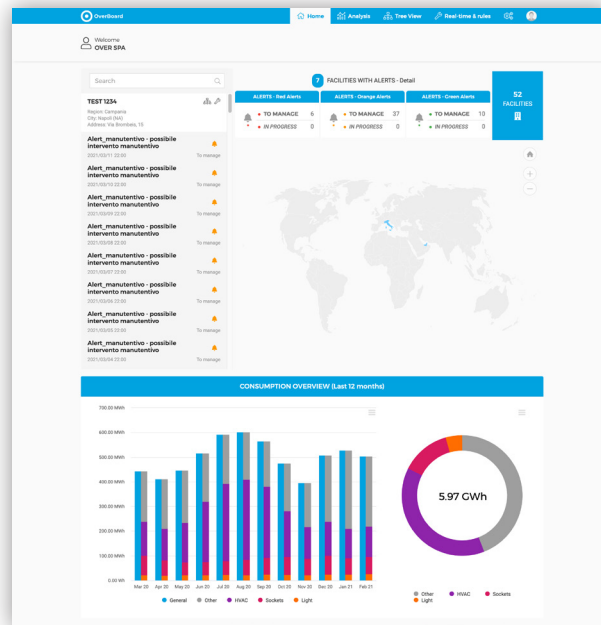


Figure 3.1

The HOME page is divided into the following functional areas:

- An interactive map illustrating all plants associated to the User with eventual alert status (the management of alerts depends by User and the Project) (Figure 3.2).

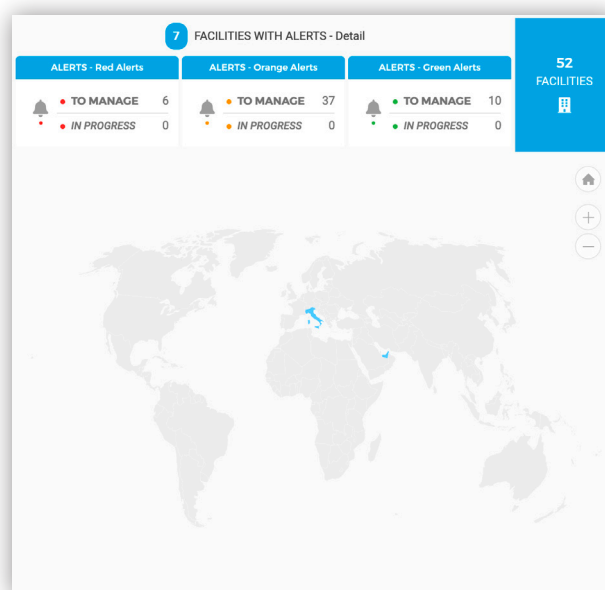


Figure 3.2

- A list of associated plants with a search filter by name and/or address (Figure 3.3).

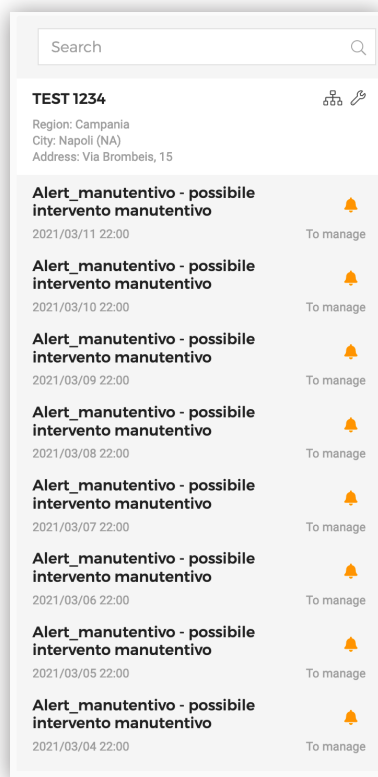


Figure 3.3

- A bar chart and pie chart illustrate the consumption overview of all plants associated to the user during last 12 months (Figure 3.4).

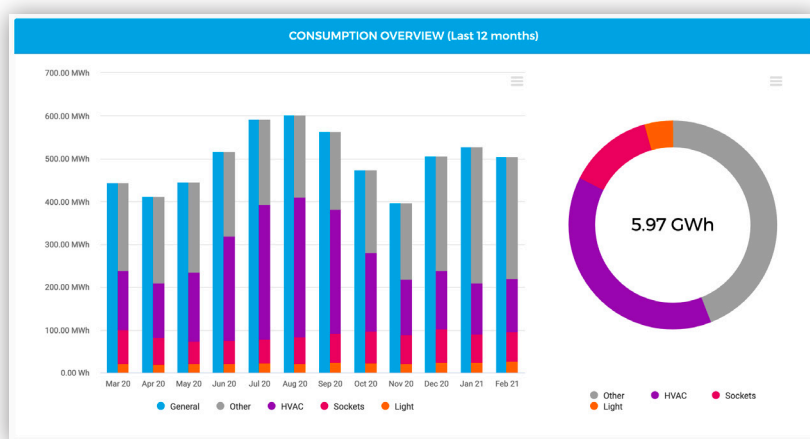


Figure 3.4

4. ANALYSIS

4.1 GLOBAL ANALYSIS

The Analysis section presents two different routes to click on - Global Analysis and KPI Analysis.

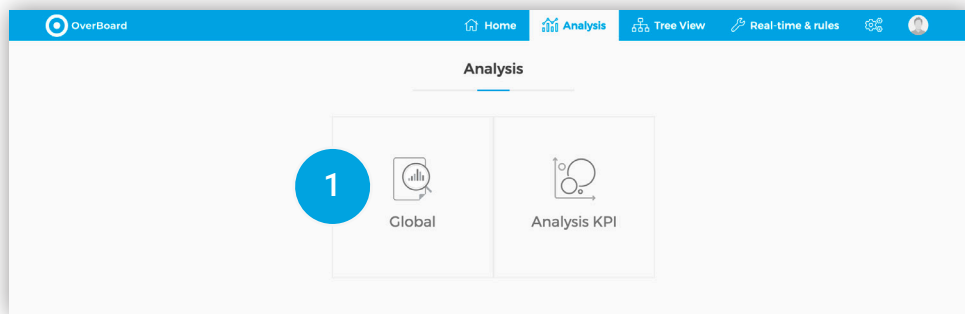


Figure 4.1

By selecting Global Analysis (Figure 4.1 – box 1), the User can search for all the associated plants through various search filters (Figure 4.2).

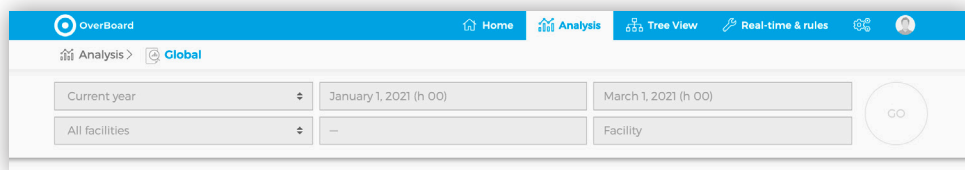


Figure 4.2

Monthly, daily and hourly granularity is available to consult the historical consumptions, timeslot filtering with the suggested periods (last full month, last full year) or with customized one is also allowed (Figure 4.3). The historical consumption can be shown by plant or grouped by city, region, district, or custom clusters (Figure 4.4). The electric bills can be moreover uploaded to be compared with electrical historical data (optional).

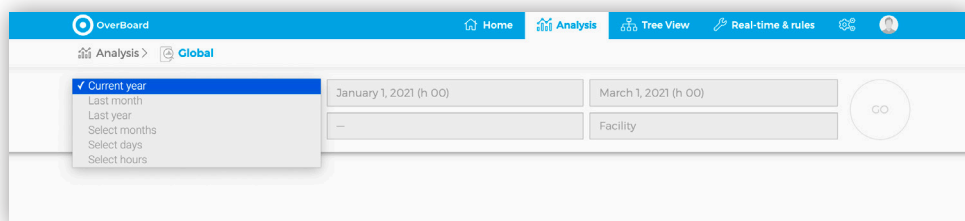


Figure 4.3

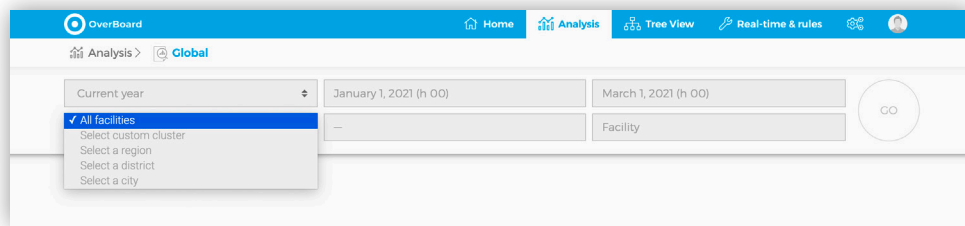


Figure 4.4

When criteria is selected through the various filters, in case of a single plant is chosen, the following charts will be presented in the section on the right (Figure 4.5 box 2):

- Active Energy
- Active Energy/sqm
- Active Energy/used sqm
- Power factor (Cos Phi)
- Peak Power

The left section (Figure 4.5 box 3) presents the average consumption of the selected data in the specified period (demarcated on the right by box 2), the equivalent value of CO2 emitted, the total consumption as well as the total consumption as it is divided across the specified time slots (F1, F2, F3) and their associated percentages.

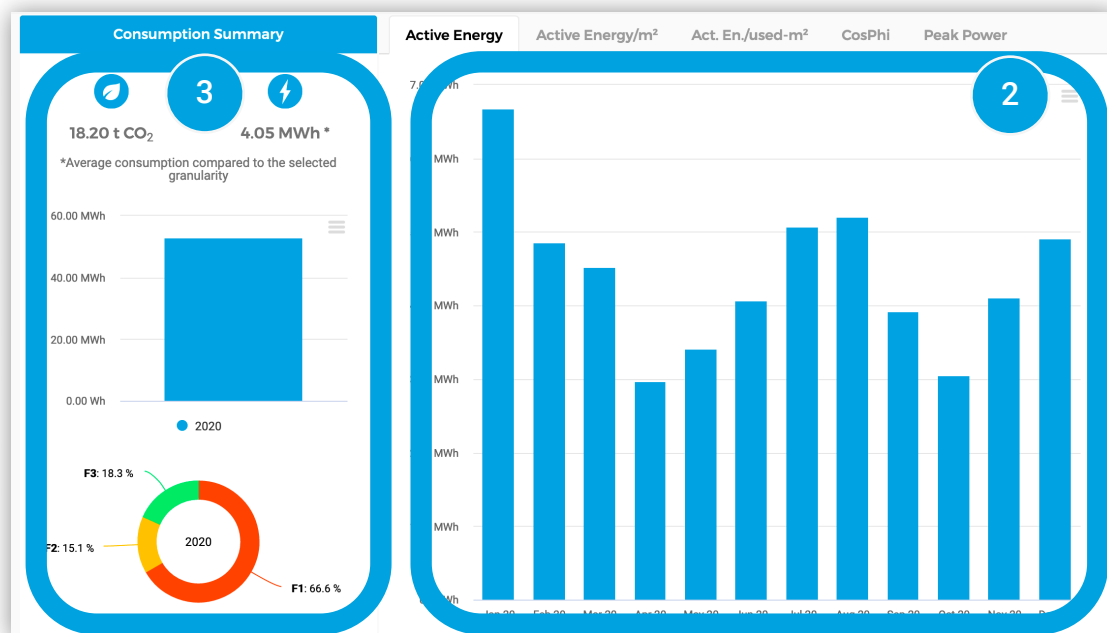


Figure 4.5

The graph layout changes when multiple plants or "plant clusters" are selected. The average consumption of the following three KPIs (Figure 4.6) are shown:

- Active Energy
- Active Energy/sqm
- Active Energy/sqm used

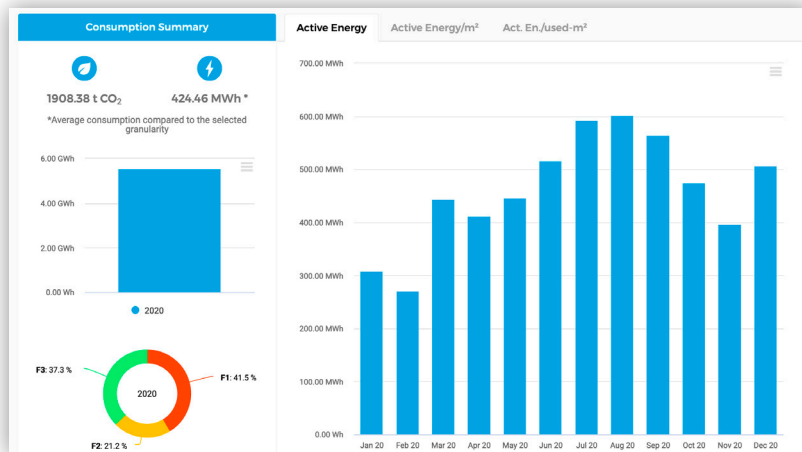


Figure 4.6

After the charts shown in Figure 4.5 – Figure 4.6, a table shows the total consumption for the selected period, divided by time slot, maximum power, active energy/sqm and power factor (Cos Phi) for the three slots (Figure 4.7, box 4) and compared with the same period of two previous years (if applicable).

After this table, the electrical consumption is also illustrated with the energy clusters breakdown chart (Figure 4.7 box 5) as well as the environment data, in particular internal and external temperature measurements (Figure 4.7 box 6).

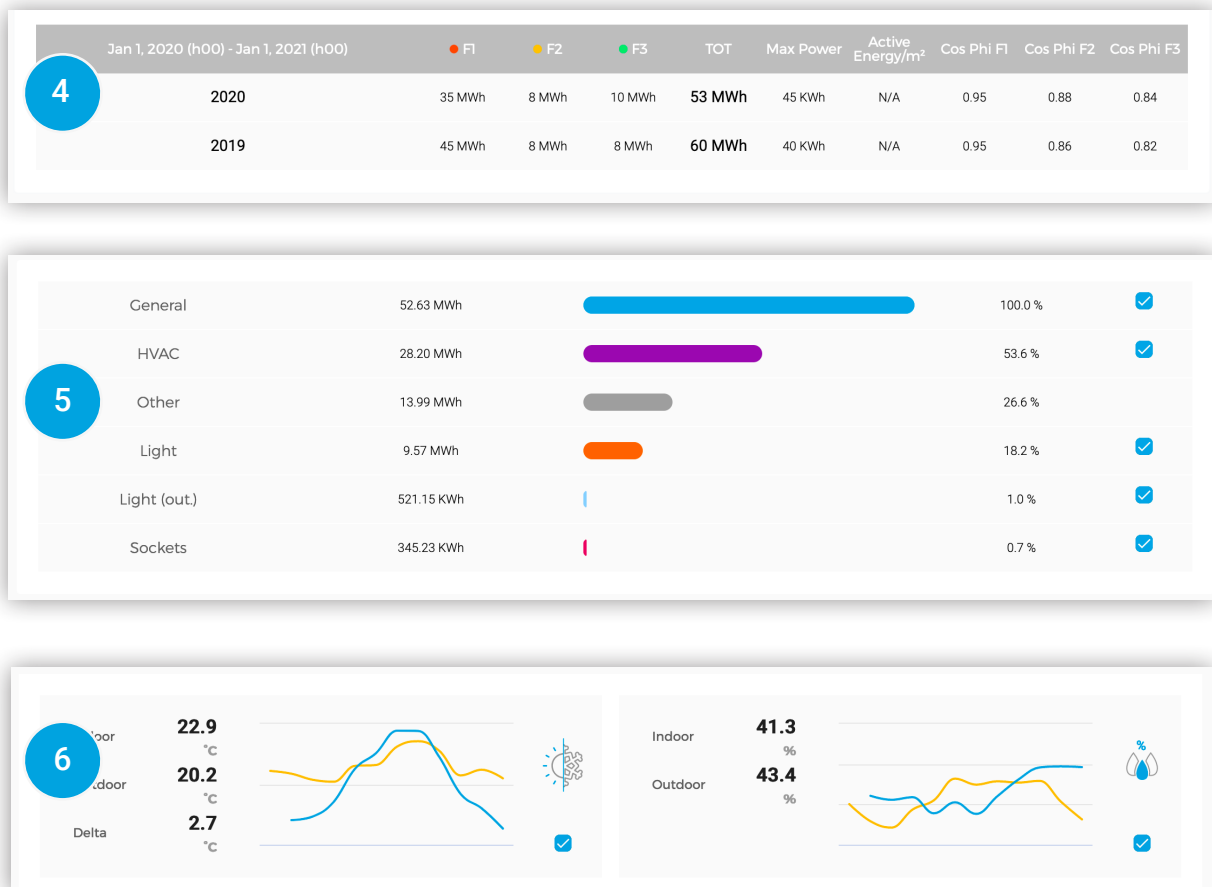


Figure 4.7

The energy cluster consumptions are also possible to see with bar charts (Figure 4.8) selecting the ones the User prefers to see checking the proper boxes of Figure 4.7 box 5. Environment data can be also overlapped on this chart checking the proper boxes in Figure 4.7 box 6. By default, all parameters are checked.

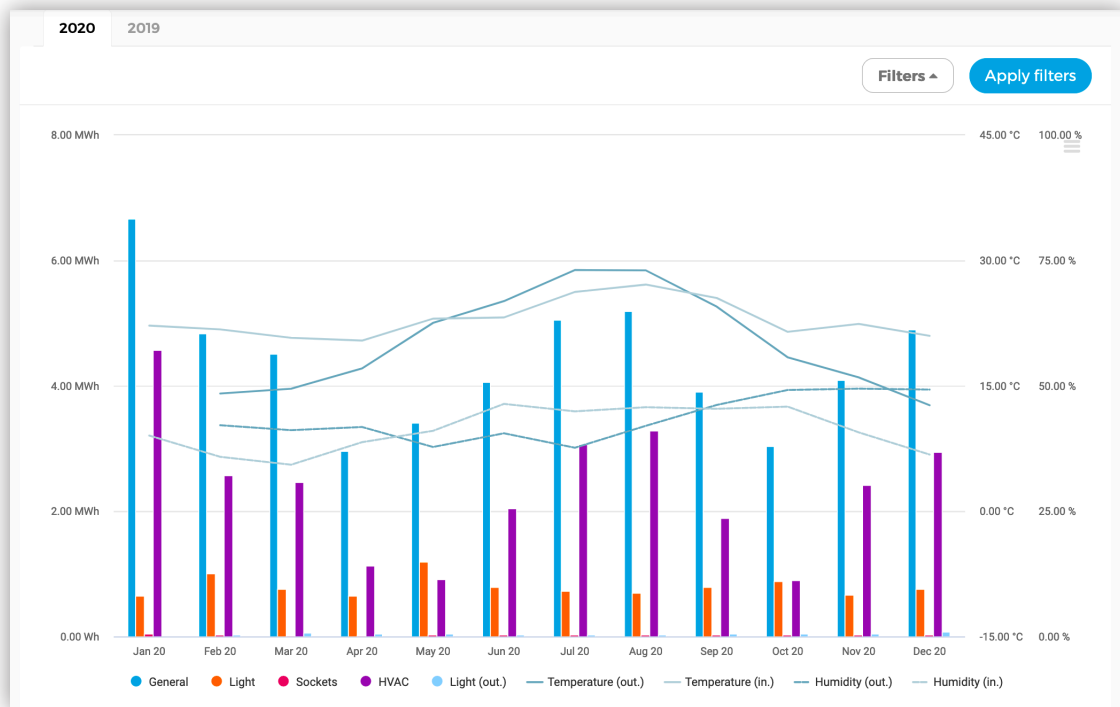


Figura 4.8

In this section, the monitored air quality parameters given from OSensors are shown. This area will be available only in case OSensors are installed in the plant. The table reports the following parameters:

- CARBON MONOXIDE
- EQUIVALENT CARBON DIOXIDE
- FORMALDEHYDE
- PARTICULATE MATTER 1
- PARTICULATE MATTER 10
- PARTICULATE MATTER 2.5
- ATMOSPHERIC PRESSURE
- VOLATILE ORGANIC COMPOUNDS

The card colors easily indicate the nature of the parameters, namely if they come from INDOOR or OUTDOOR OSensors. The reported values in the tab show the average values in the selected timeslot, indicating also the number of collected measures in that period.

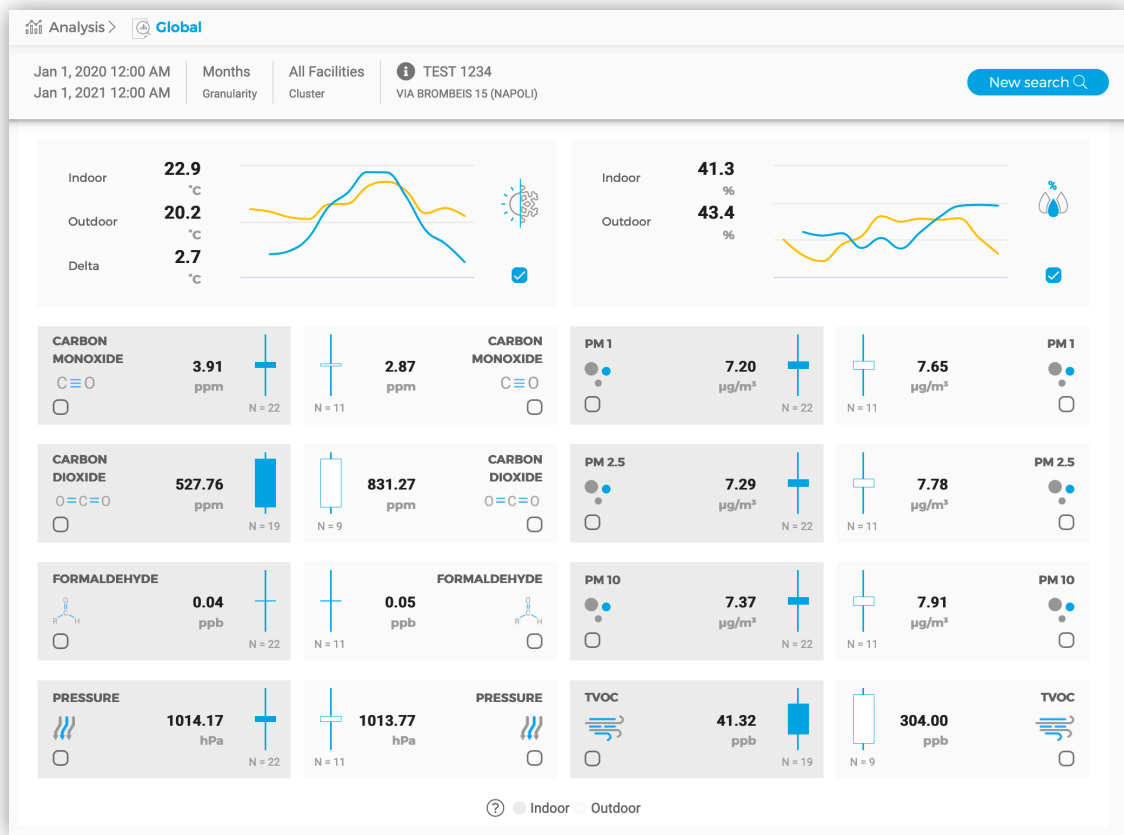


Figure 4.9

The Global Analysis tab continues with an HVAC energy cluster chart (Figure 4.10), **available only for single-plant selections and Monthly granularity**. In particular, this graph shows the HVAC cluster consumption in relation to temperatures (tab "Real HVAC") and a second chart using this time the HVAC normalized one (tab "Normalized HVAC"). The two charts report moreover the respective values comparing the data of the current year with the same of the last two years (if applicable), in order to evaluate the energy behavior of HVAC systems during the years with similar outdoor conditions. The normalization is based on approach of "Fabbisogno Energetico Normalizzato", that is defined by Italian Law n. 10/91 as (Heating Electric Energy) / (Volume of the plants * Heating Degree Days). The Heating Degree Days are computed directly by the Overboard taking into account the installed outdoor sensor(s) on the plant and the customized reference temperature (20°C by default).

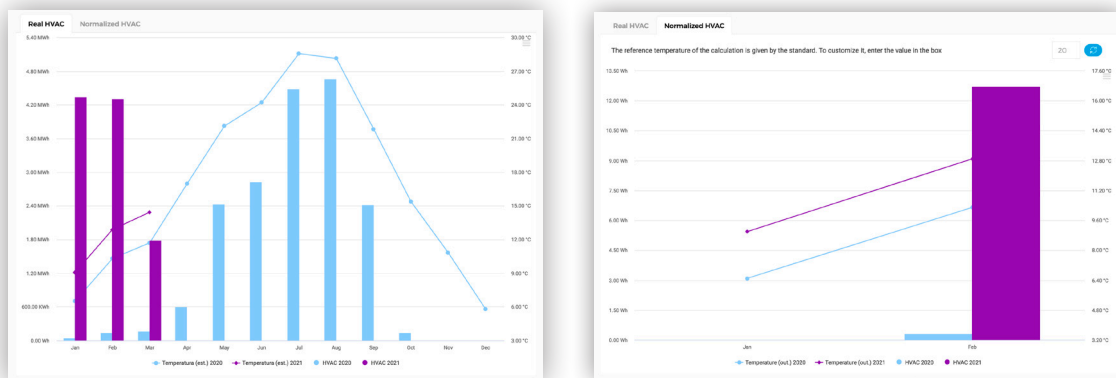


Figure 4.10

The Section goes on with the average hourly distribution of consumption (Figure 4.11), shown only for a single plant search, and the annexed KPI (F2 + F3)/F1 with the breakdown of the individual consumption clusters LIGHTS, HVAC and FM per individual time slot are displayed. The filter on the top allows to choose the preference about the temporary selection of data (working days, Saturdays, Holidays).

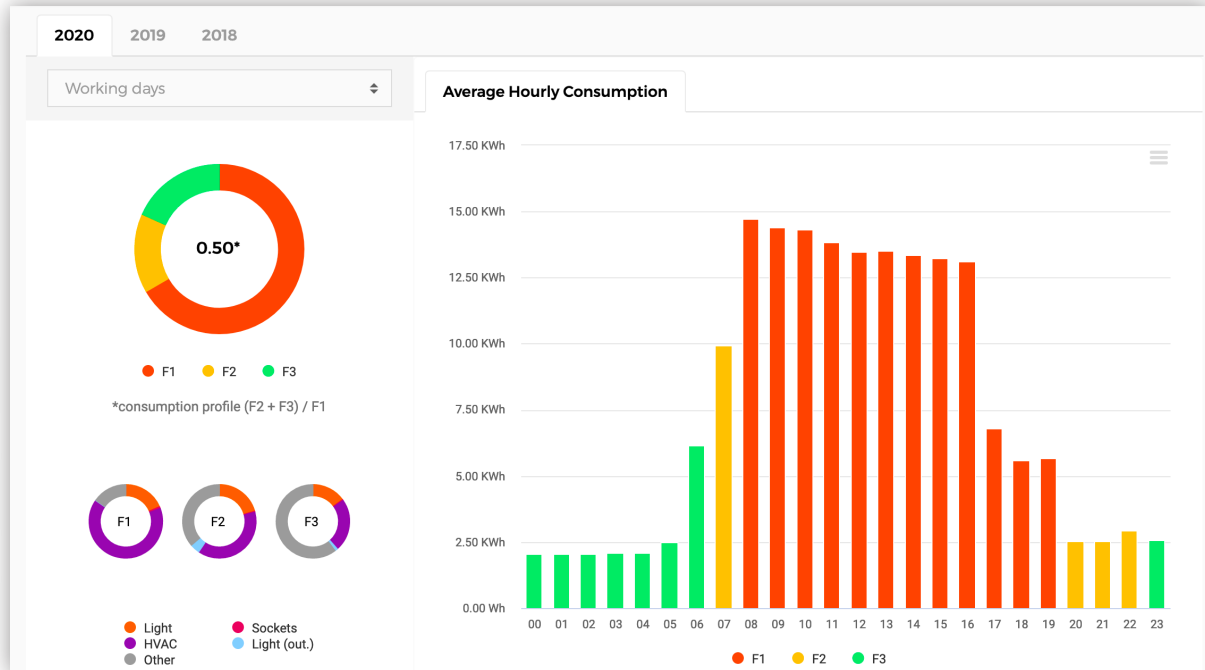


Figure 4.11

SITE-PARAMETERS LOGGING

Site-Parameters logging is available in the foot of the Global Analysis only for **single-plant selections**. All the events relating to the changes made to the site's characteristic parameters are shown on the energy consumption graphs (Figure 4.12). By clicking on the info-box the User can see the details of the selected change, that are the Modified Parameters (area, used area, n. of people), the Data, and the User who carried out this operation. At the bottom of the page, the User can find the changelog (Figure 4.13) and add a new parameters modification (Figure 4.14).

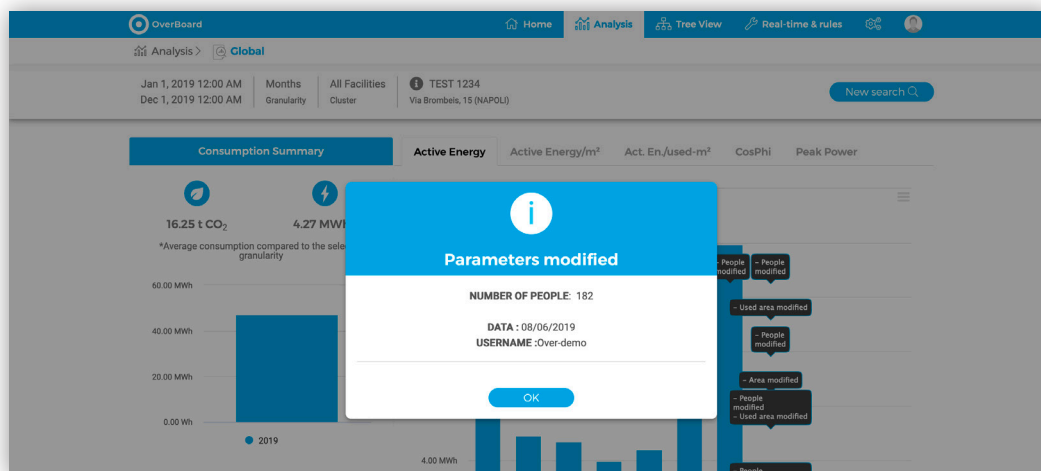


Figure 4.12

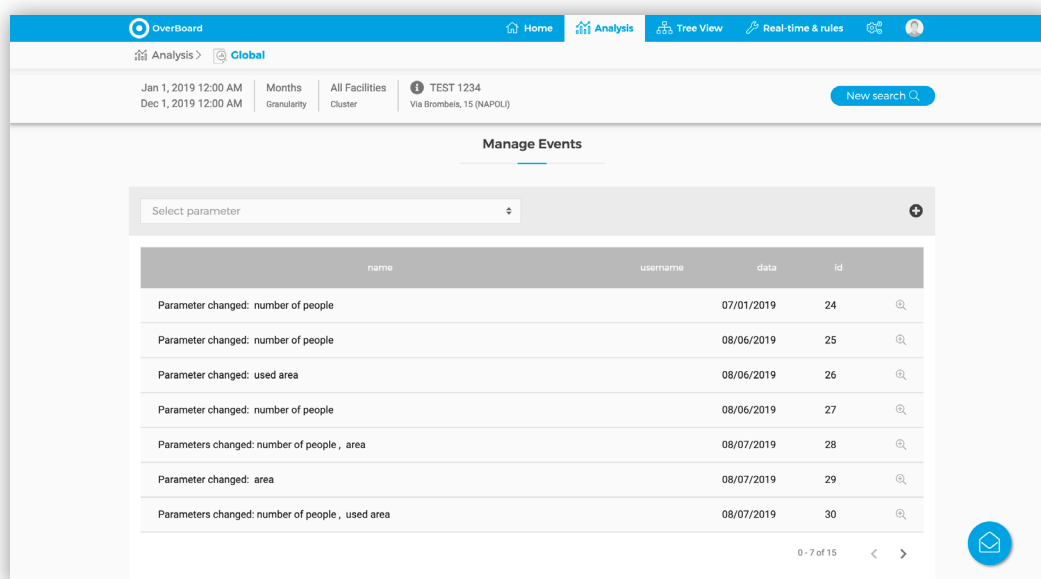


Figure 4.13

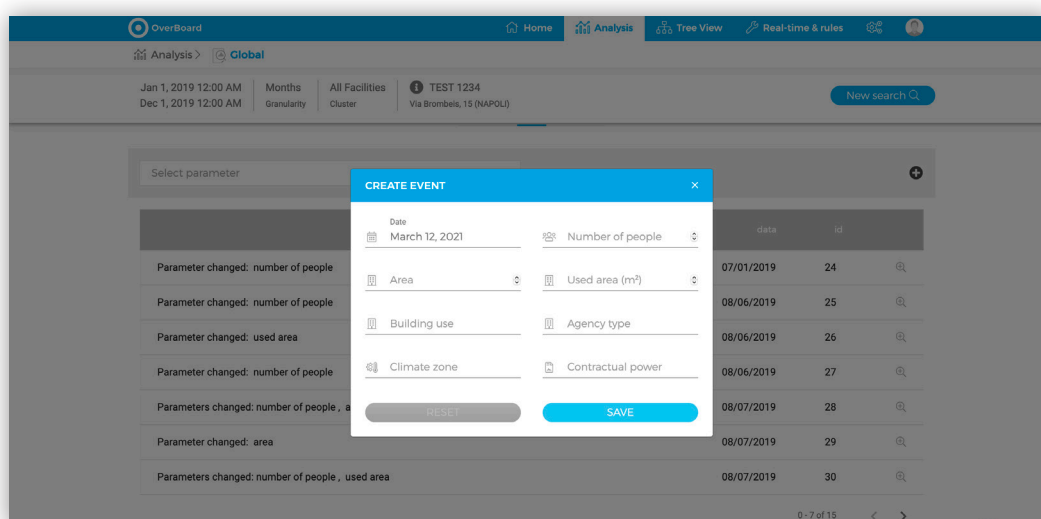


Figure 4.14

4.3 KPI ANALYSIS

The second route of Analysis tab is the KPI Analysis (Figure 4.15 box 7), in which the consumption are analysed by default KPIs or new ones customized by the User.

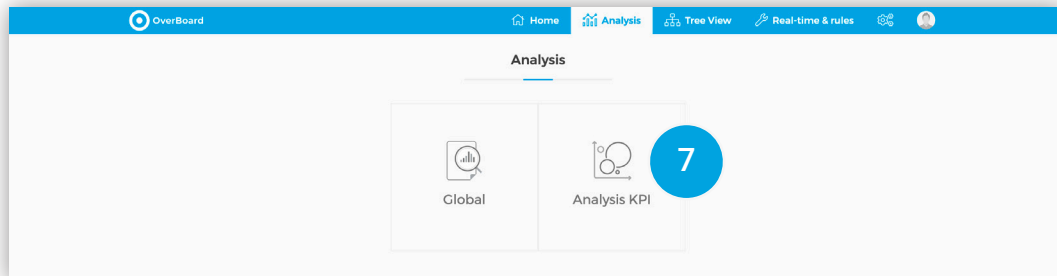


Figure 4.15

Similarly to what this manual shown for the previous tab, the User can select the granularity of the consumption and the plant/plants for the analysis (Figure 4.16), or eventually select/deselect manually one or more buildings using the proper checkboxes (Figure 4.17).

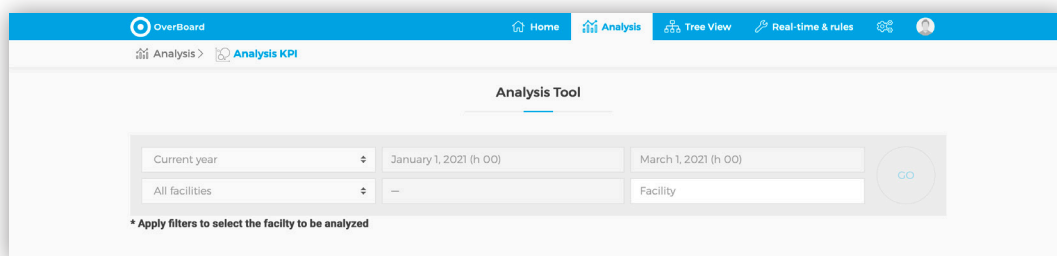


Figure 4.16

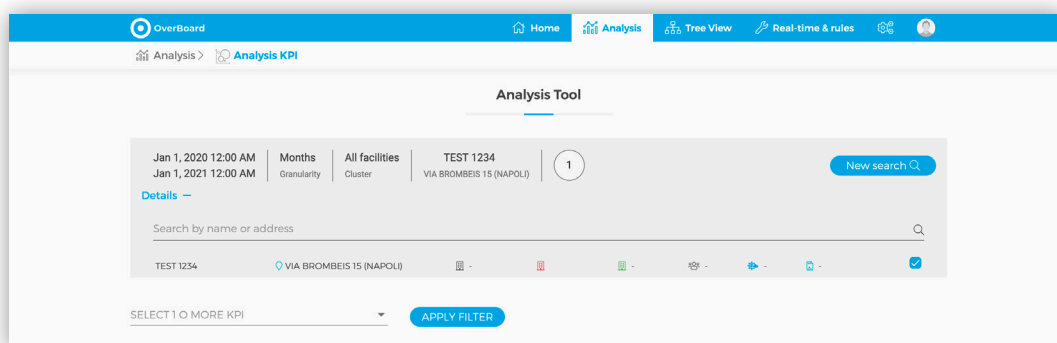


Figure 4.17

Finally, the User can choose one or more KPIs. The consumption will be shown depending on the selected KPIs:

- 1 KPI: horizontal bars chart (Figure 4.18 box 8)
- 2 KPI: a scatter chart in which the value of dots represents the surface of the plants (Figure 4.19 box 9)
- 3 or more KPI: radar-shaped representation (Figure 4.20 box 10)

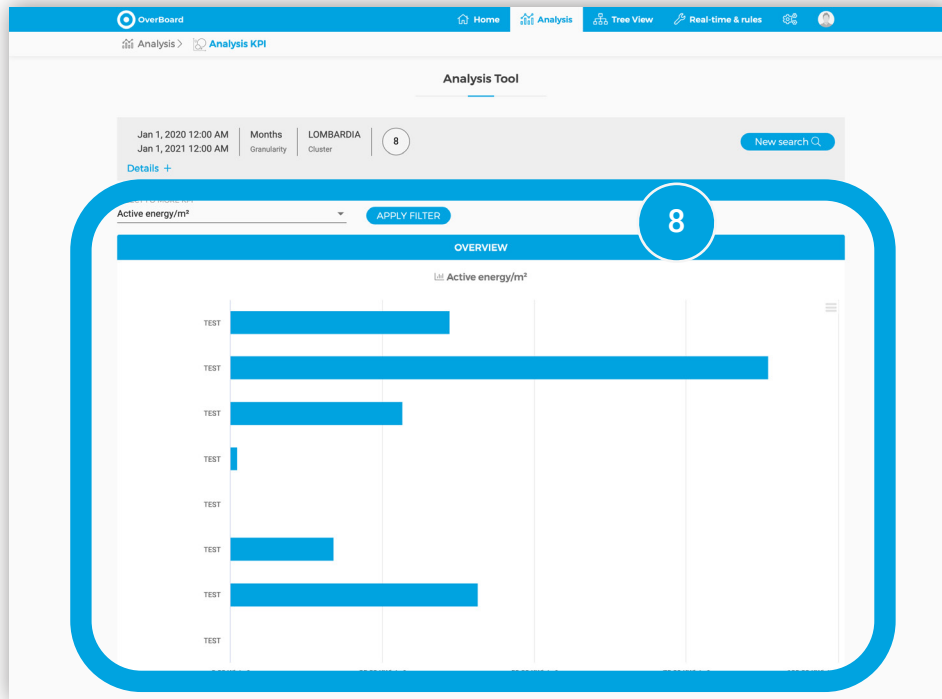


Figure 4.18

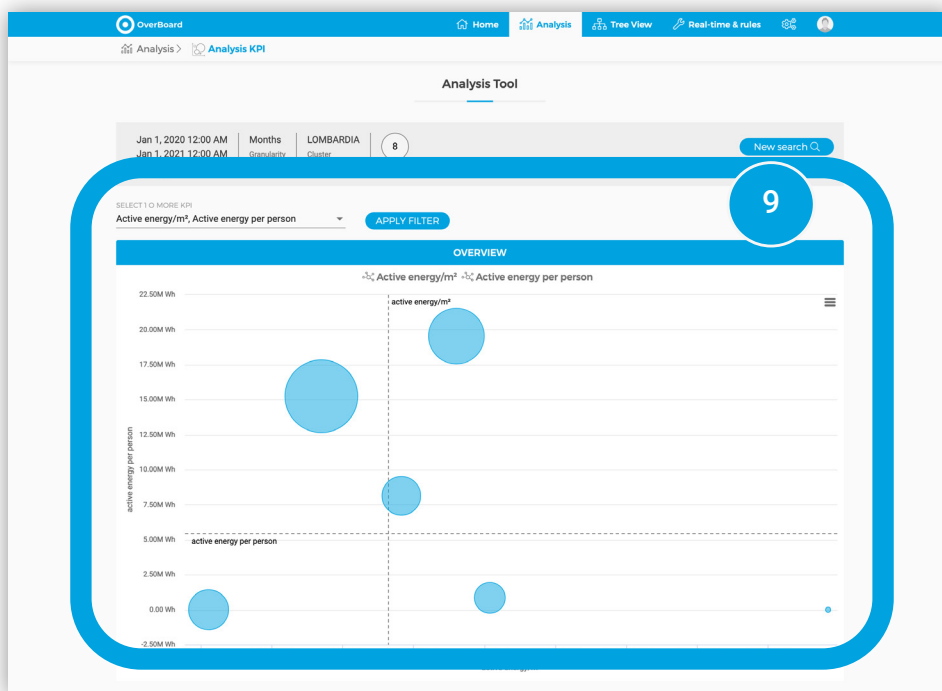


Figure 4.19

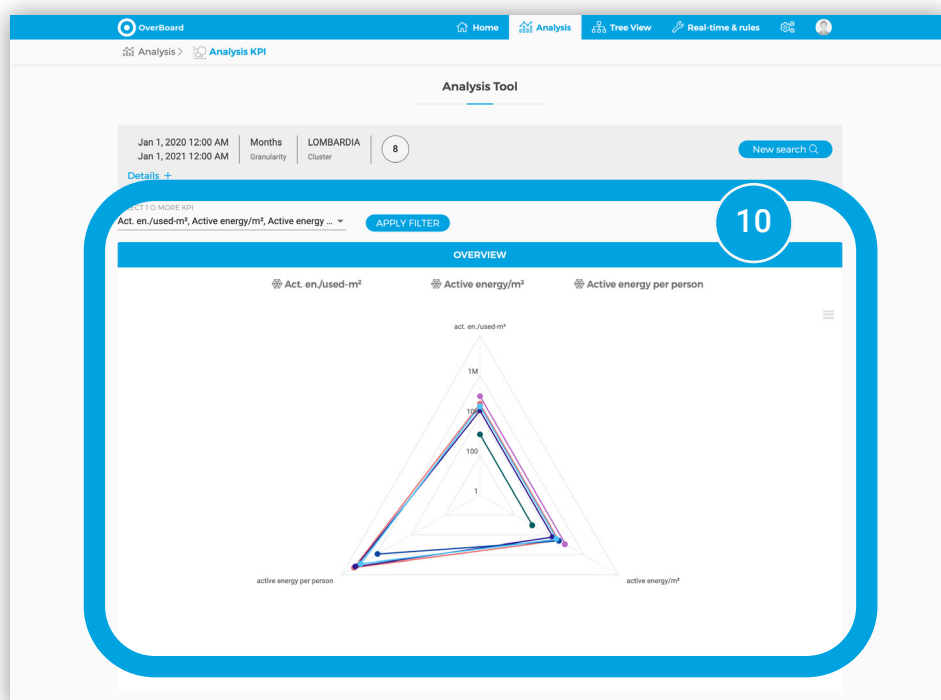


Figure 4.20

5. TREE VIEW

The TREE VIEW section shows a hierarchical diagram of the entire plant and the monitored lines. This allows each user to monitor individual devices and individual power lines, as well as to create custom graphs including or not including lines of interest. The search filter in this case is relative and dedicated to a single installation (Figure 5.1).

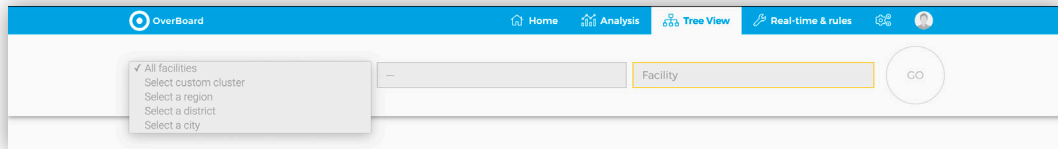


Figure 5.1

Once the search has been carried out, the platform shows the hierarchical tree (Figure 5.2) through which it is possible to navigate the single nodes of the plant. By right-clicking on one or several lines and indicating the reference period with the same criteria previously illustrated for the Analysis section, the graph of illustration is provided for the data associated with it. The User can export the graphical data in CSV or Excel format, or directly export the Png (Figure 5.3).

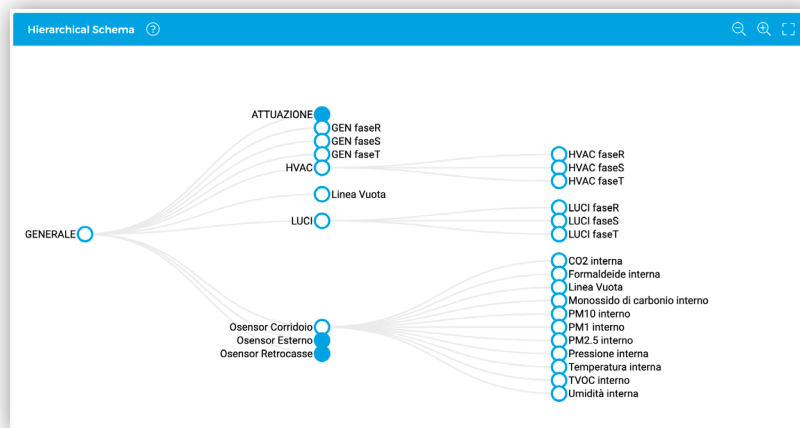


Figure 5.2

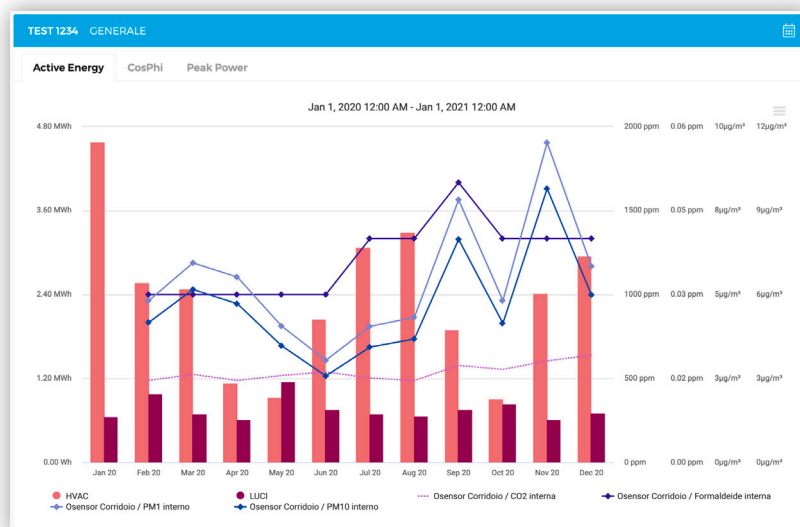


Figure 5.3

6. REAL-TIME AND RULES

The Real-Time function of the Overboard enables the user to connect "live" to the devices installed in a given plant. Meaning, a user can – in real-time – monitor consumption as well as modify pre-existing or create new e-rules that once saved will embed instantaneously as an active logic for actuation or alerts going forward. E-rules can be paused, deleted or created at any time or adjusted to account for external parameters (such as time, humidity, TVOCs, etc) at any time.

6.1 OVERVIEW

The first section in the real-time tab is an overview that shows data on (Figure 6.1):

- Energy consumption divided by cluster
- External temperature and humidity
- Internal temperature and humidity
- Number of active rules
- Number of alerts generated by the rules
- Connection status

In case of large buildings the right part will show the connection status to every single area, as shown in (Figure 6.2)

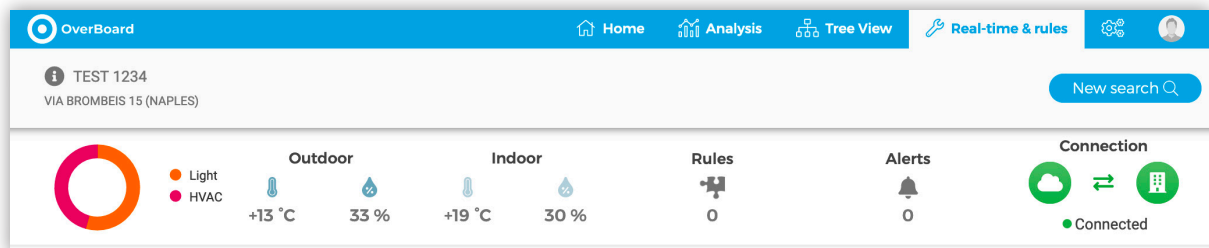


Figure 6.1

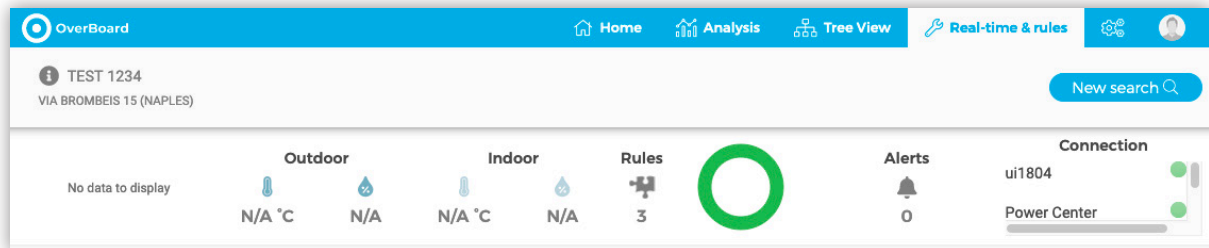


Figure 6.2

6.2 MONITORING AND DATA ON REAL-TIME CONSUMPTION

Following the summary provided by the overview section, the real-time trend graph (Figure 6.3 A) of monitored power lines is shown.

In the upper part through a drop-down menu (highlighted in the image) you can choose between lines of monitoring only or lines of actuation, in order to filter the list below, it is possible to sort this list by the name of the line, or for the value connected to it, in ascending or descending direction (using the two icons next to the padlock in the top bar).

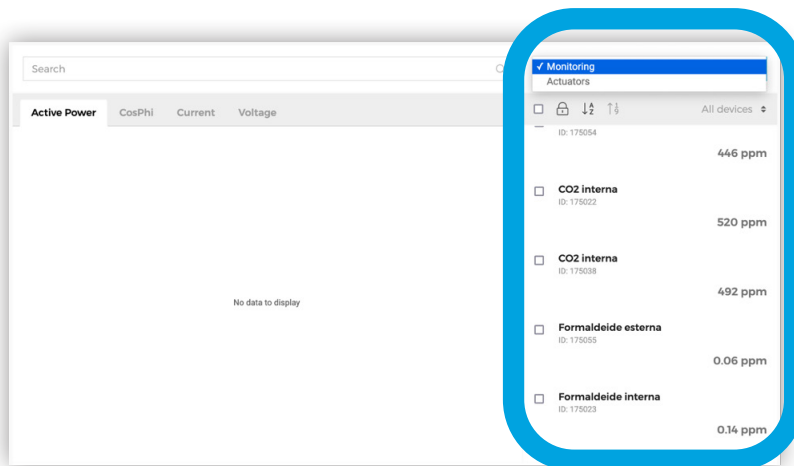


Figure 6.3 A

A line that can be implemented has a command for the on-off control next to the check for selection, but it must be unlocked using the padlock next to the control for the single line or in the bar above for all the lines present in the top of the right list (figure 6.3 B)..

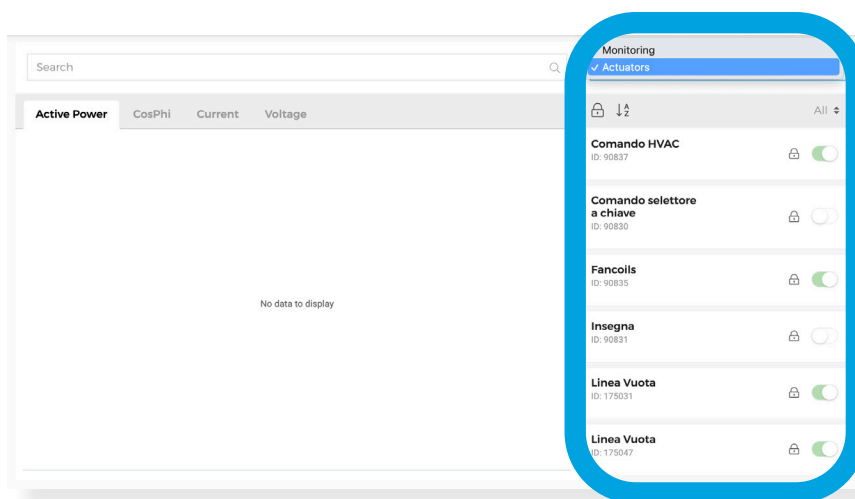


Figure 6.3 B

The selection of the lines to be displayed on the central graph is done through the ticks next to their name. You can view the consumptions of all the lines simply by using the check mark at the top of the list (indicated by the arrow in the figure below).

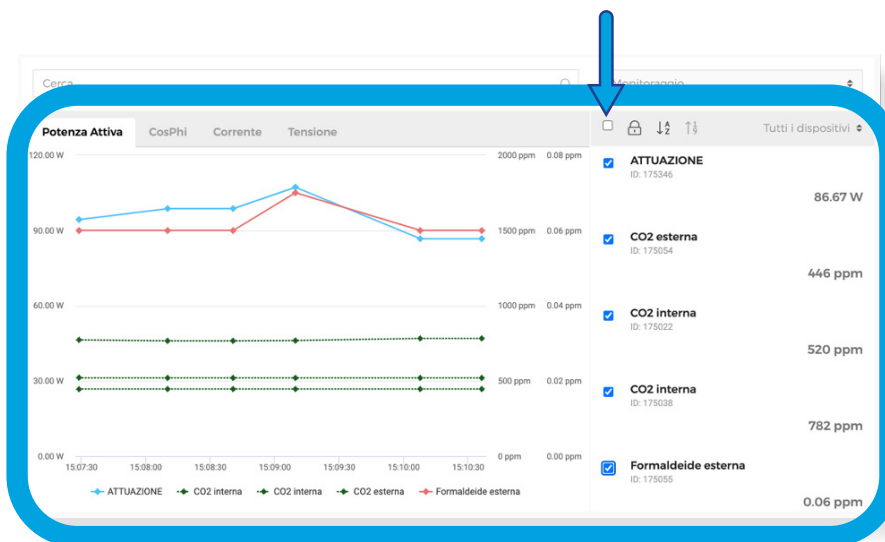


Figure 6.4

The selection of the lines to be displayed on the central graph is done through the ticks next to their name. You can view the consumptions of all the lines simply by using the check mark at the top of the list (indicated by the arrow in the figure below).

6.3 SMART HVAC

In this section the user can use artificial intelligence built into the system.

It learns from past behavior on the basis of historical data, reference temperature, and automatically establishes the advance of the system start-up, keeping the ignition logics of the controlled machines.

The user can modify and manage settings previously created by the operating CONTROL ROOM, which guarantees process supervision in order to control the correct start-up phases of the machine. Figure 6.5 (2) shows all available settings on the system when launching the page.

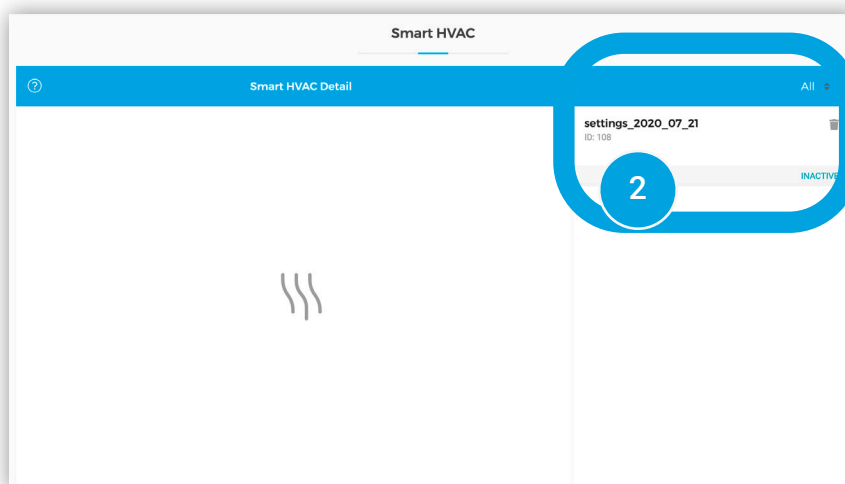


Figure 6.5

In this section, Figure 6.6 shows the possibility to modify a specific setting. Based on the selected setting, the user can edit (3):

- First starting time
- Target time to reach the desired temperature
- The date range in which that setting must be active by default
- Target temperature
- Days of the week
- Preferences to skip holidays

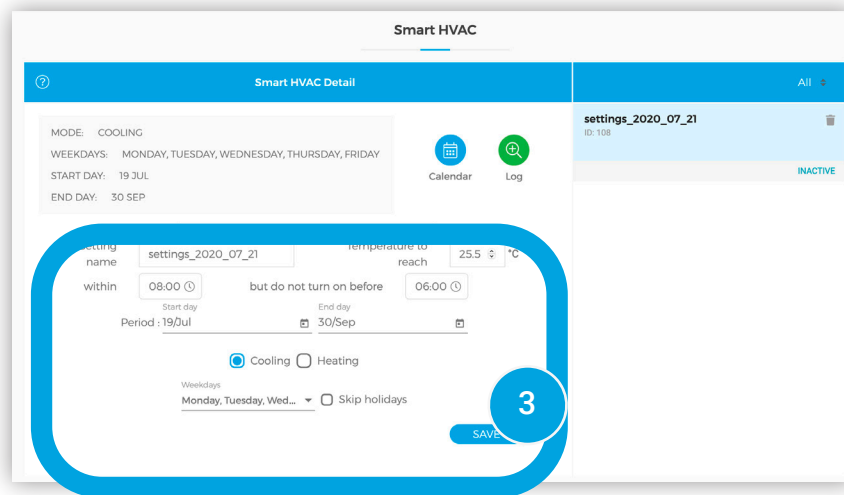


Figure 6.6

6.4 RULES EDITOR

The simplicity and intuitiveness of this instrument allow the autonomous and personalized management of all measured parameters at infinite levels, thus ensuring maximum flexibility for the instrument made available to the user. Through an editor, rules can be created, modified, and managed by constructing potentially infinite logics (Figure 6.7).

The new rule button opens a window in which the possible puzzle pieces that can be joined are displayed to create the desired operating logics. Parameters can be combined across:

- Events (Figure 6.8)
- Conditions (Figure 6.9)
- Actions (Figure 6.10)
- Operators (Figure 6.11)

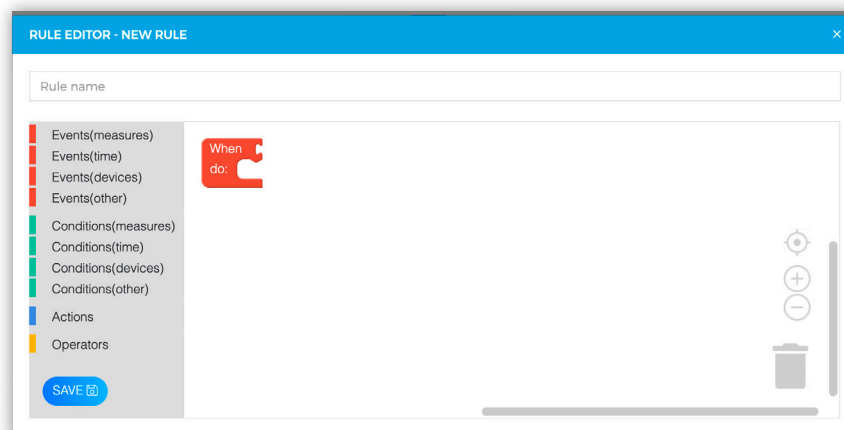


Figure 6.7

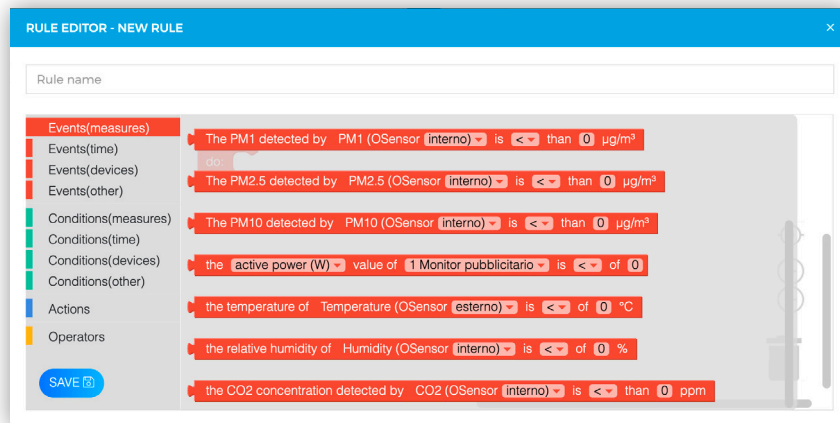


Figure 6.8

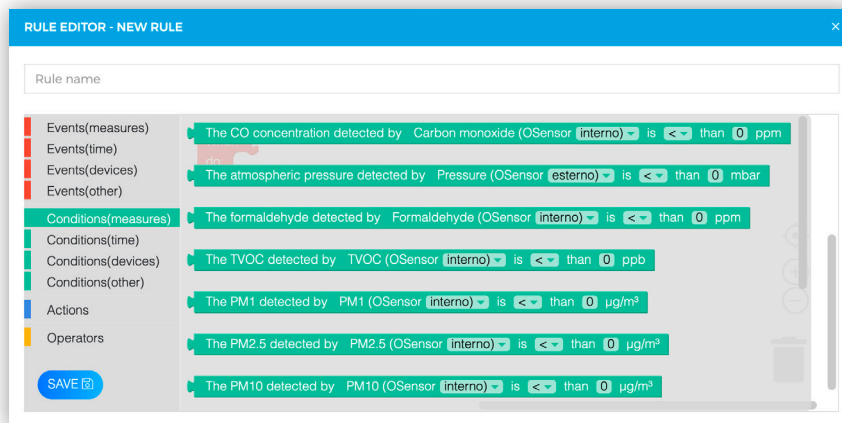


Figure 6.9

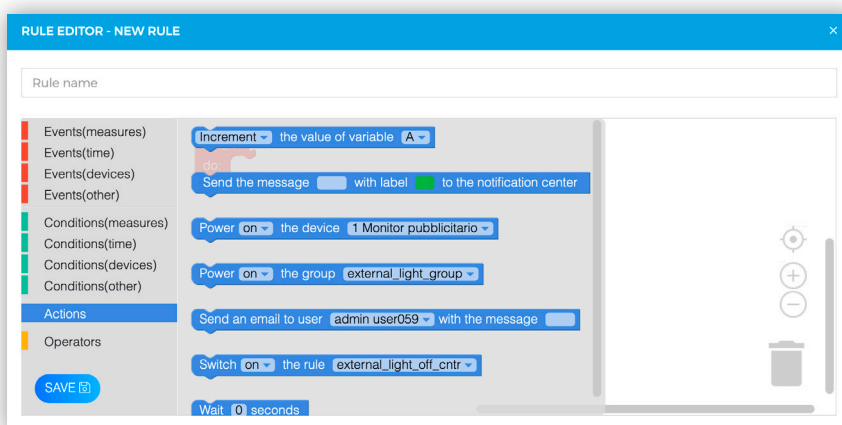


Figure 6.10

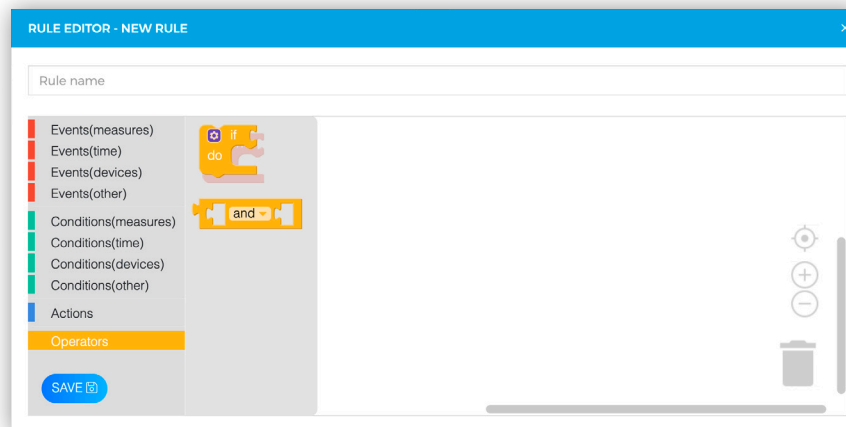


Figure 6.11

After creating the logic to be used, the rule can be saved under an identifying name so that it can then be reused on other systems. The complexity can be raised to infinite levels like the example shown in the next figure, guaranteeing the complete automation of the process (Figure 6.12).

In case of large buildings there will be a menu on the left from which the user can choose a single area and see the related rules, shown in (Figure 6.12).

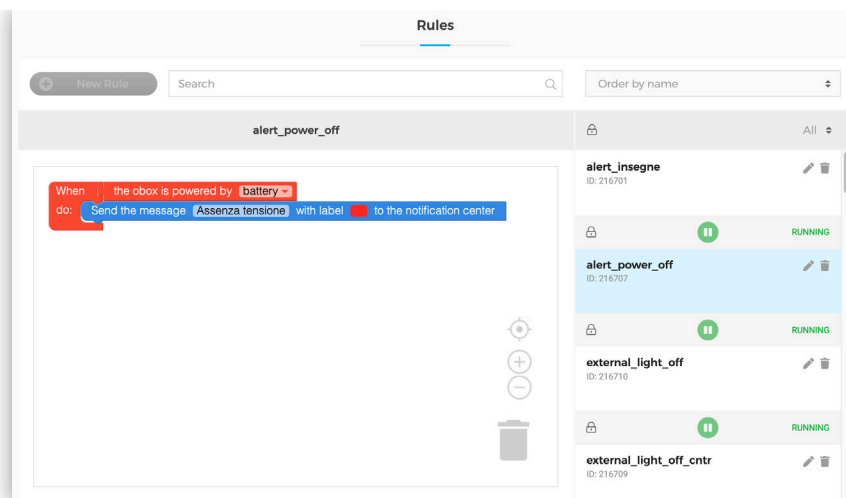


Figure 6.12

6.5 ALERTS

Alerts play an essential role in tracing the overall state of a plant and to have monitors always-active in the field. The latter are created through the rules and can be managed in this section (Figure 6.13, 6.14). An alert can be categorized (Figure 6.15) as To Be Managed, In Management, or Archived, for easier resolution and analysis.

Each alert can be archived or modified and changes can be traced with user messages. This mechanism keeps a history of each alert, which can be consulted after having selected it in the dedicated section. It is therefore also possible to archive an alert, after which the alert is no longer shown on the Home Page (Figure 6.16).

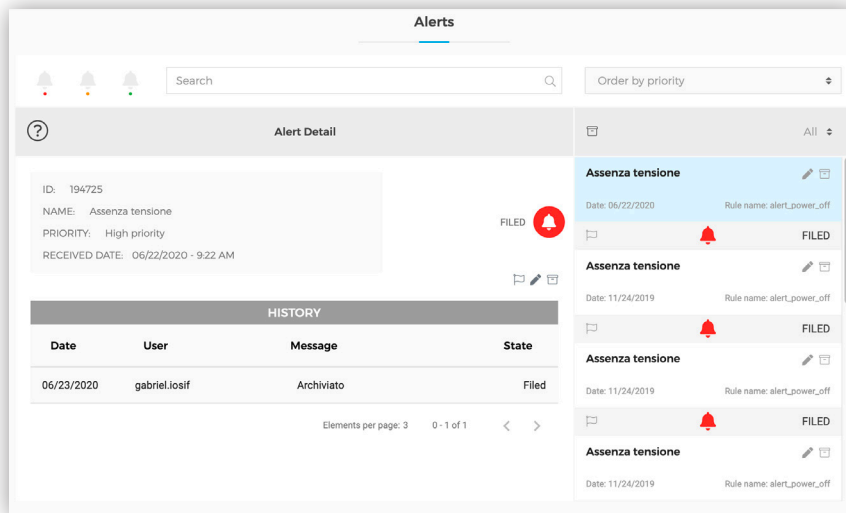


Figure 6.13

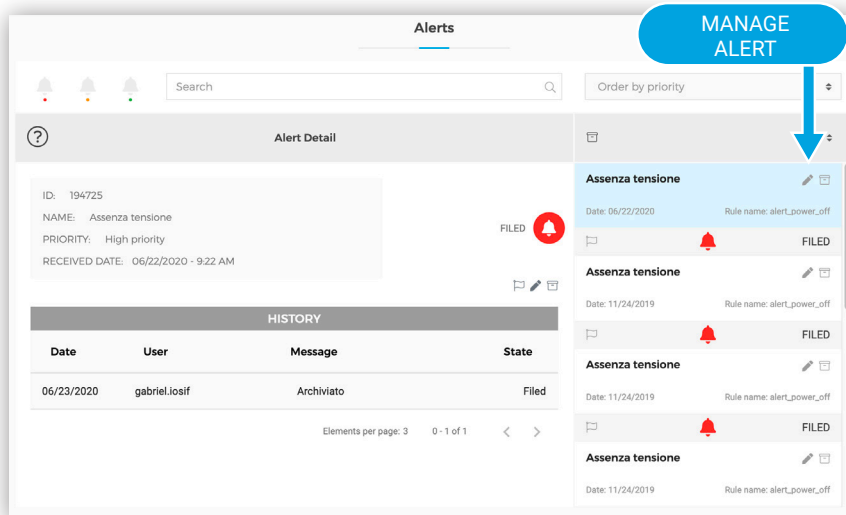


Figure 6.14

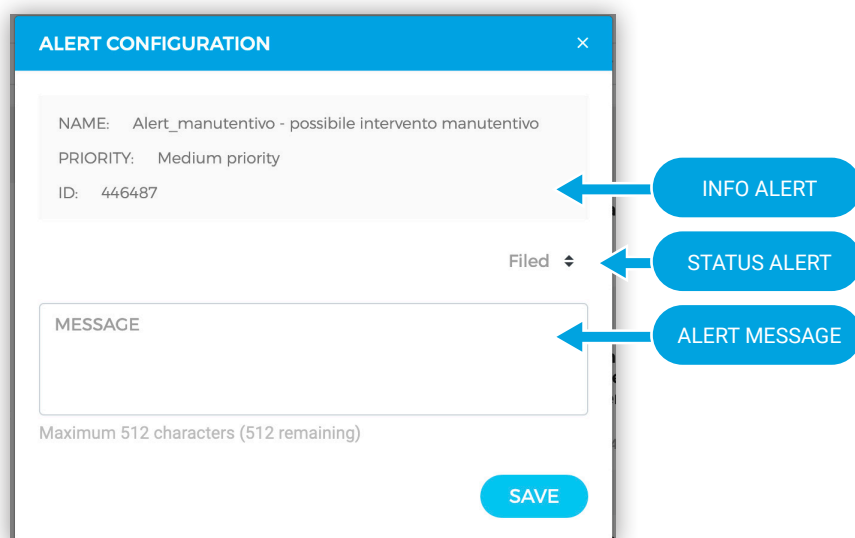


Figure 6.15

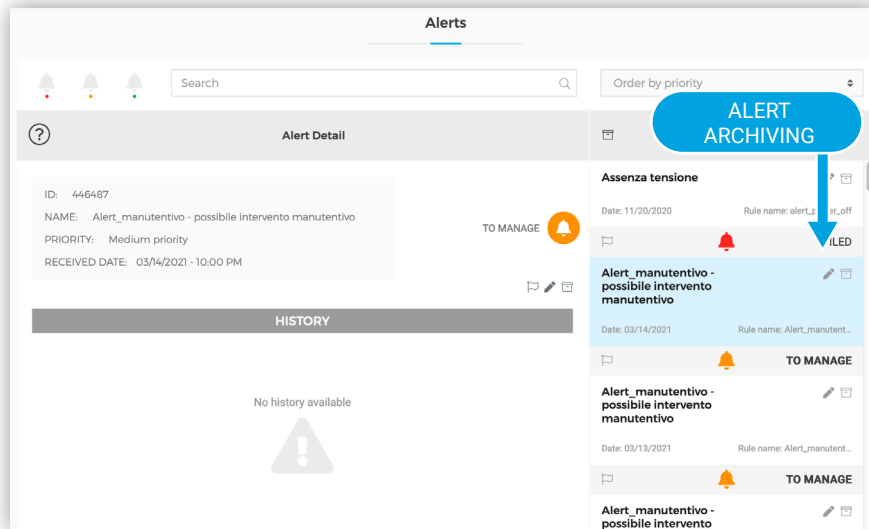


Figure 6.16

7. SETTINGS

This section provides five Setting and Export preference options –as displayed below in figure 7.1.

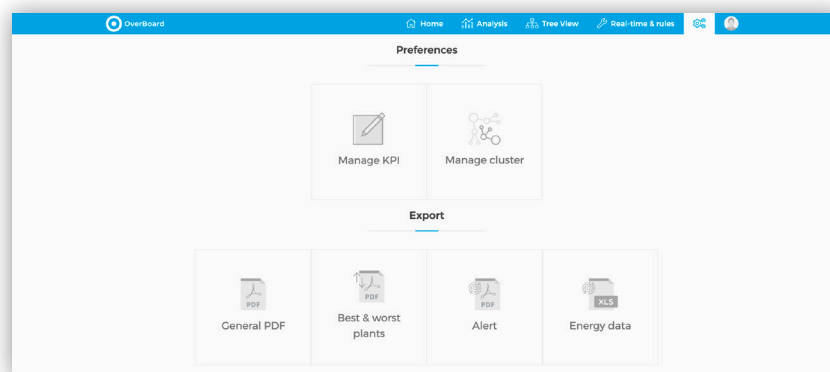


Figure 7.1

7.1 GENERAL EXPORTING

Selecting "General" will load a page showing an automated data report. The comparison available shows the extrapolation of the data per month over the course of the current year of the assigned plant (Figure 7.2).

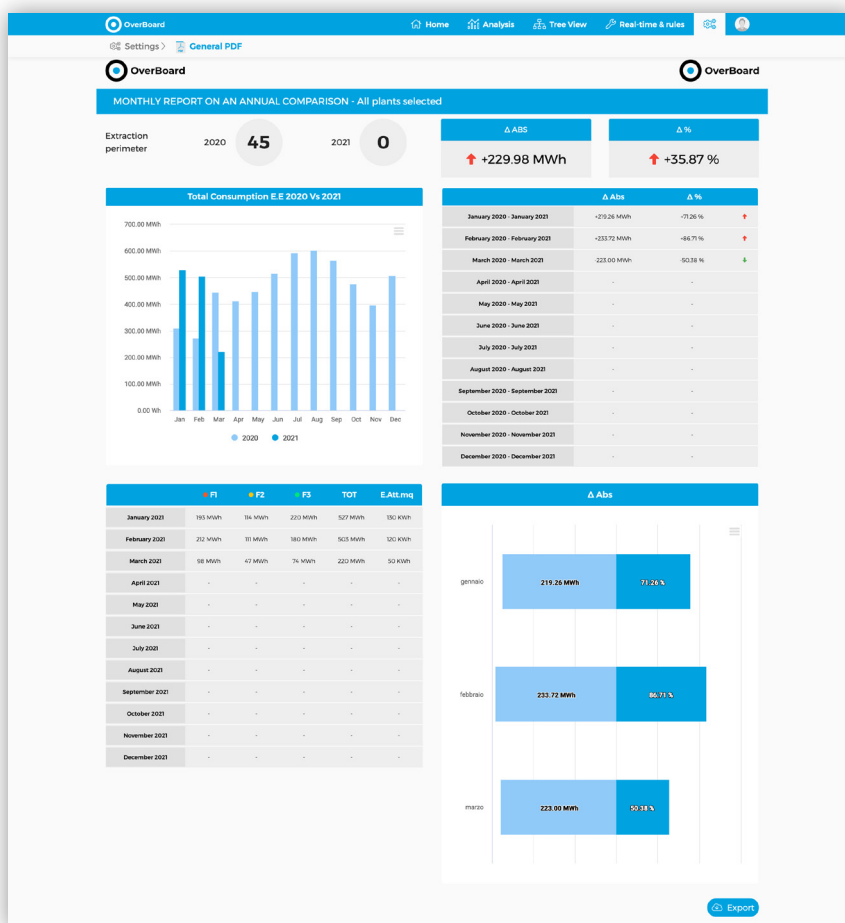


Figure 7.2

The historical data is displayed by two charts and two graphs according to the specified perimeter (specific timeframe, location of plant, significant energy user, etc) selected by the user. The left section of the report deals with the month-to-month comparison of the monitored data, while the right section shows the Delta, Absolute, and Percentage values of the comparisons made.

It is then possible to generate a PDF from the button at the bottom of that page, as shown (Figure 7.3, 7.4):

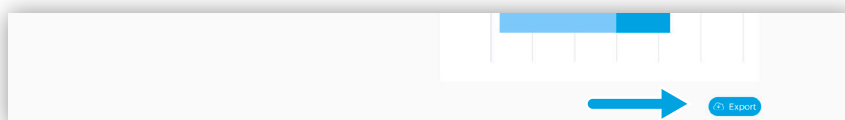


Figure 7.3

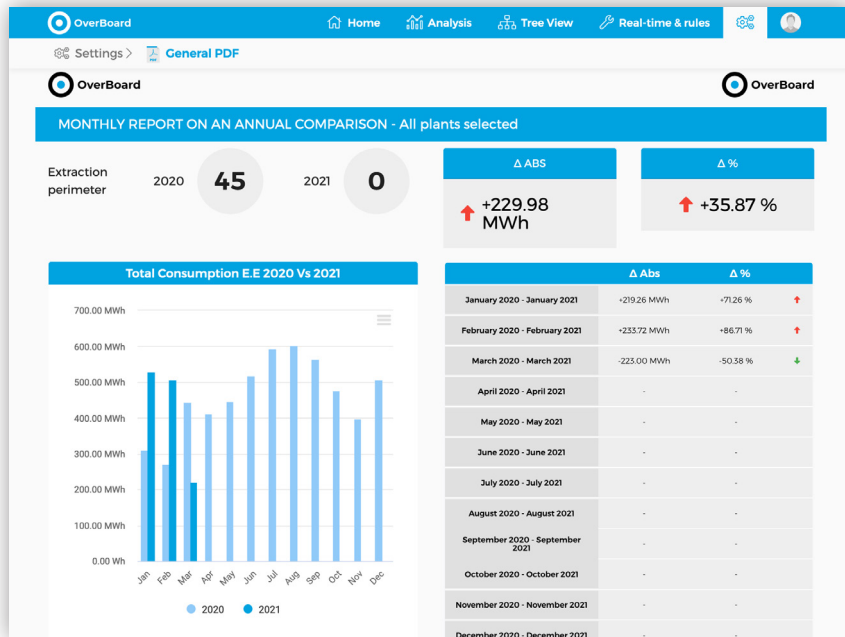
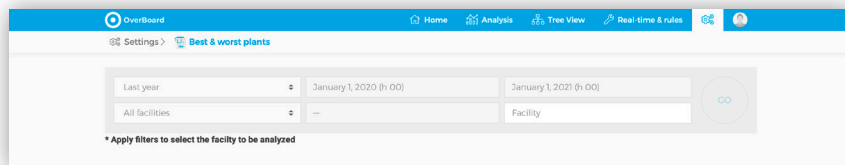


Figure 7.4

7.2 EXPORT BETTER VS WORST PLANT

By selecting the best and worst plant for export, a page will be generated showing a data selection filter, and selection of the reference KPI to be used as the driver of the group of plants subsequently shown. (figure 7.5, figure 7.6). This export is only available for multi-site property clusters.



Best & worst plants

Last year: January 1, 2020 (h: 00) January 1, 2021 (h: 00)

All facilities: Facility

GO

* Apply filters to select the facility to be analyzed

Figure 7.5

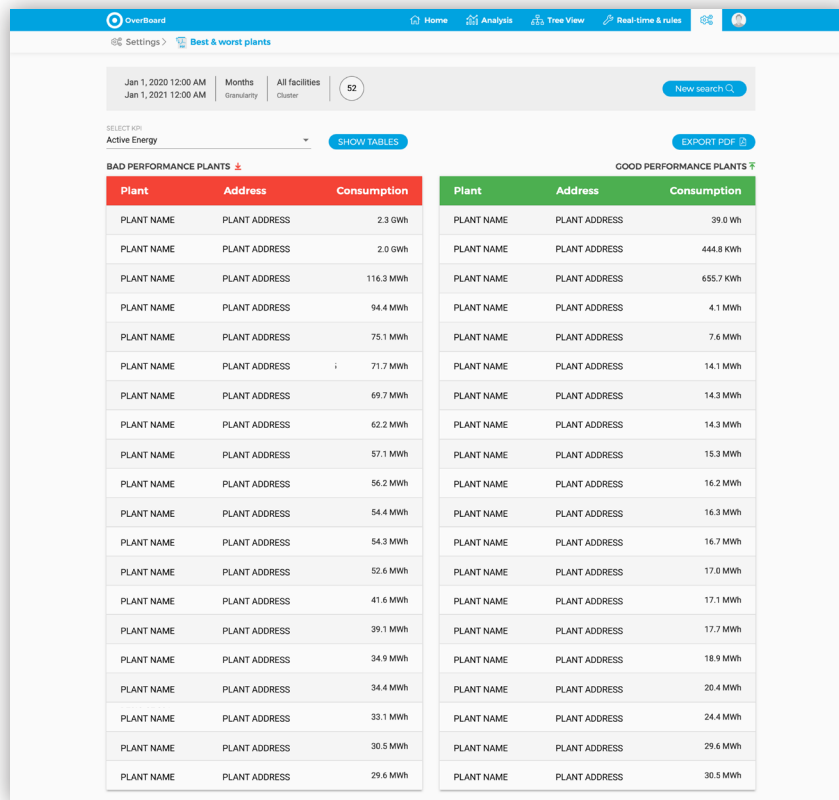


Figure 7.6

7.3 EXPORT ALERT

By selecting export alert, a page will be generated showing a data selection filter (figure 7.7). This export is only available for plant clusters. The rendering shows the alerts relating to the selected period, and the consumption of the last 3 months divided by reference energy cluster.

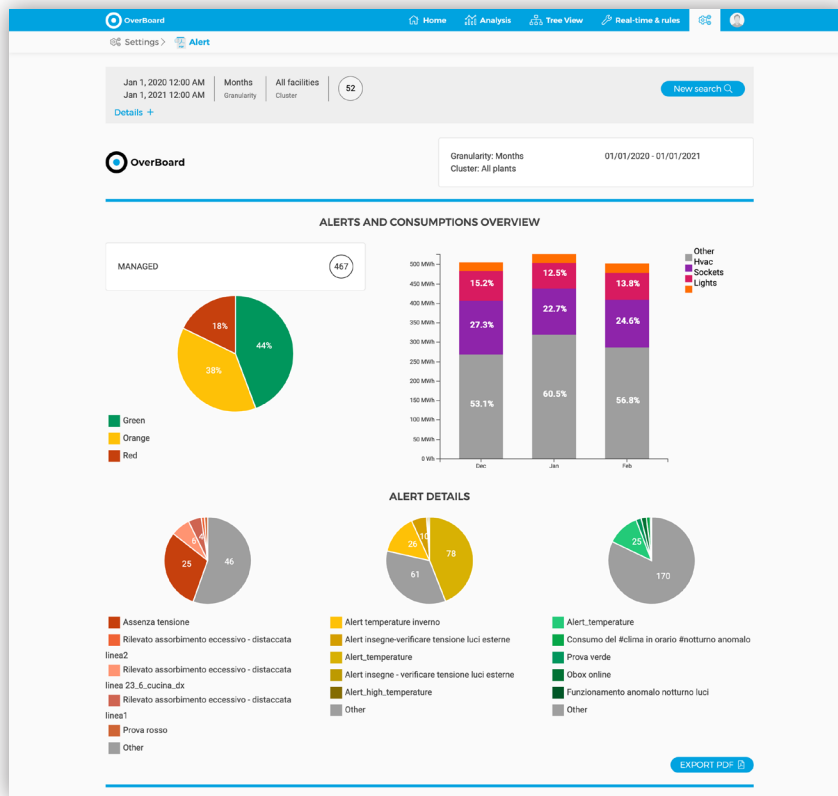


Figure 7.7

7.4 KPI MANAGEMENT

This section allows users to create, modify, and save customized KPIs (Figure 7.8). Each user can create their own comparison metrics to be applied to all the finished data and measurements that the platform offers.

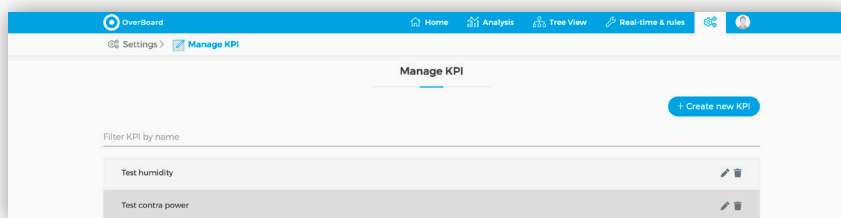


Figure 7.8

Clicking on the creation button or on the pencil in the list of existing KPIs opens the KPI editor/edit tool to create and/or modify KPIs (Figure 7.9).

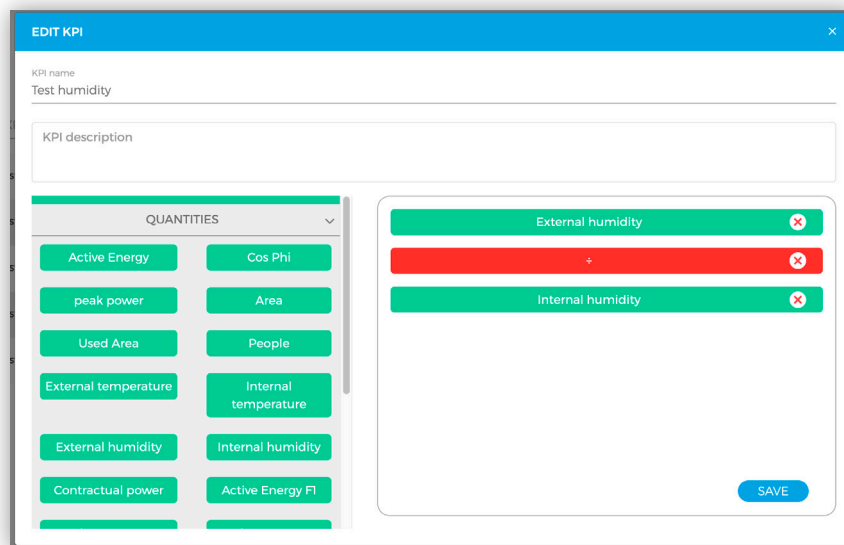


Figure 7.9

Using this tool to drag objects into the empty screen, the User can delete or add parameters from or to the equation, customizing the metric of the KPIs created, usable in the KPI Analysis section (chapter 4.2). When the equation is not correct or the order of the operators is wrong, the instrument reports the errors related to the operation performed (Figure 7.10).

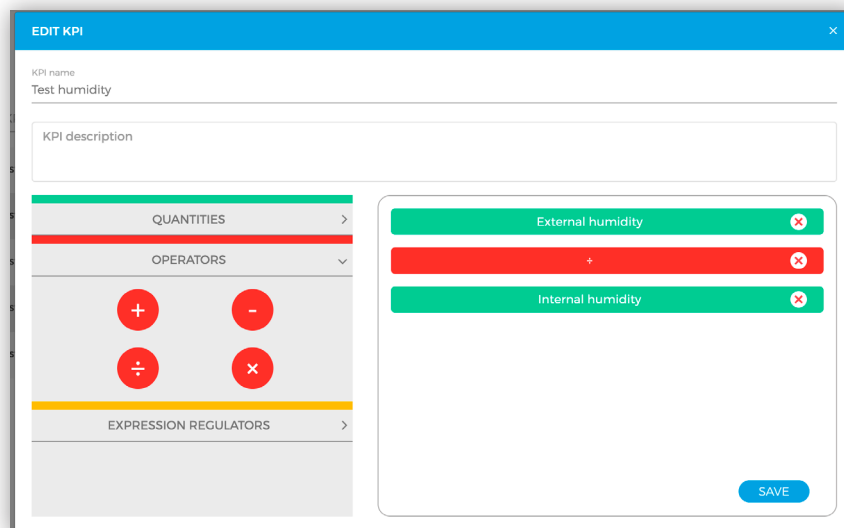


Figure 7.10

7.5 CLUSTER MANAGEMENT

This section consists of two interaction areas, one dedicated to the creation and the other to the management and modification of clusters already created (Figure 7.11).

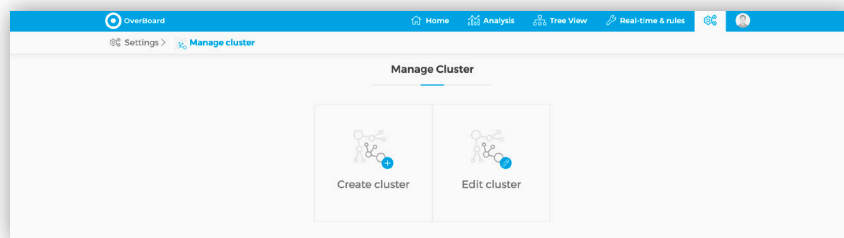


Figure 7.11

CLUSTER CREATION

This section allows the User to select all the plants with which to set up their own customized cluster. The filters on the page and other advanced filters make it easier to find items to select once the search is complete. The filters available are related to (Figure 7.12):

- List of unique codes (separated by commas)
- Region
- District
- City
- Climate zone
- Area
- Number of people
- Contractual power
- Type of agency

The search can only be carried out for the multi-site plant clusters associated with the user performing the operation. The created clusters will be available in all the sections where there is a filter that allows the choice of customized clusters. (Chapter 4)

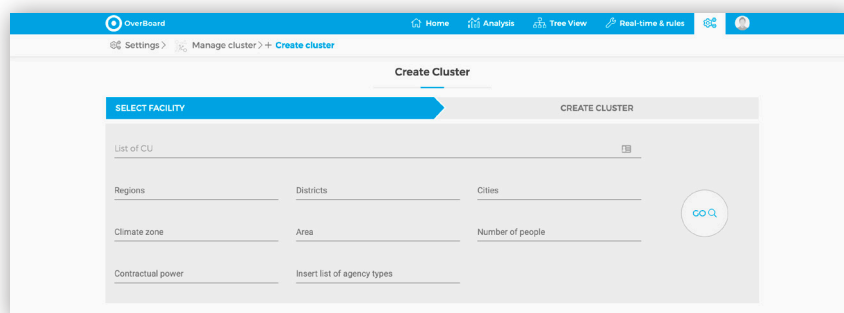


Figure 7.12

After applying the search filters, the list of results obtained (Figure 7.13 box 1) appears on the page; advanced filters (Figure 7.13 box 2), can be applied again, such as:

- Address
- Unique plant code
- Plant name

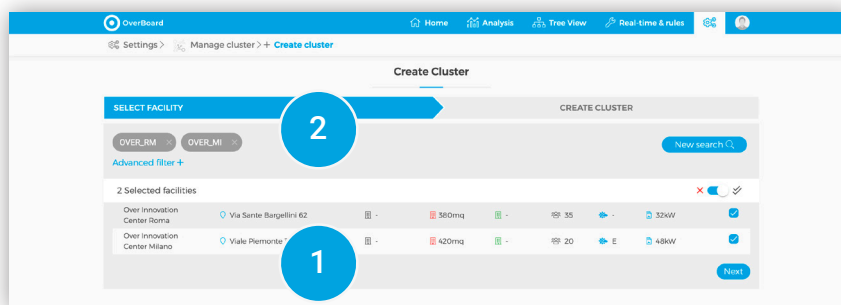


Figure 7.13

Once the systems have been selected, the selected cluster can be saved by assigning an identifying name to it (Figure 7.14).

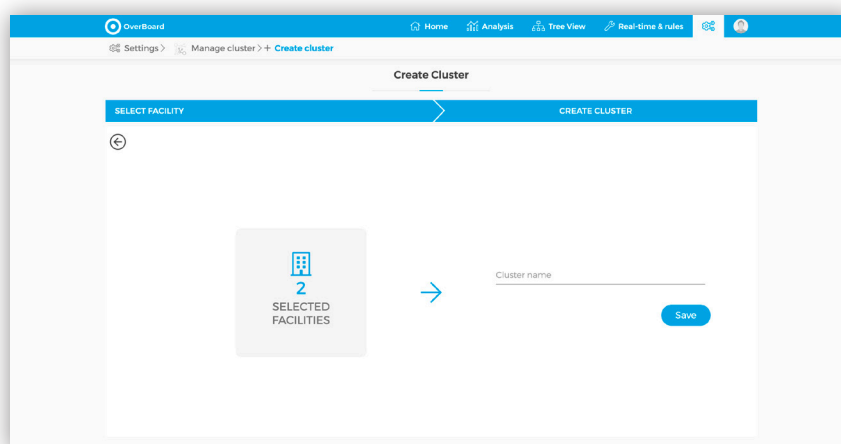


Figure 7.14

The search can only be carried out for the multi-site plant clusters associated with the user performing the operation. The created clusters will be available in all the sections where there is a filter that allows the choice of customized clusters. (Chapter 4)

CLUSTER MODIFICATION

Through this section, the User can modify or delete an existing cluster, remove plants or change their names (Figure 7.15). Furthermore, it is possible to download the list of associated installations in CSV format at any time, to keep track of the created Cluster.

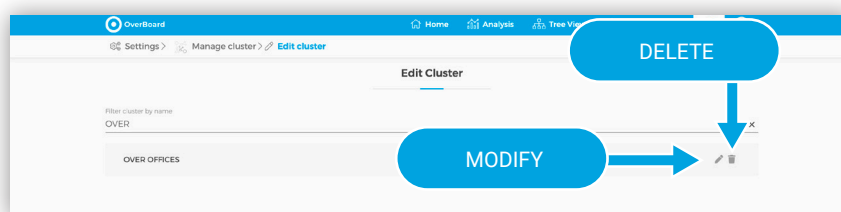


Figure 7.15

Selecting the modification button opens a modification window where the User can remove the plants assigned to that cluster (Figure 7.16 box 1) and export a CSV file (Figure 7.16 box 2) relating to the list of those modified elements.

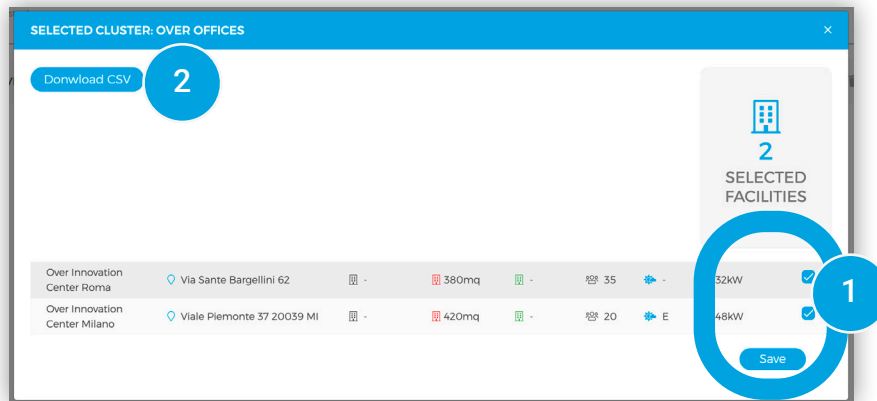


Figure 7.16

7.6 EXPORT ENERGY DATA

In this section it's possible to export energy data related to a specific cluster of all the plants coming from a custom search, applying criteria shown below (Figure 7.17 – 7.18).

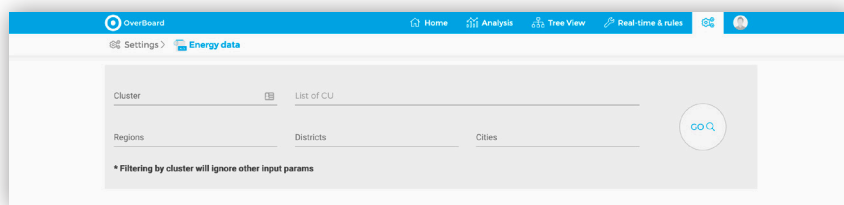


Figure 7.17

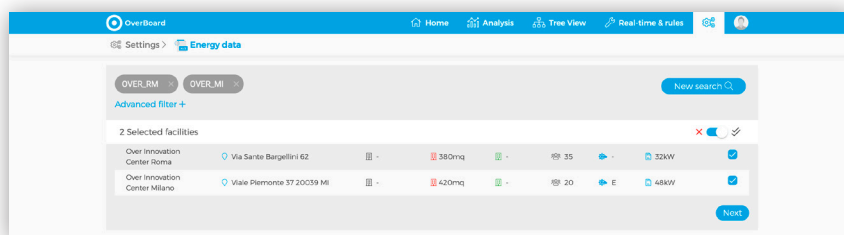


Figure 7.18

After this, custom parameters can be set to export a CSV or XLS file containing desired information. (Figure 7.19).

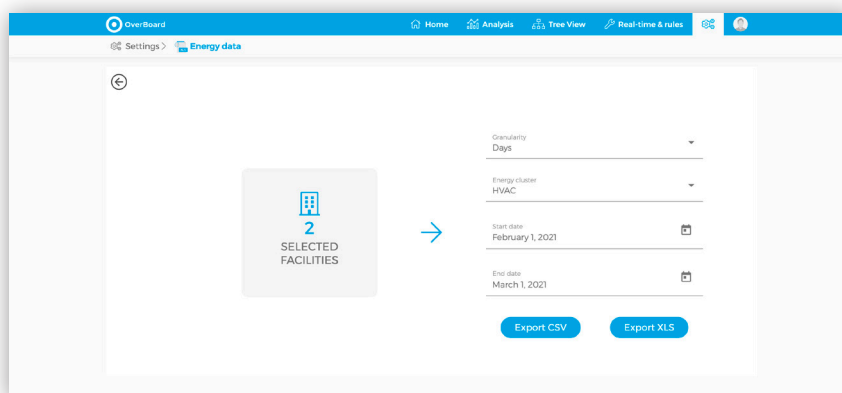


Figure 7.19

8. ASSISTANCE FORM

Through the assistance request button (Figure 8.1 box 1) shown in the Global Analysis and Real-Time sections, it is possible to send a request for assistance for a single plant.

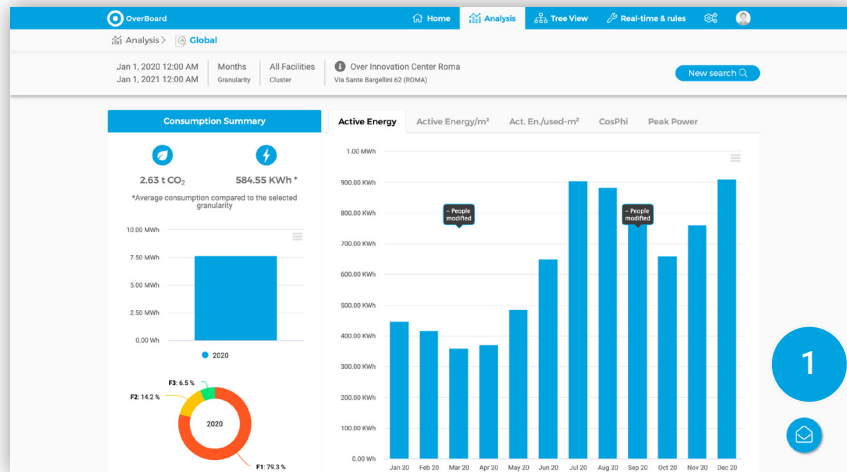


Figure 8.1

Clicking this opens a form to fill out, with some mandatory fields so that the request can be processed as efficiently as possible. The indicated reply e-mail (Figure 8.2 box 2) will automatically fill out according to the authenticated profile, but it can be changed if necessary. An e-mail address to be copied can also be added.

OVER ASSISTANCE

REQUEST FOR :

Facility

Over Innovation Center Roma

Address

Via Sante Bargellini 62

DESCRIPTION
(2500 remaining)

ENTER A DESCRIPTION OF THE PROBLEM ENCOUNTERED

PERFORMED CHECK
(2500 remaining)

ENTER DETAILS CHECKS

PRIORITY:

HIGH

MEDIUM

LOW

Reply to

over@overtechnologies.com

Send in cc

Send second mail in CC

ID ticket archibus

RESET

SEND

Figure 8.2



Milan

Rome

Dubai

London

OVER SPA

Via Maffio Maffii, 11 - 00157 Rome (Rm), Italy - TC/VAT N° 12065001005

www.overttechnologies.com