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FENIKS PRO svetovanje, projektiranje inženiring in izvedba avtomatizacije v zgradbah in industriji d.o.o.

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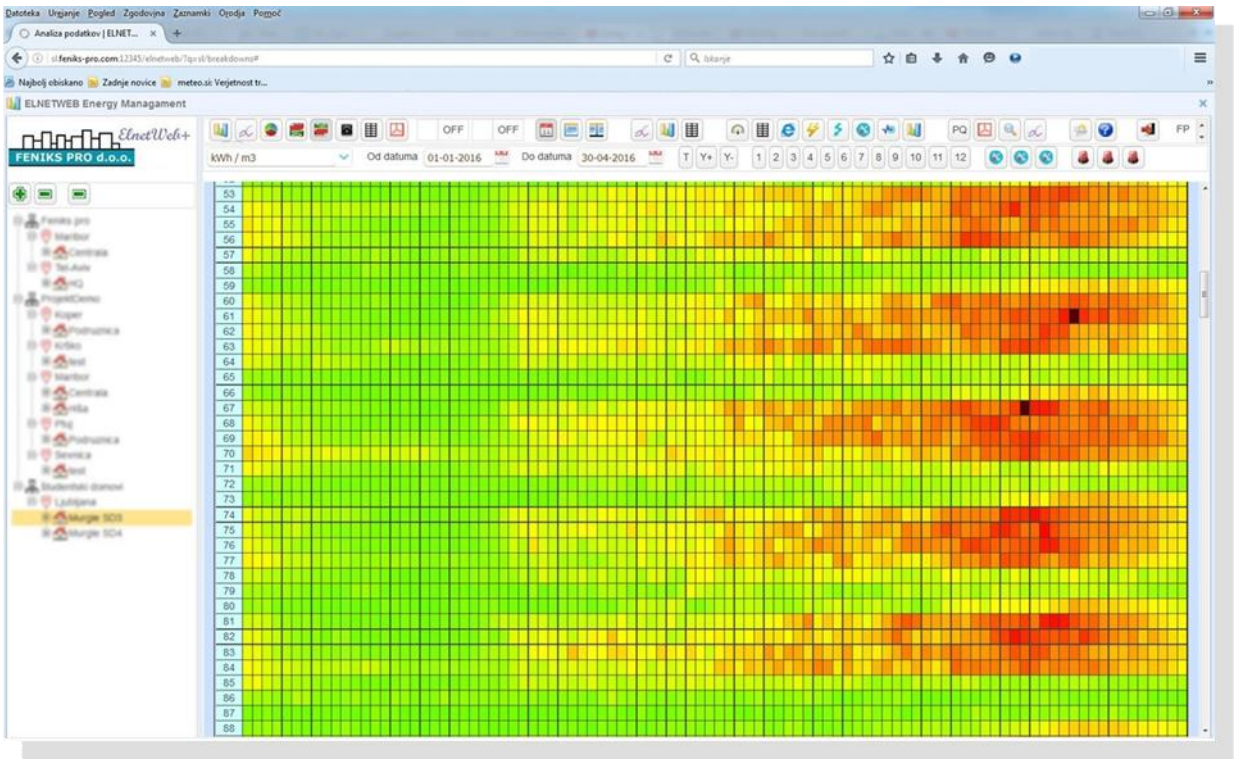
User's manual for the software

ElnetWEB +



FENIKS PRO d.o.o. ElnetWeb+

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1. General

The software is designed to collect energy data from multiple power analyzers or network. energy meters, heat meters, water meters, gas meters ... The program offers a simple and intuitive user interface for easy overview of the energy consumption in your building. Meters can be installed in different locations, connected must be on a computer network, which is also a computer with installed software package Elnet WEB +. Another possibility is that the network analyzer connected to the Internet network and software package collects information from it via an Internet connection. Thus, a power analyzer in a completely different geographic location than your computer with software ElnetWEB+.

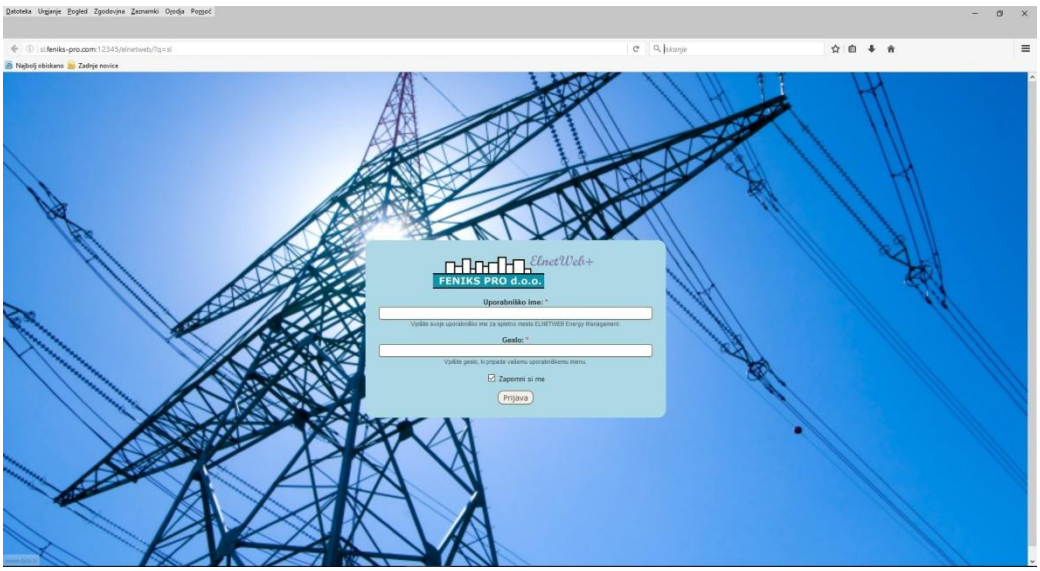
2. Software

Representatives of the company have already installed the software on the computer of server and set it according to your needs. The program starts automatically with your computer and runs in the background, because of this you will not interfere with your normal work with your computer.

The smooth operation and data collection from meters computer must be on 24 hours a day and connected to a computer network. It is recommended to supply a source of uninterrupted power supply (UPS).

To access the user interface, open your internet browser (supported: Mozilla Firefox, Internet Explorer, Google Crome ..) and enter the address of the computer on which the software is installed Elnet WEB +. If the software is installed on your computer in the address bar of your browser just enter "localhost / elnetweb". Otherwise, enter the IP address of the computer (eg. 192.168.1.100/elnetweb). According to the first report it is best to save the page to your favorites.

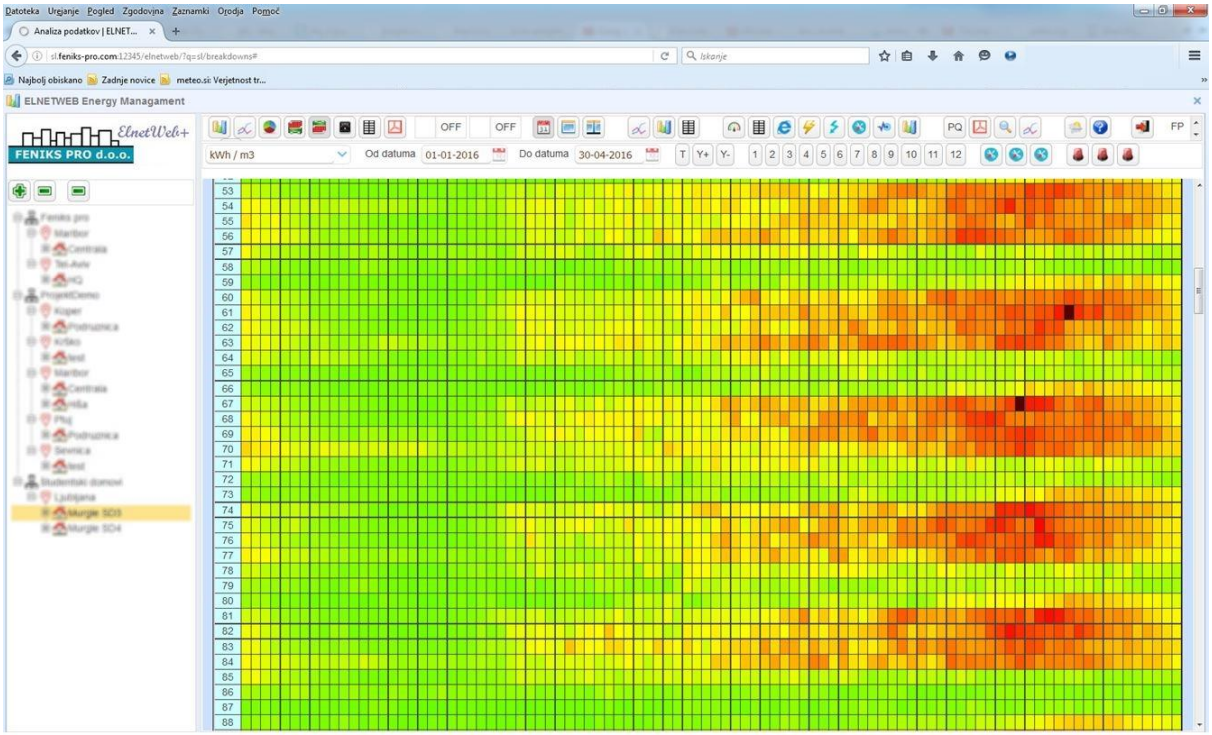
Opens the main window for the user login to the system. There is a need to enter enter your username and password that you set by our service personnel.



Picture 1: The login window

Password You can then change yourself in the "My Account". More about this is explained in section 8.3.

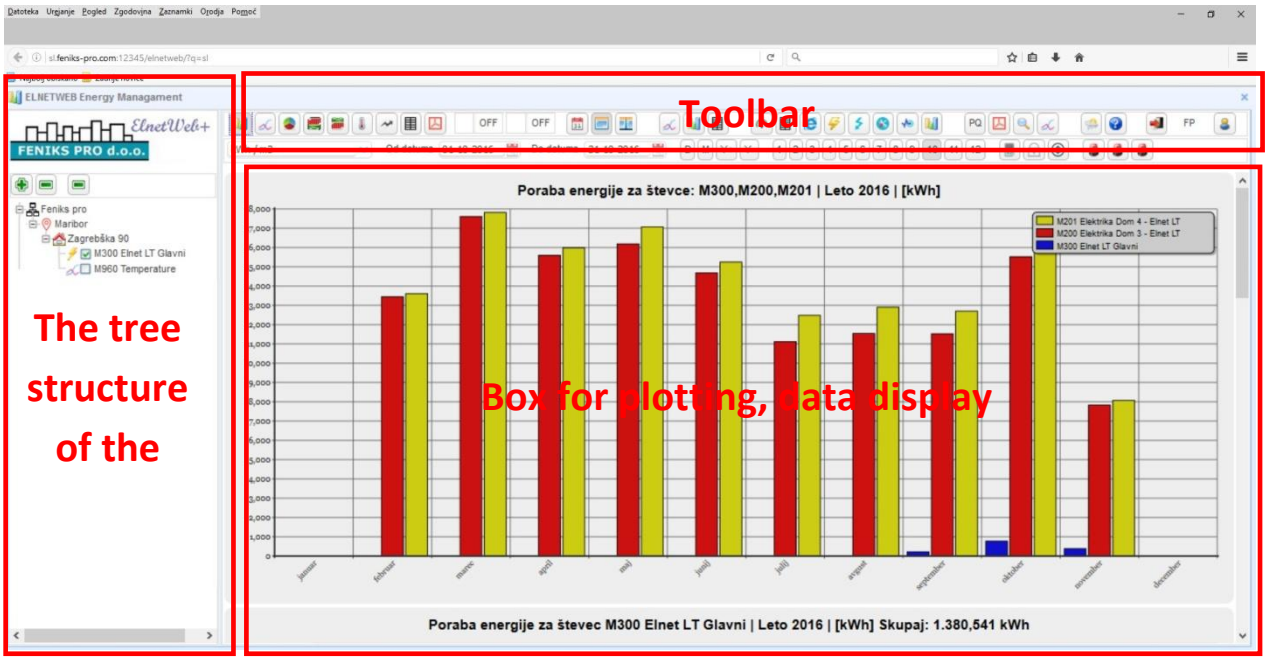
After login, you open the main window with a tree counters on the left and a toolbar at the top. The menus and tools depends on your license to use and installed modules, so your screen image may differ from the ones shown below.



Picture 2 The central views of the application

3. Explanation of the functions and basic concepts

The basic view user interface Elnet WEB + consists of the following elements:



Picture 3 Overview of the basic components of the user interface

More specifically, let us consider their structure and function.

3.1. The tree structure of the meters

The room on the left side of the screen to select the counter from which the software uses to read and store data. Counters are organized in a tree structure.

Picture 4 Structure tree

Composition of the tree structure is as follows:

At the highest level, the "project". Under the project the "Locations". Locations follow the "Facilities". At the lowest level are the "counters". Such an arrangement is standardized and always remains the same.

They opened the counters that this location is available.

The project

location

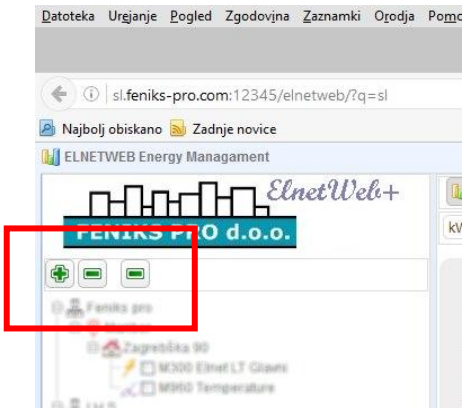
facility

Meters respectively.
data points

Picture 5 Items tree

To open the desired lower levels of the tree structure click with the left mouse button on the + symbol:

All podnivoje tree can suddenly close or equipment. For this purpose, on top of the tree by the following icons:



Their meaning is as follows:

Expand all:

It displays the entire tree structure with all layers at once.

Collapse all:

Tree structure shrinks, so that they are visible only "Projects".

Uncheck all:

All counters, we have identified, we can deselect all of a sudden.

Comparison of data from two or more meters

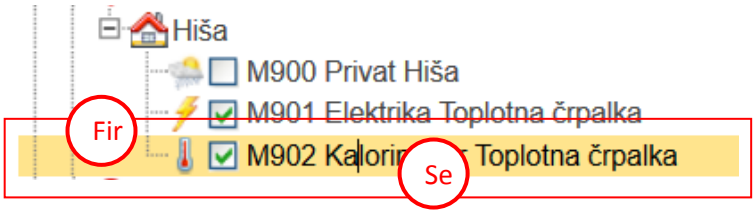
Elnet WEB +It is dedicated to collecting and analyzing data on energy consumption. Its big advantage is that you can compare the collected data immediately.

For example:

We want to compare data on the energy consumption of the heat pump and the amount of heat energy produced by the.

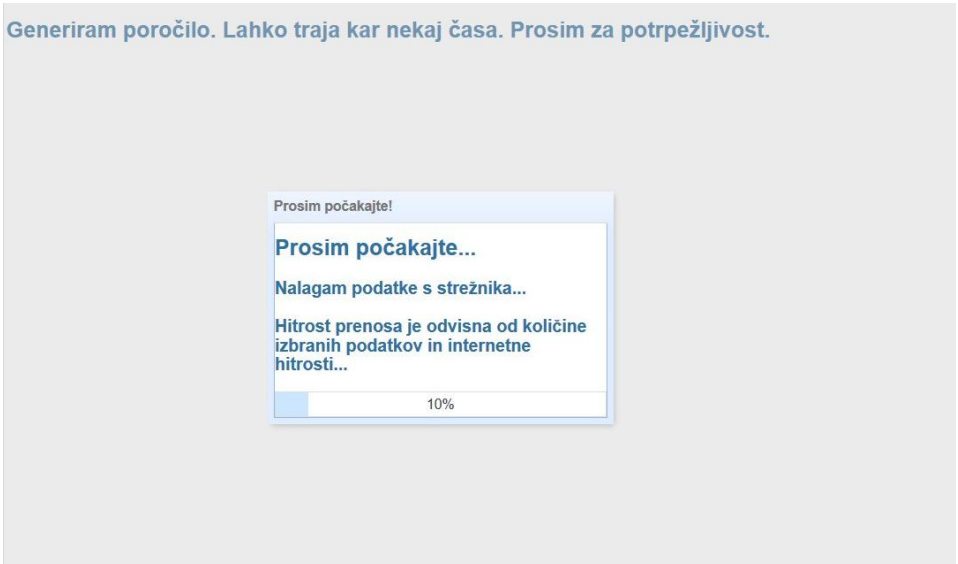
If you compare this to specify counters labeled as follows:

1. With the left mouse button "tick" counters by clicking the left mouse button in the empty boxes for meters which we want to compare.
2. Click on the text the name of one of the counters (in this case M902 calorimeter heat pump)
3. The name is highlighted with a bright orange color.



Picture 6 Selecting the counters to compare their

This means that the program has started preparing a show, which is confirmed by the following message:

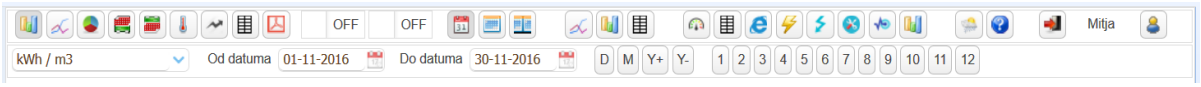


Picture 7 A confirmation message data preparation

We can also compare several meters, various facilities. This tick analogue meters in a tree structure.

3.2. Toolbar

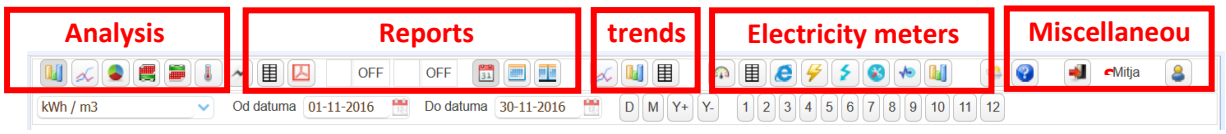
Toolbar user interface is located above the box to see the data. The collected icons with which we can access to all functions of the program, change settings, and the like. Appearance toolbar can be changed depending on the selected parameters. Certain functions may be active only a certain type of meter.



Picture 8 Overview toolbar

If the mouse pointer is placed on each icon will display a brief description of the meaning of icons:

Toolbar can be roughly divided into the following sections:

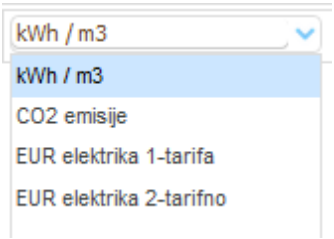


Picture 9 The main sections toolbar

A detailed description of the functionality is located in the sections 4 to eighth

Some additional features to facilitate working with the program:

Key Performace Indicators



The data collected in the software Elnet WEB + can be shown in the following ways:

- energy consumption can be displayed in kWh or cubic meters, when treating a gas consumption or water consumption
- CO2 emissions resulting from the consumption of fossil fuels
- the monetary unit, Euro, accounting for one tariff electricity
- or monetary unit, Euro, accounting for two-tariff electricity

Upon request, you can insert additional indicators. Eg. kWh / m2 .. kWh per unit of product ...

Calendar

Acquisitions, that we are interested in energy consumption for a given period of time. This period is determined by date using calendar. With the left mouse button click on the desired start and end date.

Picture 10: Select the desired date from the calendar

The rapid change in the time period

When selecting the desired periods of time, we could be faster if the left mouse button click on the following icons:

Their meaning is as follows:

Only data for the current day

Only data for the current month

Enlarge year n + 1

Decrease year n-1

Quick selection of the month. It is; 1 = January, 2 = February, etc.

Only tabular and graphical display

In the report, left-click on the icon:

Picture 11 Choosing tabulating data on graphic

Where possible, the box will display the data show a table below the graphic display. The function is switched off by clicking on the icon.

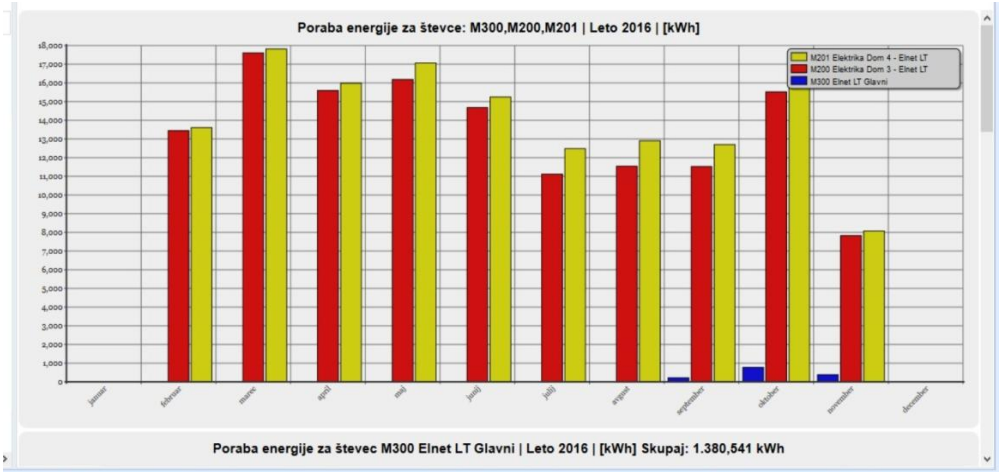
Separate display in stages

Picture 12 Selection display for each phase

By default, the electrical energy values appear as the sum of the individual phases. If we look at the data for each phase with the left mouse button click on the icon. This information will be shown for each phase, where possible. The function is switched off by clicking on the icon.

3.3. Box for plotting, data display

The largest part of the user interface Elnet WEB + is designed to display data. Only these are shown in the form of graphs and tables.



Picture 13 For example, the data displayed in the Field of plotting, data display

In the upper right corner of each graph is a legend for interpreting impressions such as:

4. Data analysis

The tools collected the data analysis can review collected data and energy consumption patterns. Are possible in which different views of the selected counters into certain time intervals. Intervals can be entered via the field Calendar "from" "to" or simply press the button for the desired month of the selected year in the "from", as described in section 3.2. You can choose between the following:

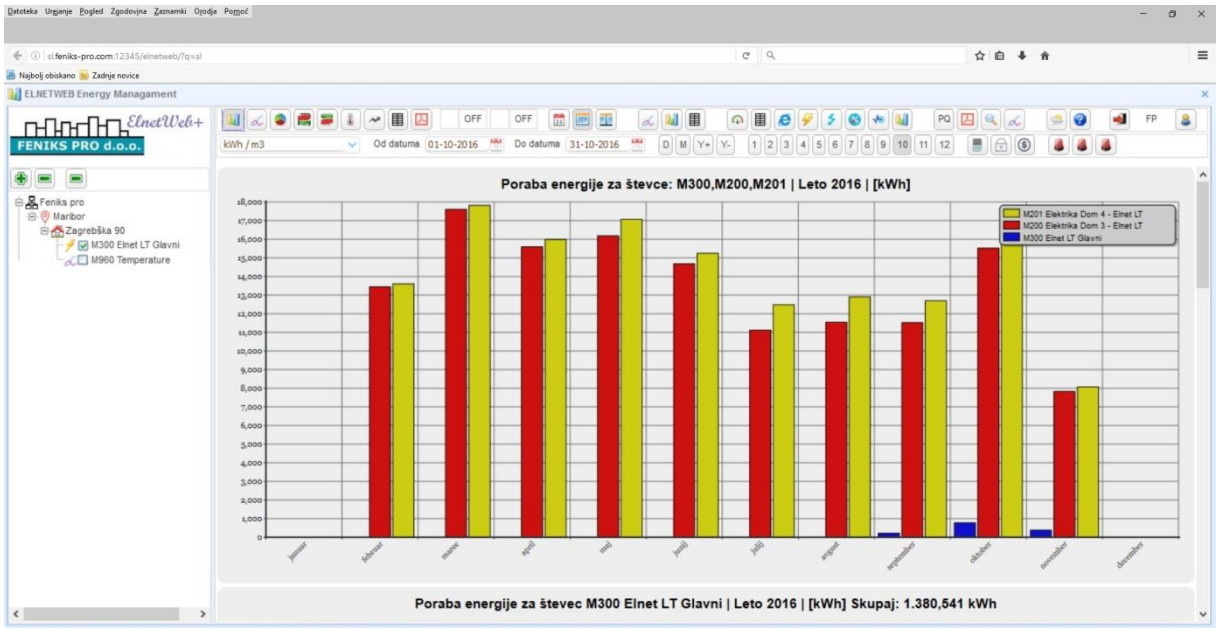
- Bar chart
- Line chart
- Pie chart
- Terrain view

4.1. Bar chart

By the bar graph display can be accessed by clicking on the first icon within the Analysis toolbar:

Picture 14 Selection of a bar chart

For example, the bar graph shown in Figure 15:



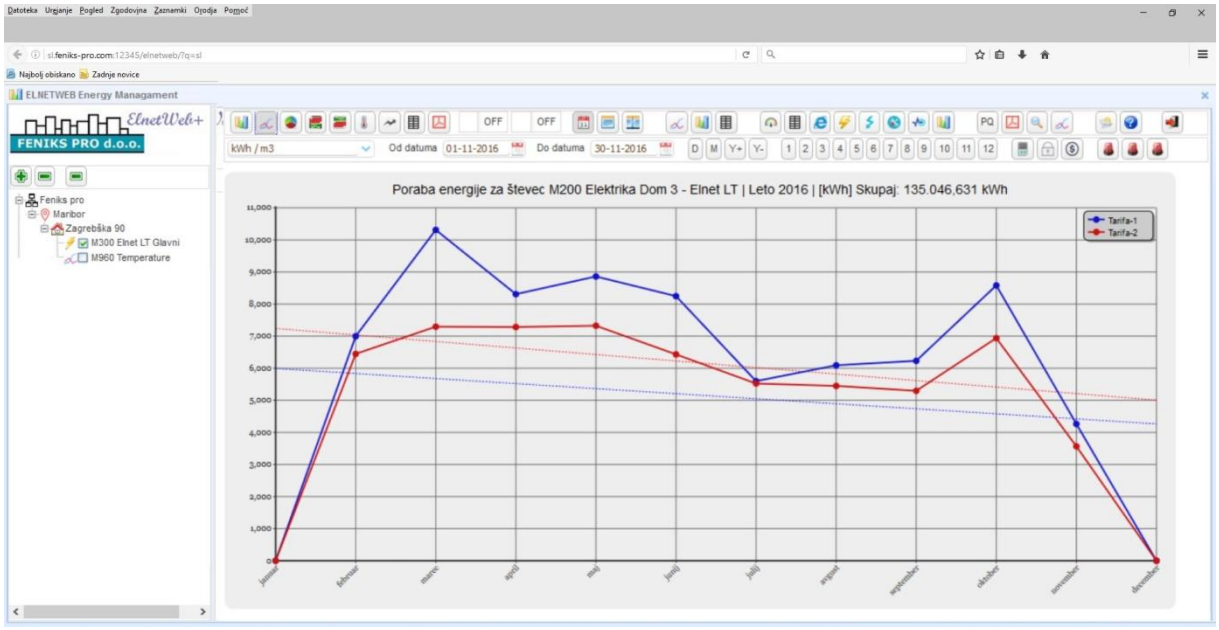
Picture 15 An example of a bar chart

4.2. Line chart

By the bar graph display can be accessed by clicking on the second icon within the Analysis toolbar:

Picture 16 Choosing a Line Chart

For example, the linear graph shown in Figure 17:



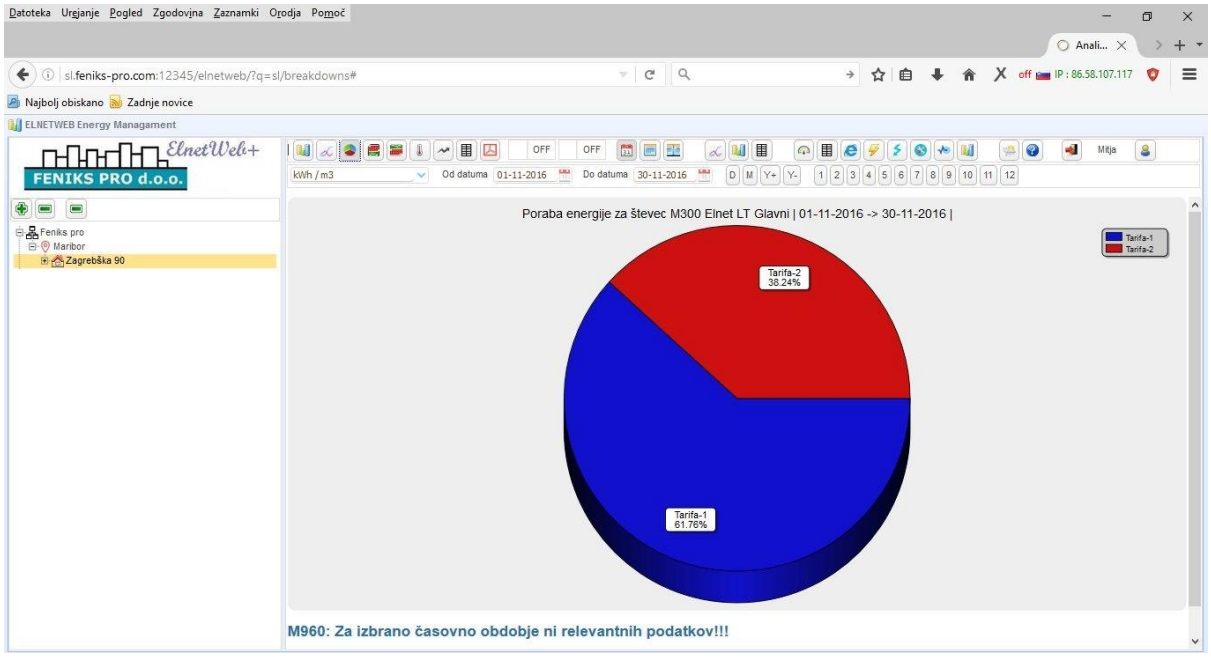
Picture 17 Example Line chart

4.3. Pie chart

By the bar graph display can be accessed by clicking on the icon in the third part analyzes the toolbar:

Picture 18 Choosing pie

For example, a pie chart is shown in Figure 19:



Picture 19 Example pie

4.4. Heatmap energy consumption

To display the profile of energy consumption in the program Elnet WEB + uses these embossed review. Until we can be accessed by clicking on the fourth icon within the Analysis toolbar:

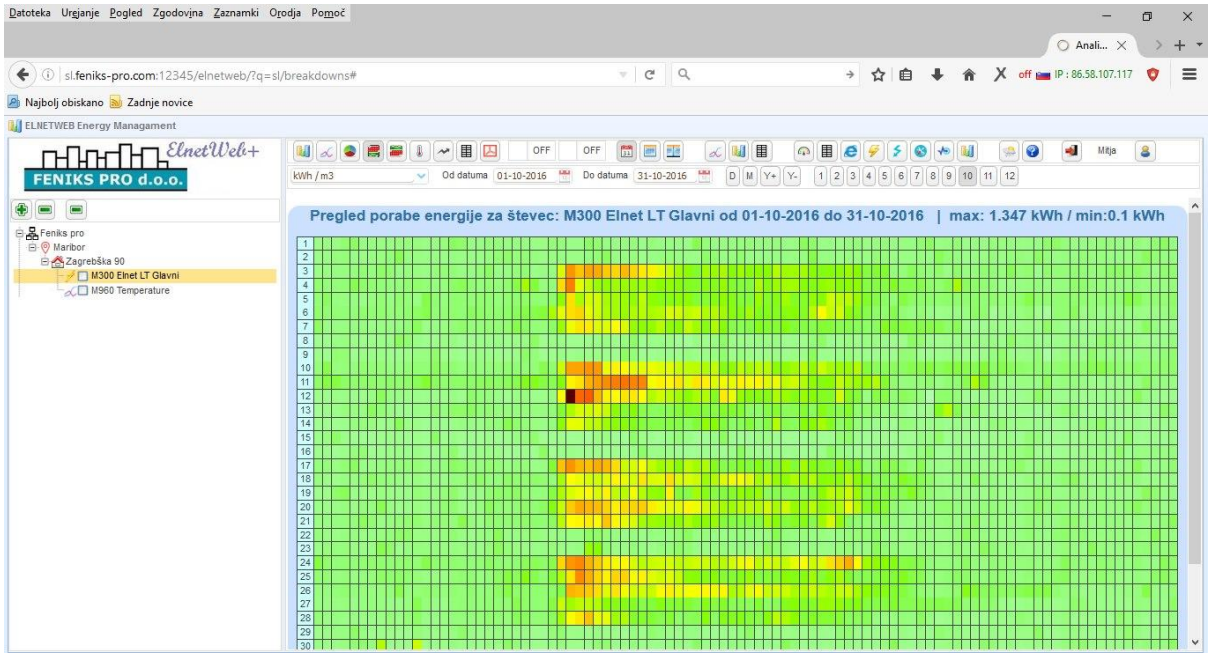
Picture 20 Choosing a relief review

embossed review It serves for easy overview of average power (energy consumption) for the entire month selected. Power are shown in color ranging from green, yellow, orange to red. Whereby, the more green the lowest consumption, but higher red, dark red means the maximum consumption of the selected time interval. All power is normalized to the maximum consumption. Added means white and 0 consumption. OFF status of the gray coloration indicates that for the selected period are not available. The display is organized so that the rows of impressions at 15 minute intervals from the midnight to the end of the day, after the rows of days. If the mouse is moved across a field display, for each interval of the additional information is displayed on the time of reading and energy respectively. the average power.

Only in a graphic way possible to identify usage patterns and can quickly figure out where we consume energy unnecessarily. For example, a strong red coloration at night, when we know that an object is empty and should be a minimum consumption of energy, gives a clear indication that something is wrong and it is necessary to ascertain why.

The review is normalized to the maximum consumption of the selected month. If the report or select a year. the biennial scaling performed at maximum output throughout the year.

For example, review the profile of energy consumption is shown in Figure 21:



Picture 21 For example, the profile of energy consumption

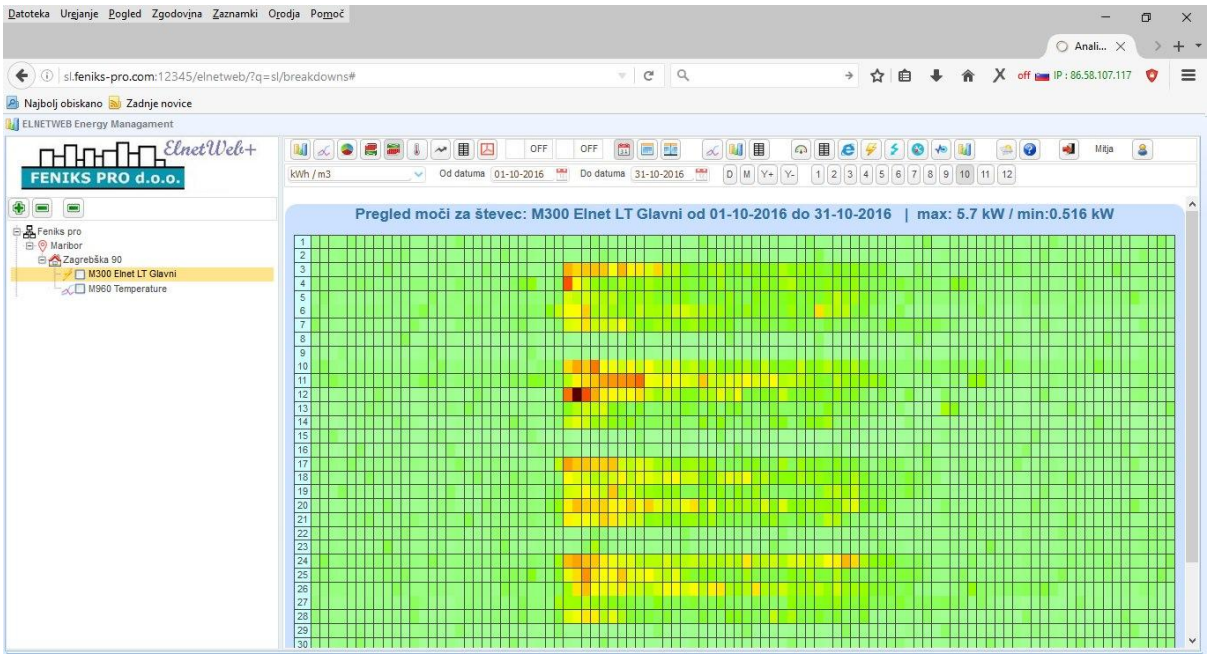
4.5. Heatmap power

Also to see the profile can program Elnet WEB + uses these embossed review. Until the display profile can be accessed by clicking on the fifth icon within the Analysis toolbar:

Picture 22 Viewing profile power

This display is only possible for meters, which is measured instantaneous power (electricity meters ElNet)

For example, the power profile is shown in Figure 23rd



Picture 23 Example profile power

4.6. Heating degree days (Beta) - The number of heating days (beta)

The number of heating days is a measurement parameter set to measure the demand for heating buildings. In English terminology it is called a Heating Degree Days (HDD) and comes from the measurements of external temperature. The need for heating buildings are proportional to the location of the building number of heating days (HDD) at this location. Similarly, measurement of the number of days of cooling (Cooling degree day or CDD), reflects the amount of energy that is used for cooling the building.

The number of days of heating is determined relative to the base outside temperature above which the structure does not require heating. The most suitable base for the heating temperature of each structure is dependent on the type of structure, its occupancy, temperature mark-ups caused by the equipment in the building, etc. Thus, the fixed internal temperature of 18 ° C or 19 ° C, which is suitable for the base seating comfort (internal energy margins that temperature increase of 1 to 2 ° C)

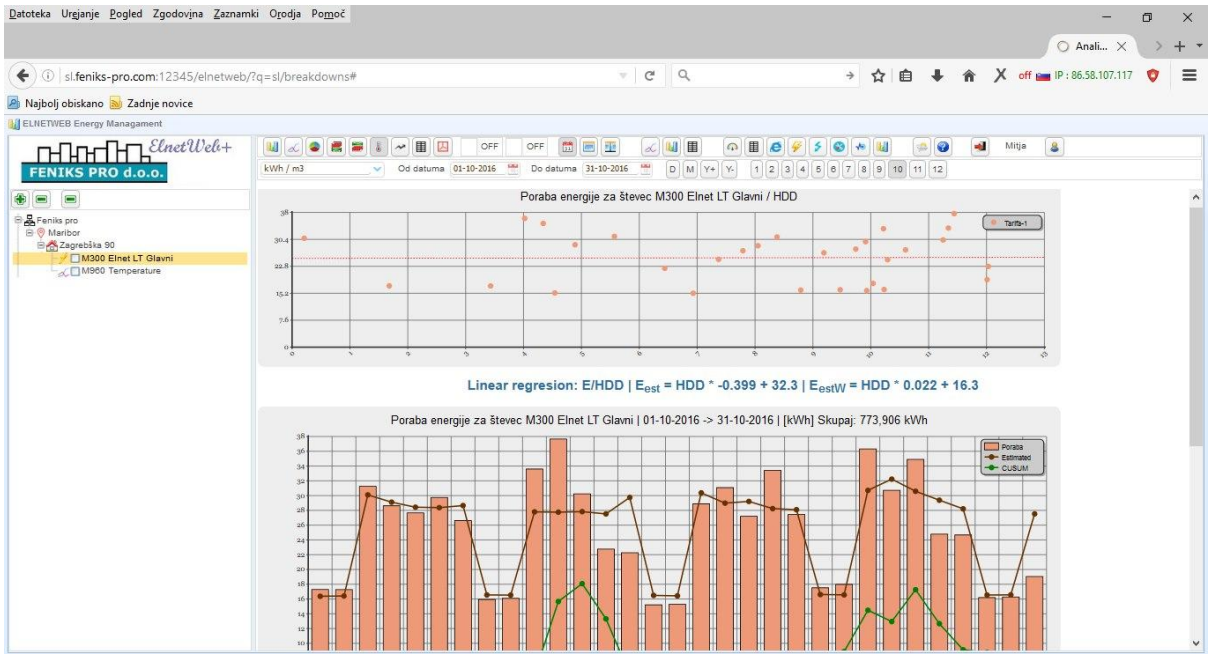
HDD makes it easy to determine the amount of heat that the building needs at a certain location at a certain period (eg. A particular month or year).

Unit 1 HDD means that the temperature conditions outside building uniform, while the temperature in the building did not fall by more than one degree per day. This represents so well represents the heat that is necessary to maintain thermal comfort inside buildings.

Up Display HDD can be accessed by clicking on the icon in the sixth part analyzes the toolbar:

Picture 24 Heating degree days

For example, review the HDD shown in Figure 21:



Picture 25 Example display heeting degree days

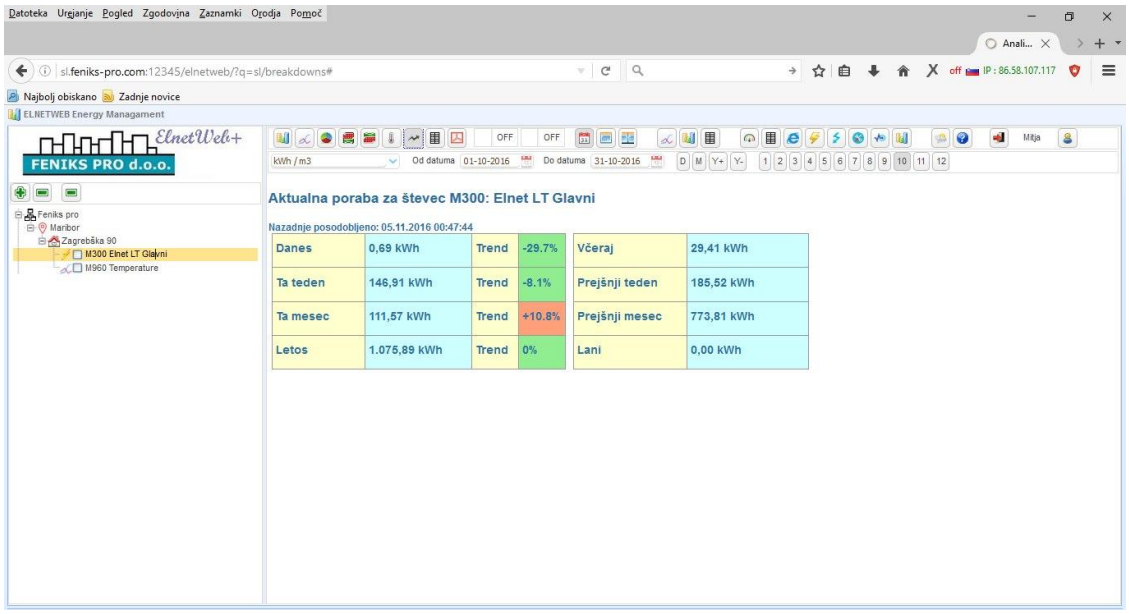
The operator can for each counter or set the reference month. period. Program based on the interdependence between energy consumed and outdoor temperature and degree days of the date determined by the characteristic of the object and separately for weekdays and weekends. Based on these characteristics, the next display energy consumption in the columns bar also displays planned spending for each day based on the HDD (brown). Then, for each day it is calculated by the difference between the actual and expected energy consumption. Based on these data on the same graph plots have -Analysis CUSUM cumulative sums (green), where all the aforementioned differences are cumulative from the first to the last day of the selected period. Based on CUSUM display the operator can quickly assess whether the energy used is appropriate with regard to external conditions. In the event that the green curve all the time around the scratch, the case is appropriate for the reference month. In the event that the curve turns upward and the upward trend means that we consume too much energy and needed to find the cause. In the case of the curve, which reduces this is a good sign that we are in a system implemented measures to save energy and to consume significantly less energy than expected.

4.7. The trend of consumption of energy products

Elent WEB + It provides that from past energy consumption data calculated trend of spending energy source. This is especially useful if you want to anticipate the consumption of energy products in the future. This feature can be accessed by clicking on the icon:

Picture 26 The trend of consumption of energy products

An example of a trend of spending energy source in Figure 27:



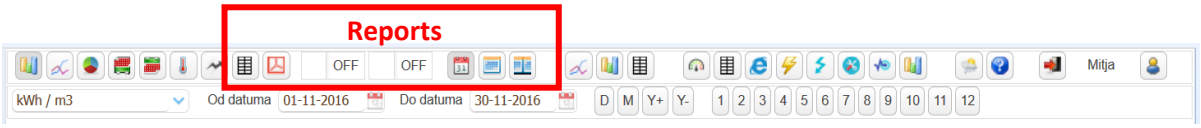
Picture 27 An example of a trend in the consumption of energy products

5. Reports

The tools collected in the program Elnet WEB + under section reports can:

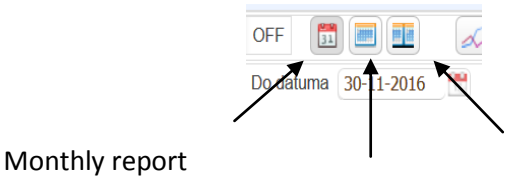
- Checking the current values of the counters
- We are exported to PDF files
- We select data on a monthly, annual or biennial basis.

Figure 28 shows a toolbar with the selected tool



Picture 28 tools Reports

Various types of reports, select the following icons:



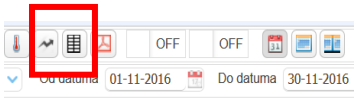
Monthly report

Annual Report

Bi-annual Report

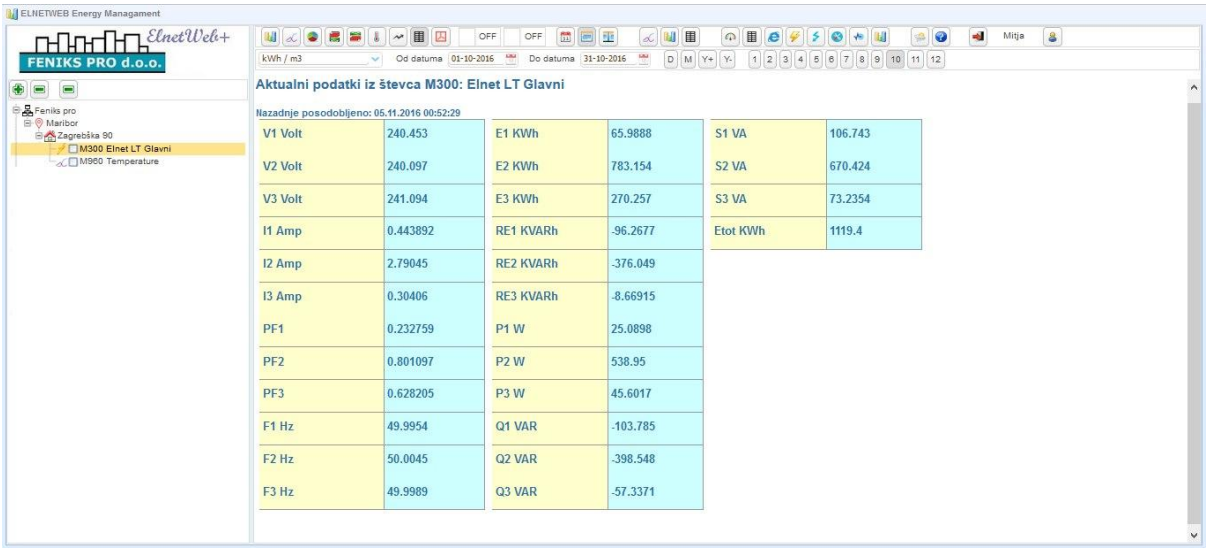
5.1. Current readings

All current data available in certain energy meter can be retrieved by clicking on the icon:



Picture 29 Facts and Figures

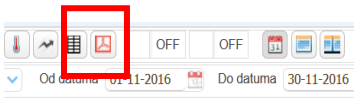
For example, reports that in the open is shown in Figure 30. The report is, of course, depending on the type of meter. Both will report to the heat meter is different from the electric meter, etc .. The report also indicates the date and time of the last reading. In the event that the reading is more than 1 hour to figure it turns red. In this case, it is necessary to check the communication with the meter or. notify the system administrator.



Picture 30 An example of real-time data from the meter.

5.2. Create PDF report

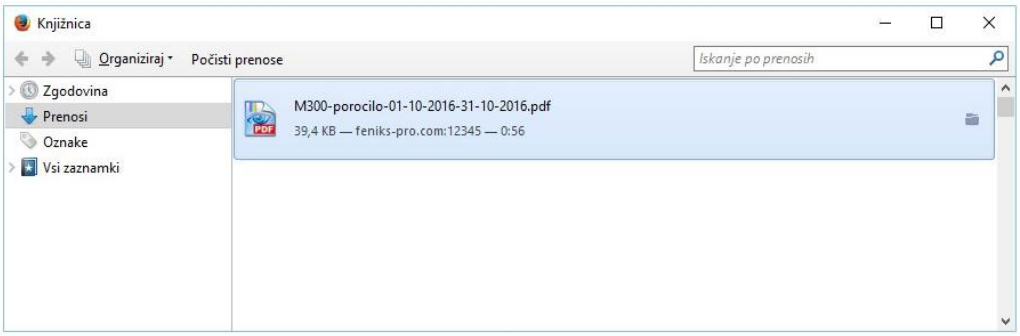
The collected data can be exported in PDF file format. To do this click on the icon:



Picture 31 Export data to PDF

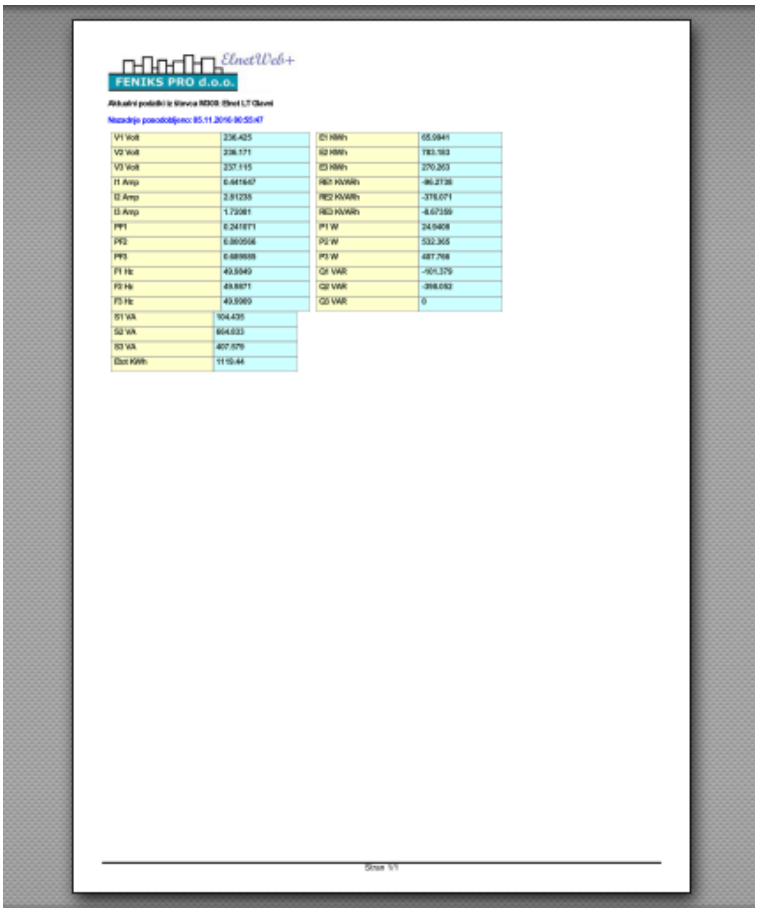
The file begins to prepare. It can open it in the Library of transfers. In Mozilla Firefox until you can be quickly accessed by pressing the key combination Control + J. In other web browsers in the menu, find the option Downloads.

Creating reports can be used on the displays in section 4.1. forward (column, bar, pie chart etc.).



Picture 32 Library downloads in the Mozilla Firefox

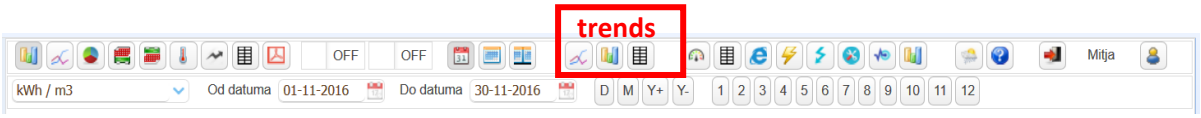
The values of the current value is converted into a PDF file, as shown in Figure 33rd



Picture 33 An example of PDF reports

6. Trends

Tools collected under Trends are designed very accurate processing of data.



Picture 34 tools trends

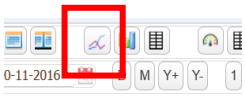
In the trend we find the following icons:

- trend
- The trend differences between readings
- Statistical trend

In sections 6.1 to 6.3 followed by descriptions of individual functions.

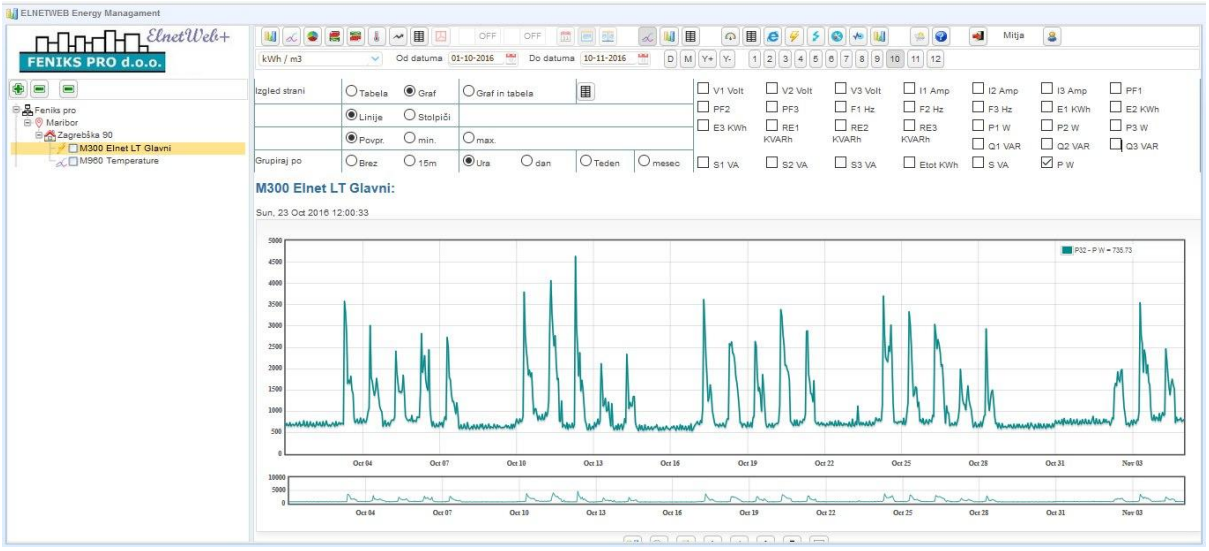
6.1. Trend

Trend function can be opened by clicking on the icon:

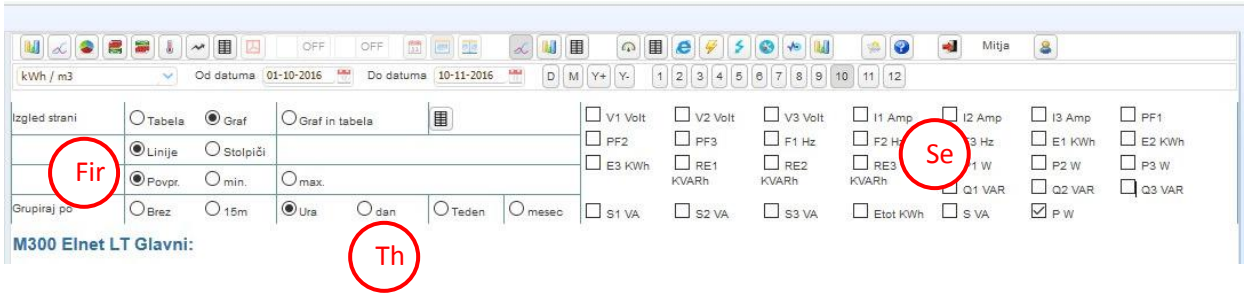


Picture 35 trend

It opens a screen image, as shown in Figure 36:



Picture 36 An example of a trend report



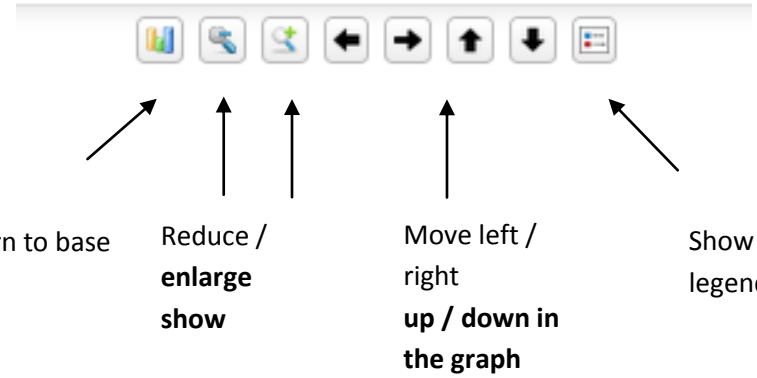
Picture 37 Customize display

Only it is possible to arbitrarily adjust their own needs. You can choose different views of the data: in the form of tables, graphs, or both (code 1). It can be switched between the display in the form of lines and columns.

When looking at data from power analyzers (code 2) You can choose the desired electrical quantities that we are particularly interested.

When we want to show the large amounts of data that have been gathered from the meter over time using the function "Grupiraj" (label 3). From the meter can collect large amounts of data (for example, if you scanned every minute). If you would like to display all this information, the program operated on by an excessive amount of data and charting to take too much time. For this reason, we can choose the unit of time, which corresponds to our requirements. The program averages the data accordingly to the selected time unit. This is the preparation of the display is much faster.

For easier navigation through the chart trends can be used the following icons:

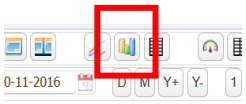


Picture 38 Navigate trends

6.2. The trend differences between readings

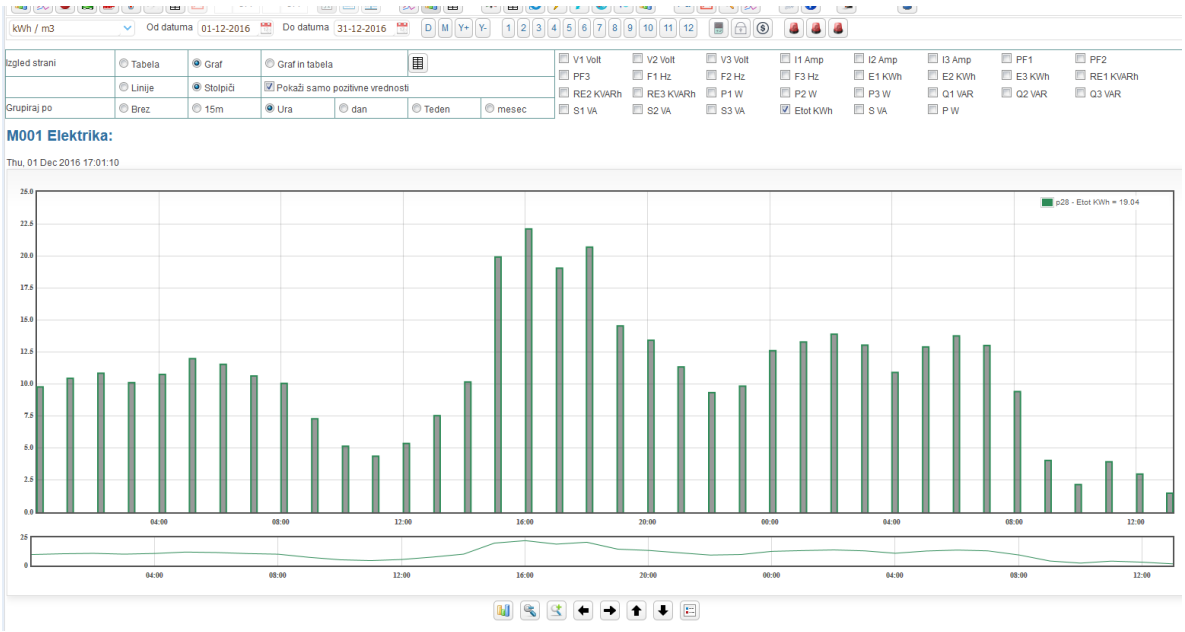
With this tool it is possible to select the analyzer network, and the selected data or several data simultaneously plotted graphical difference value between two consecutive measurements of a certain time interval, is chosen. It is particularly useful for the examination of energy consumption at the time intervals (selects the point P28 - Etot KWh).

The trend differences between the readings are opened by clicking on the icon:

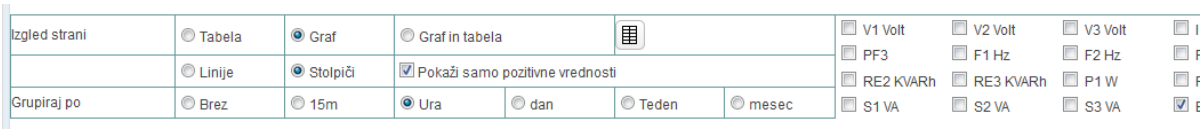


Picture 39 The trend differences between readings

Opens a screen, as shown in Figure 40, where the display power consumption at hourly intervals.



Picture 40 An example of a trend in the difference between the readings



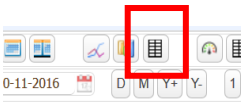
Picture 41 Customize display

In this case, the possible adjustment of the display. Functions are the same as already described in the previous chapter 6.1.

6.3. Statistical trend

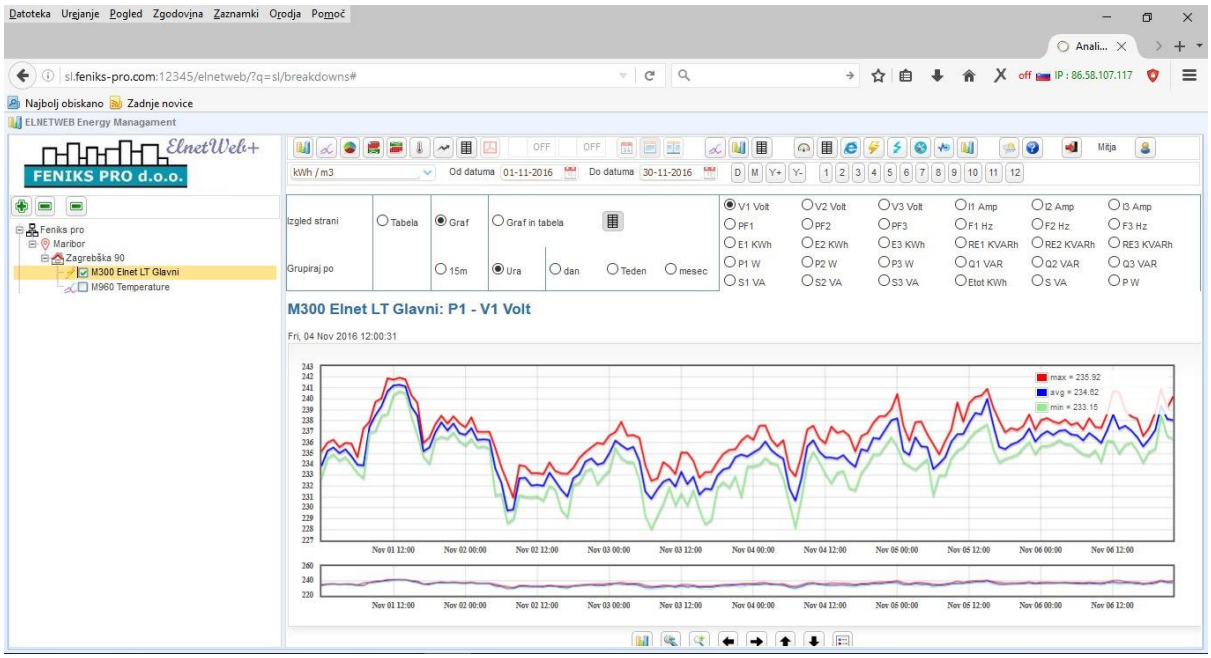
With this tool it is possible for the selected network analyzer, and the selected data verified statistics measurements. This means the maximum, minimum and average measurements in the selected time interval. In addition, it also draws a graph measurements. You can choose additional settings such as. the time interval to produce statistics (15min, hour, day ..)

Statistical trend opened by clicking on the icon:

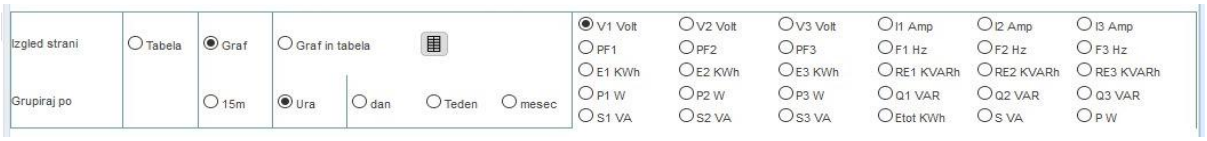


Picture 42 Statistical trend

It opens a screen, as shown in Figure 43:



Picture 43 An example of a statistical trend

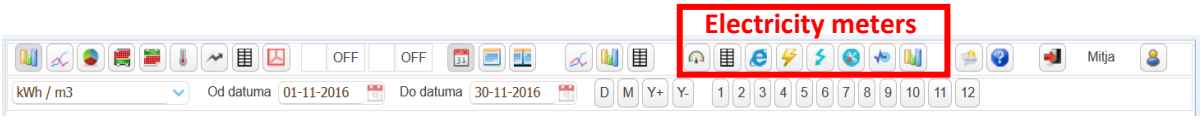


Picture 44 Customize display

In this case, the possible adjustment of the display. Functions are the same as described in section 6.1.

7. Tools linked to electricity meters Elnet

Tools collected under electric meters designed to work with electricity meters Elnet. The toolbar can be found under:



Picture 45 Tools of the current value

This section contains the following icons:

- Current overview
- Review of current values in tabular display
- The integrated WEB server
- The current strength of the selected counters
- Only the current energies of selected counters
- Displays the current status of the selected counters
- Only the phase diagram
- harmonic analysis
- Weather forecast for your location

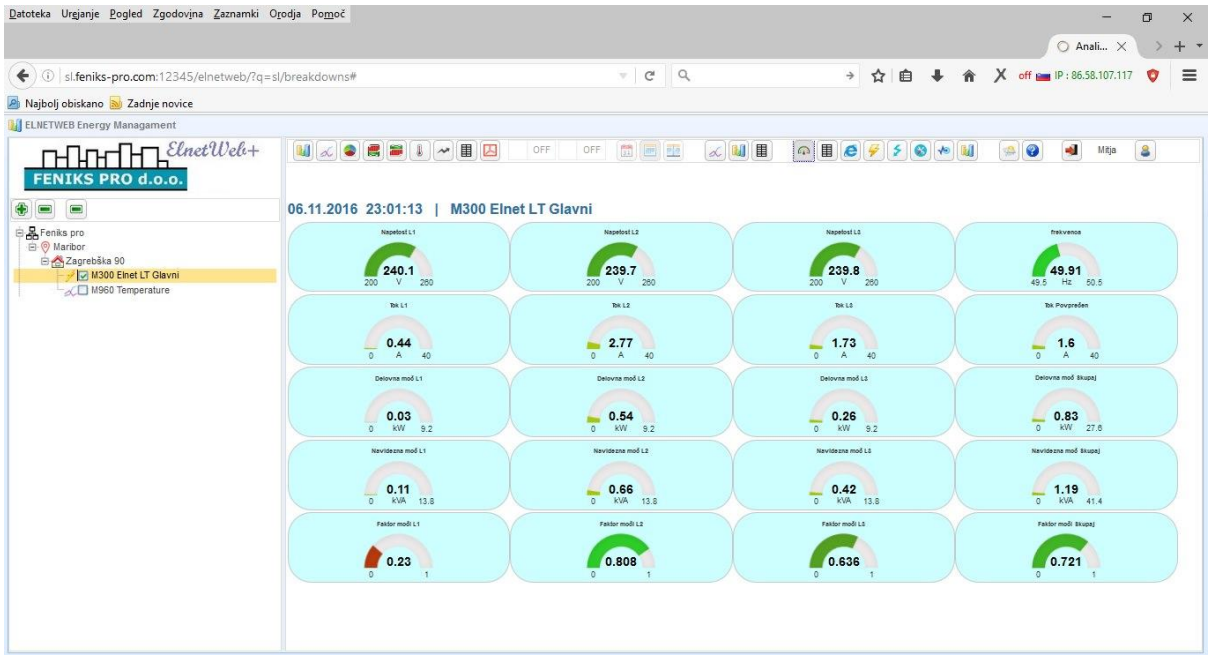
In sections 7.1 to 7.9 followed by descriptions of individual functions.

7.1. Current overview

The current review of shipment by clicking on this icon:

Picture 46 Current overview

It opens us to review as shown in Figure 47:



Picture 47 Current overview

The real size of the current electricity meters Elnet are shown in the form of virtual counters.

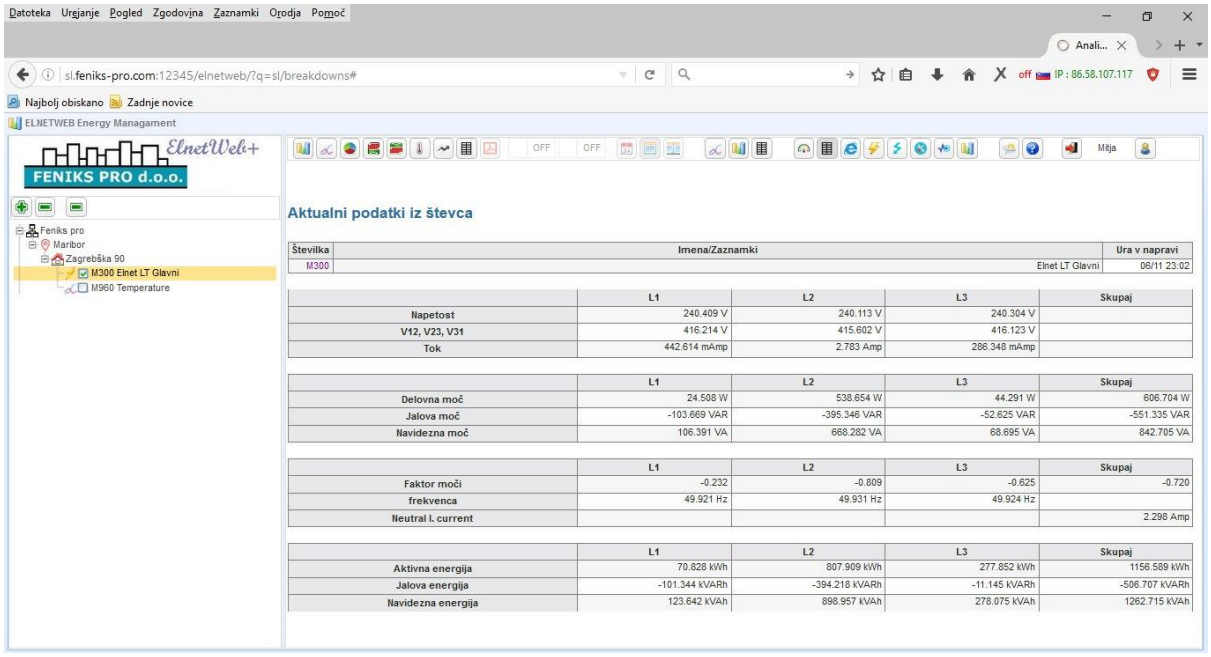
7.2. Review of current values in tabular display

The current value of the counters can be displayed in tabular form.

With the left mouse button click on:

Picture 48 Overview of current to the value in the tabular display

It opens the review as shown in Figure 49:



Picture 49 Current data in the tabular display

7.3. The integrated WEB server

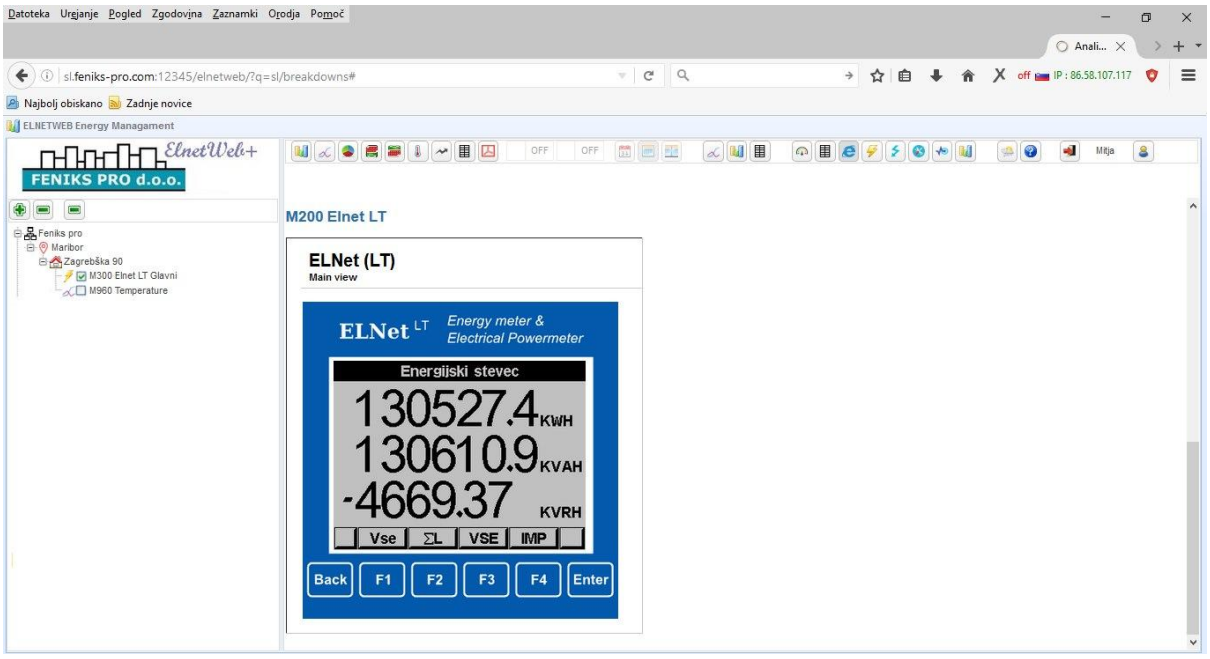
Some power analyzers, which are connected to the World Wide Web itself have a built-in WEB server. This means that you can connect to the IP address counter and displayed a display counter, with virtual buttons. The counter can be used as if they were physically in front of the device, though we may be separated from it by thousands of miles.

This feature is very convenient if you want to change numerator certain settings, check, etc., Without being physically at the counter.

To display the WEB server analyzer with the left mouse button click on:

Picture 50 Integrated WEB counter

It opens us to review as shown in Figure 51:



Picture 51Only an integrated WEB counter el. analyzer

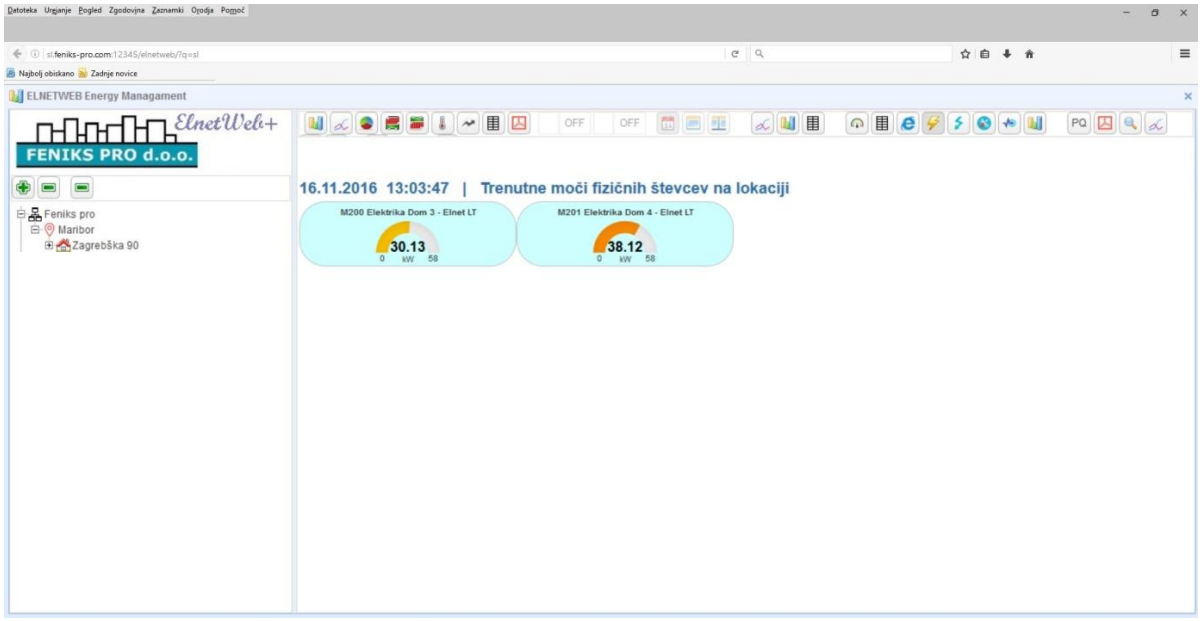
With the left mouse button you can klikamo the keys of the virtual counter. The rate of change of impressions depends on the speed of your Internet connection.

7.4. The current active power of the selected counters

In particular building can be built more electricity meters. If we are interested in current electrical power provided by these counters measure, select the next icon:

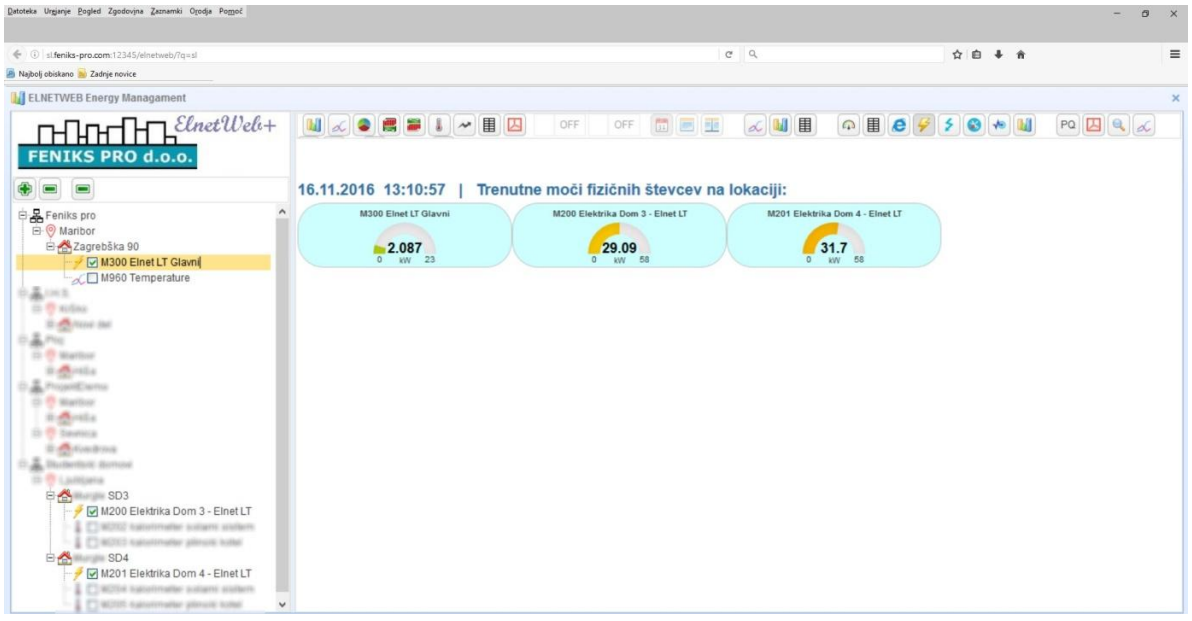
Picture 52 The current strength of the physical counters

The tree tick physical electricity meters and give the display as shown in Figure 53:



Picture 53 The current strength of the selected counters

The tree can tick more physical electricity meters. In this case, a display of electric power in one graph to facilitate comparison:



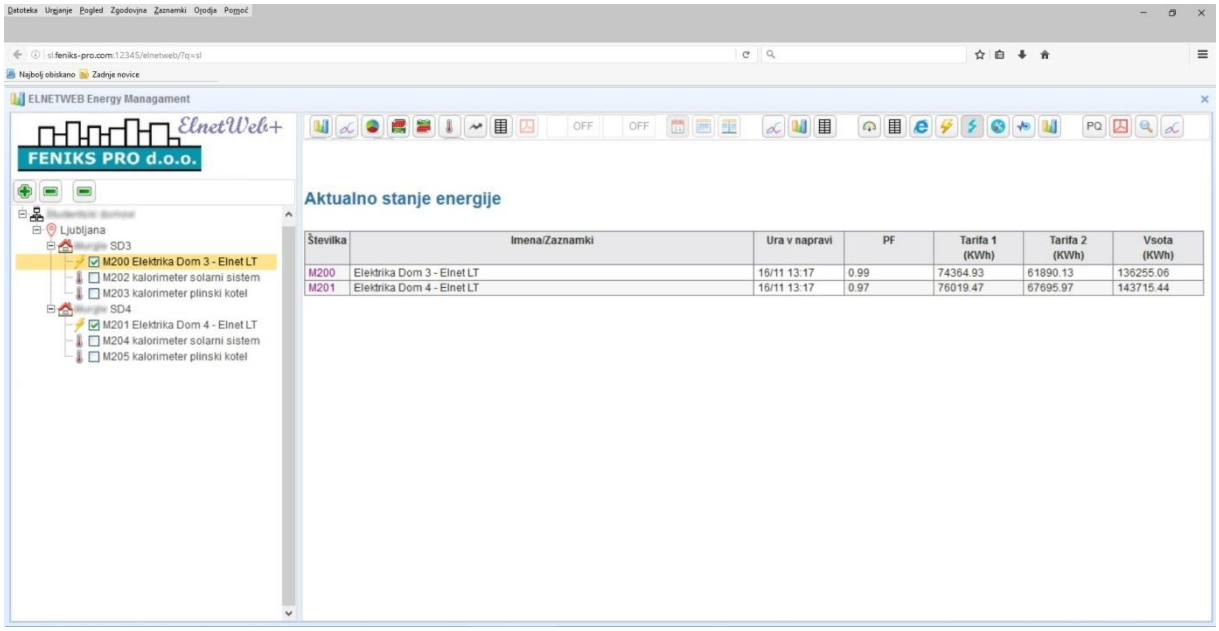
Picture 54 Comparison of power between counters

7.5. Current energies of selected counters

Suppose that we are interested in the state of power consumption at a given power meter. With the left mouse button click on the following icon:

Picture 55 Only current energy counters for physical

The tree tick physical electricity meters and give the display as shown in Figure 56:



Picture 56 Only current energy

The first shows the current time in the electric meter Elnet. The second column shows the power factor. Ideally conditions is 1. The next two Kolin show the value of the energy consumed by the first and second tariff in kilowatt-hours. The last column shows the total kilowatt-hours.

7.6. Current status of the selected counters

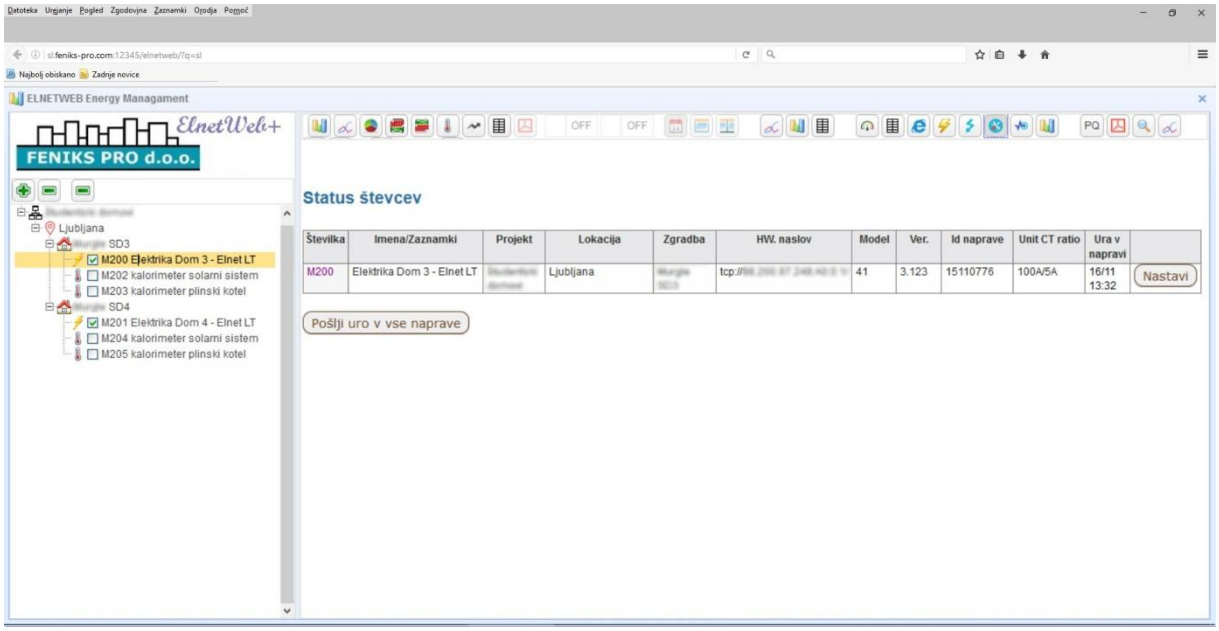
In this menu, you can:

- check the notes on the physical counter, the location of the installation, the building in which it is installed, look at the current electricity consumption
- check its physical IP address
- check your device model
- check the firmware version devices
- Check the version and device ID
- Check current ratio of the device
- check / set the clock on your device

The menu is accessed by clicking the left mouse button on the icon in the toolbar:

Picture 57 Displays the current status of the selected counters

I opened a display similar to Figure 58:



Picture 58 device status

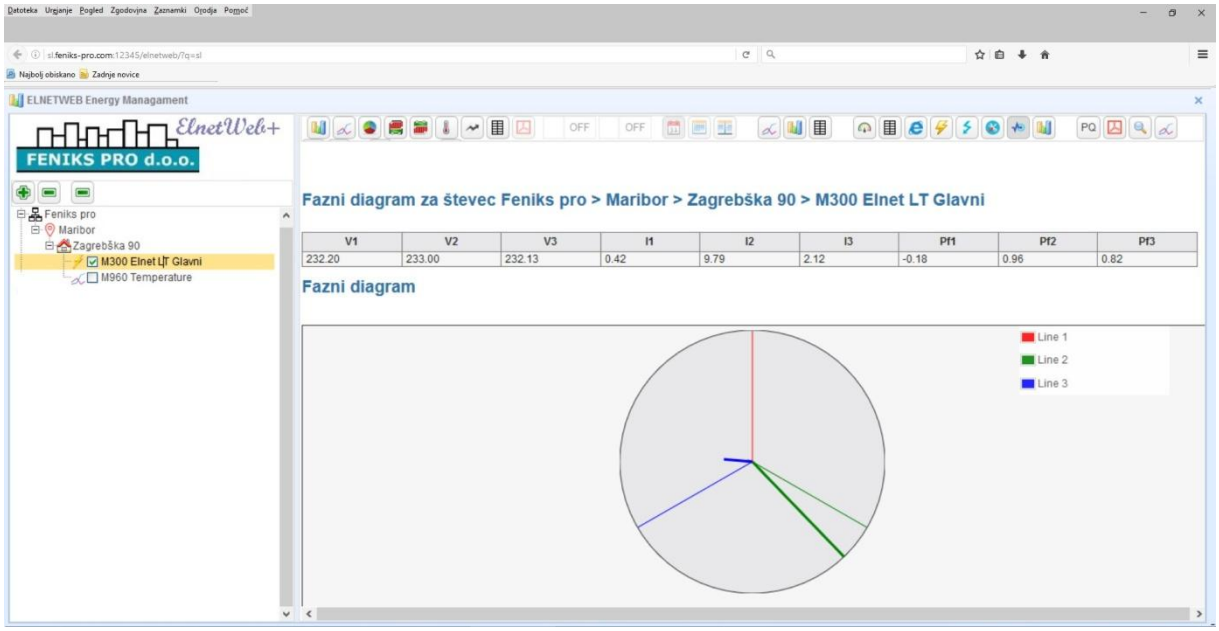
If we find that time in which the device is not correct (for example, that more than one), you can click with the left mouse button on the "Send clock in every device" and set the correct time in the meter it is arranged.

7.7. Phase diagram

Already we are interested see the load of individual phases in the meter, voltage, current and power factor in the toolbar, select the icon:

Picture 59 Only the phase diagram

The display shows the following display:



Picture 60 Only the phase diagram

Above the table is displaying said numerical values.

Under the table is displayed even phase diagram.

7.8. Harmonic analysis

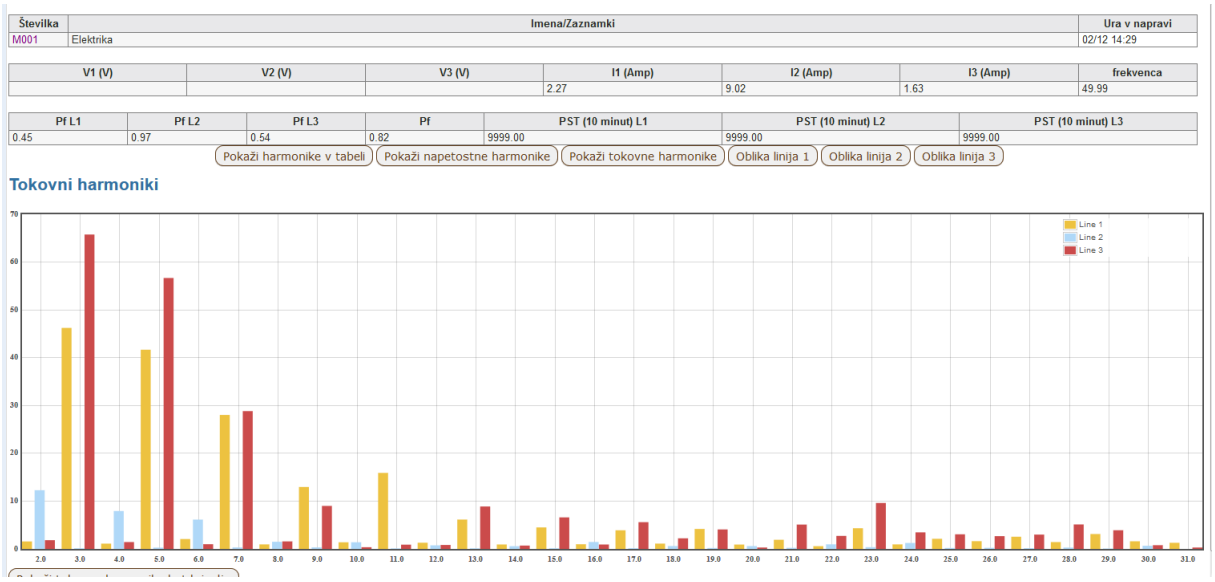
In the grid due to a variety of electrical devices that are connected to the network and develop various disorders. distortion of basic electrical frequencies. We are talking about these higher current and voltage. These components represent a higher distortion and cause disturbances and even failure sensitive electronic equipment. This can be a major problem as of server, measuring equipment in sensitive environments such as hospitals, airports, precision industries, and many others. The situation can be improved with the installation of compensation devices, add filters, and the like.

Most of you can already do with the monitoring of higher harmonic distortion. In the jargon of the encounter with the concept and harmonic analysis. quality electricity.

The program ElnetWEB + can be accessed by these data, which are measured counters Elnet.

On the toolbar with the left mouse button click on:

Picture 61 harmonic analysis



Številka	Imena/Zaznamki	Ura v napravi
M001	Elektrika	02/12 14:29

V1 (V)	V2 (V)	V3 (V)	I1 (Amp)	I2 (Amp)	I3 (Amp)	frekvenca
			2.27	9.02	1.63	49.99

Pf L1	Pf L2	Pf L3	Pf	PST (10 minut) L1	PST (10 minut) L2	PST (10 minut) L3
0.45	0.97	0.54	0.82	9999.00	9999.00	9999.00

Pokaži harmonike v tabeli | Pokaži napetostne harmonike | Pokaži tokovne harmonike | Oblika linija 1 | Oblika linija 2 | Oblika linija 3

Tokovni harmoniki

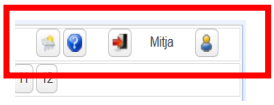
Harmonies Table

	V_1	V_2	V_3	I_N	I_1	I_2	I_3
THD	3.34	3.19	3.31		6.21	10.19	11.43
1	100.00	100.00	100.00		100.00	100.00	100.00
2	0.04	0.03	0.02		2.39	0.07	0.06
3	0.28	0.11	0.35		1.11	3.21	5.90
4	0.02	0.02	0.02		0.11	0.28	0.18
5	1.34	1.36	1.23		0.94	7.20	6.56
6	0.01	0.01	0.01		0.09	0.11	0.05
7	0.58	0.52	0.55		3.20	3.46	4.71
8	0.01	0.00	0.01		0.44	0.11	0.10
9	0.48	0.42	0.41		3.79	3.96	4.30
10	0.01	0.01	0.01		0.06	0.03	0.16
11	0.22	0.21	0.23		2.09	3.18	2.96
12	0.01	0.01	0.01		0.18	0.17	0.06
13	0.06	0.15	0.10		0.31	1.24	1.01
14	0.00	0.00	0.00		0.14	0.02	0.01
15	0.09	0.10	0.09		0.79	1.03	1.09
16	0.00	0.00	0.01		0.08	0.09	0.05
17	0.04	0.06	0.06		0.47	0.84	0.75
18	0.00	0.00	0.01		0.07	0.06	0.04
19	0.01	0.02	0.01		0.22	0.28	0.07
20	0.00	0.01	0.01		0.12	0.03	0.01

8. Miscellaneous

In this menu are grouped icons that are linked to the management of the program Elnet WEB +.

Miscellaneous section in the toolbar shown in Figure 64



Picture 62 Miscellaneous

In subsections 8.1 to 8.4 are descriptive functions.

8.1. Weather forecast for your location

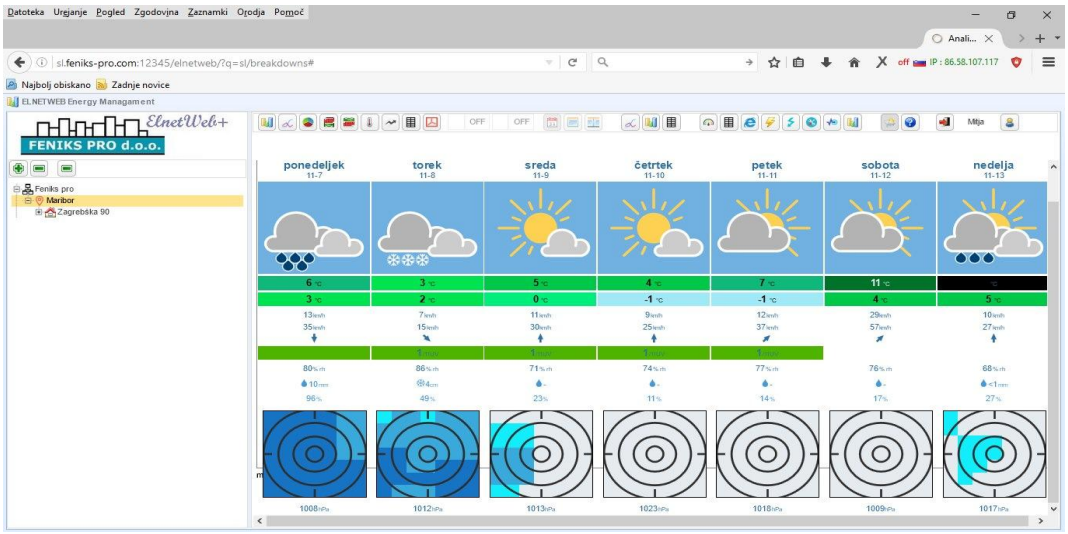
Elnet WEB + to display weather forecasts for selected locations where we have installed the meters and collect data.

Weather conditions have a significant impact on energy consumption for heating and chilled. Therefore, the comparison of the data of weather forecasts sense.

To access the weather forecasts by clicking with the left mouse button on the icon in the toolbar:

Picture 63 Weather forecast for your location

In the tree, select the desired location. The following display appears as shown in Figure 64th

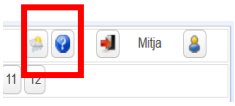


Picture 64 View weather forecast for your location

See the weather forecast consists of icons to describe the upcoming situation, data on the expected temperatures, the direction and strength of winds and rains.

8.2. Help

By left-clicking on the help icon, which is shown in Figure 65



Picture 65 Icon for aid under Miscellaneous

They opened the instructions for using Zelent WEB + PDF file.

8.3. Exit program

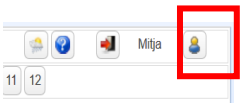
If you wish to unsubscribe from the program, click on the icon, as shown in Figure 65:

Picture 66 Icon to exit the program

The web browser redirects us to the initial login window, as shown in Figure 1.

8.4. My account

In the My Account menu, you can change your user settings. By left-clicking on the icon as shown in Figure 67:



Picture 67 My account

In this menu, the user can edit:

- your username
- change password entry
- We check email (requires an active e-mail address at the loss of a password)
- login password
- the language of the user interface.

If you have forgotten your password, enter your new password in the "Password" and "Confirm password". Save the changes by clicking the left mouse button on the "Save" button, which is located at the very bottom of the page.

If napravljenih changes you do not want to save, click with the left mouse button on the "Delete" button.

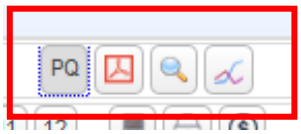
The function of "Remember Me" op application only use the computers to which you have access only to you and do not on public computers.

9. The quality of electricity

The situation in the grid can be very accurately monitored by the analysis of standard EN50160. This is also the standard quality of energy that must be met by electricity suppliers.

On the other hand, customers can monitor the quality of energy supplied with special sensors that allow the preparation of reports according to standard EN50160. One of such devices is Elnet PQ. It is a technologically advanced device.

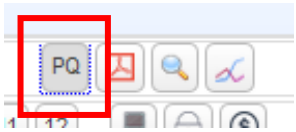
If we have the facility built some power analyzer Elnet PQ is in a set of toolbars as described in previous chapters as such, as shown in Figure 68:



Picture 68 Toolbar report according to standard EN50160

9.1. Quality report regarding EN 50160

Reports on the quality of electricity as per EN50160 accessed by clicking the left mouse button on the icon as shown in Figure 69:



Picture 69 The report on the quality of EN50160

The figure below shows a summary of the generated reports:

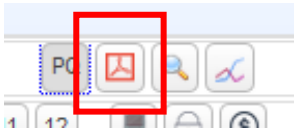
Naprava:	**M002 Elnet PQ** ELNet PQ Energy & Power quality analyzer
Lokacija	Feniks pro TelAviv Demo
Poročilo od datuma	01-08-2017
Poročilo do datuma	31-08-2017

Povzetek rezultatov

Test	Stanje
Frekvenčni test > +1%, < -1%	OK
Frekvenčni test > +4%, < -6%	Ni OK
Linija 1 Test napetostne spremenljivosti > +10%, < -10%	OK
Linija 2 Test napetostne spremenljivosti > +10%, < -10%	OK
Linija 3 Test napetostne spremenljivosti > +10%, < -10%	OK
Linija 1 Test napetostne spremenljivosti < +10%, > -15%	OK
Linija 2 Test napetostne spremenljivosti < +10%, > -15%	OK
Linija 3 Test napetostne spremenljivosti < +10%, > -15%	OK
Linija 1 Hitre napetostne spremembe > +5%, < +5%	Ni dogodkov
Linija 2 Hitre napetostne spremembe > +5%, < +5%	Ni dogodkov
Linija 3 Hitre napetostne spremembe > +5%, < +5%	Ni dogodkov
Linija 1 "fliker" test	OK
Linija 2 "fliker" test	OK
Linija 3 "fliker" test	OK
Linija 1 Upadi napajalne napetosti	Ni dogodkov
Linija 2 Upadi napajalne napetosti	Ni dogodkov
Linija 3 Upadi napajalne napetosti	Ni dogodkov
Linija 1 Prekinitve napajalne napetosti	Ni dogodkov
Linija 2 Prekinitve napajalne napetosti	Ni dogodkov
Linija 3 Prekinitve napajalne napetosti	Ni dogodkov
Linija 1 Prenapetosti (prenihaji)	Ni dogodkov
Linija 2 Prenapetosti (prenihaji)	Ni dogodkov
Linija 3 Prenapetosti (prenihaji)	1 Event
Napajalna napetost nezbalansirana	OK
Linija 1 Občasne prenapetosti	5 Dogodki
Linija 2 Občasne prenapetosti	5 Dogodki
Linija 3 Občasne prenapetosti	2 Dogodki
Harmoniki na liniji 1	Ni OK
Harmoniki na liniji 2	Ni OK
Harmoniki na liniji 3	Ni OK

9.2. Export reports in PDF EN50160

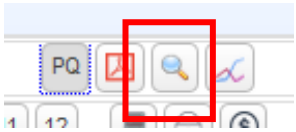
Reports on the quality of electricity as per EN50160 can be exported in PDF files, etc. as described in section 5.2. with the left mouse button click on the icon, as shown in Figure 70:



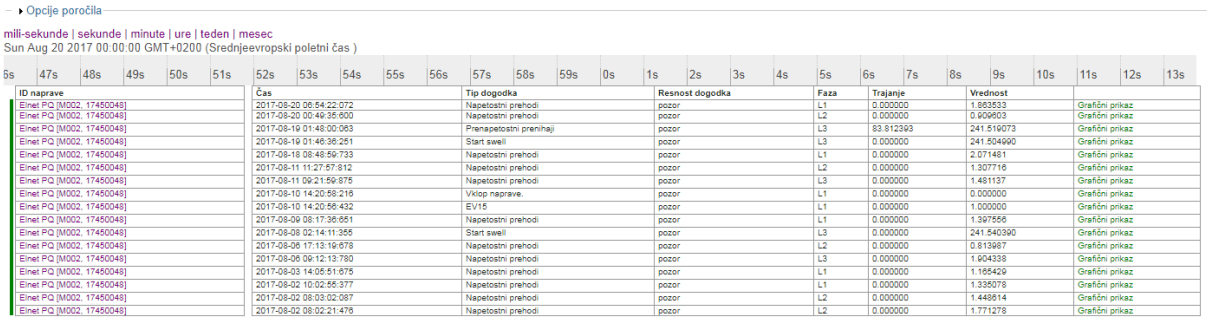
Picture 70 EN50160 export reports in PDF

9.3. EN events

Electric Elnet PQ analyzer can detect these EN events. Access them by clicking on the icon, which is shown in Figure 71:



Picture 71 Viewing ENdogodkov



Opcije poročila

mili-sekunde | sekunde | minute | ure | teden | mesec

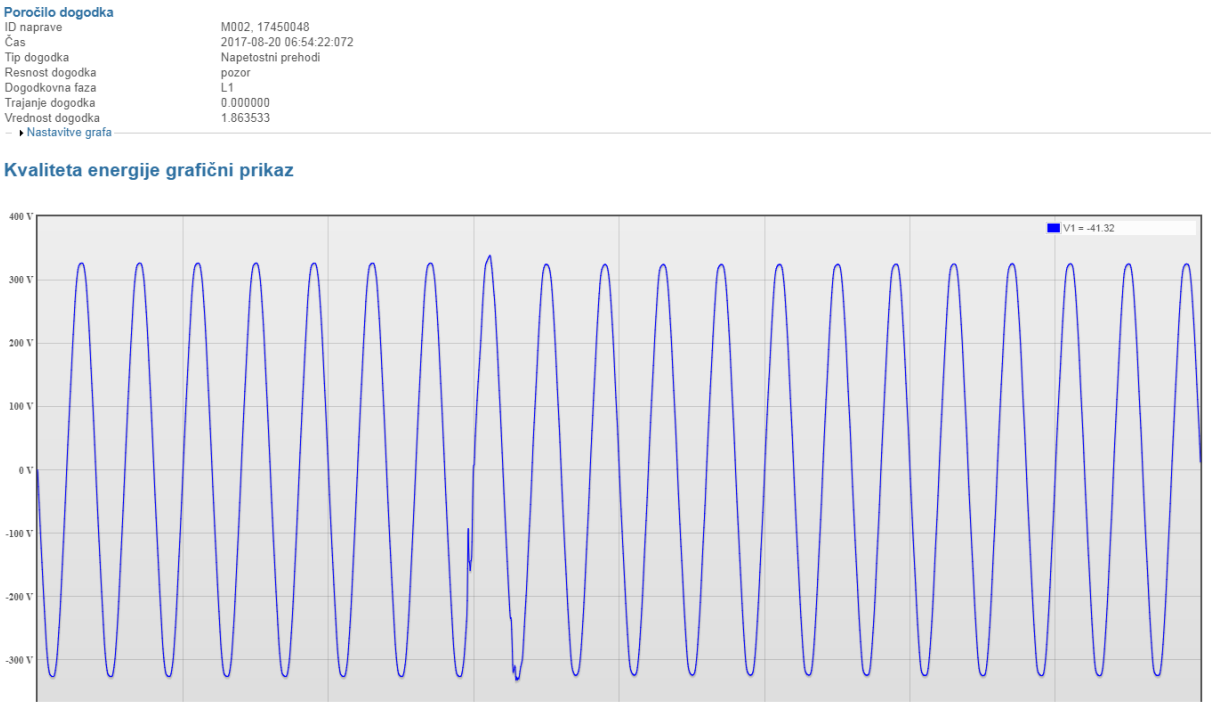
Sun Aug 20 2017 00:00:00 GMT+0200 (Srednjeevropski poletni čas)

6s 47s 48s 49s 50s 51s 52s 53s 54s 55s 56s 57s 58s 59s 0s 1s 2s 3s 4s 5s 6s 7s 8s 9s 10s 11s 12s 13s

ID naprave	Čas	Tip dogodka	Resnost dogodka	Faza	Trajanje	Vrednost	
Elnet PQ [M002, 17450048]	2017-08-20 06:54:22:072	Napetostni prehodi	pozor	L1	0.000000	1.863533	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-20 00:49:35:600	Napetostni prehodi	pozor	L2	0.000000	0.909603	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-19 01:48:00:063	Prenapetostni prenihaji	pozor	L3	83.812393	241.519073	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-19 01:46:36:251	Start swell	pozor	L3	0.000000	241.504990	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-18 08:48:59:733	Napetostni prehodi	pozor	L1	0.000000	2.071481	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-11 11:27:57:812	Napetostni prehodi	pozor	L2	0.000000	1.307716	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-11 09:21:59:675	Napetostni prehodi	pozor	L3	0.000000	1.481137	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-10 14:20:58:216	Vklop naprave.	pozor	L1	0.000000	0.000000	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-10 14:20:58:432	EV15	pozor	L1	0.000000	1.000000	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-09 08:17:36:651	Napetostni prehodi	pozor	L1	0.000000	1.397556	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-08 02:14:11:355	Start swell	pozor	L3	0.000000	241.540390	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-06 17:13:19:678	Napetostni prehodi	pozor	L2	0.000000	0.813987	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-06 09:12:13:780	Napetostni prehodi	pozor	L3	0.000000	1.904338	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-03 14:05:51:675	Napetostni prehodi	pozor	L1	0.000000	1.165429	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-02 10:02:56:377	Napetostni prehodi	pozor	L1	0.000000	1.335078	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-02 08:03:02:087	Napetostni prehodi	pozor	L2	0.000000	1.448614	Grafični prikaz
Elnet PQ [M002, 17450048]	2017-08-02 08:02:21:476	Napetostni prehodi	pozor	L2	0.000000	1.771278	Grafični prikaz

Figure 72 EN list of events in the period ozbranem

By clicking on the graphic display in the individual event obtained show voltages and currents. What will be shown is set in the submenu Setting the graph.



Poročilo dogodka

ID naprave	M002, 17450048
Čas	2017-08-20 06:54:22:072
Tip dogodka	Napetostni prehodi
Resnost dogodka	pozor
Dogodkovna faza	L1
Trajanje dogodka	0.000000
Vrednost dogodka	1.863533

Nastavitve grafa

Kvaliteta energije grafični prikaz

Figure 73 a graphical representation of ONE event

9.4. PQ trend

Software Elnet WEB + can from the data collected from electrical Elnet PQ analyzer generates reports on trends. Access them by clicking on the icon, which is shown in Figure 72:

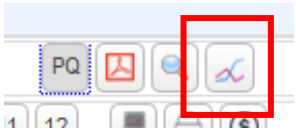


Figure 74 PQ trends

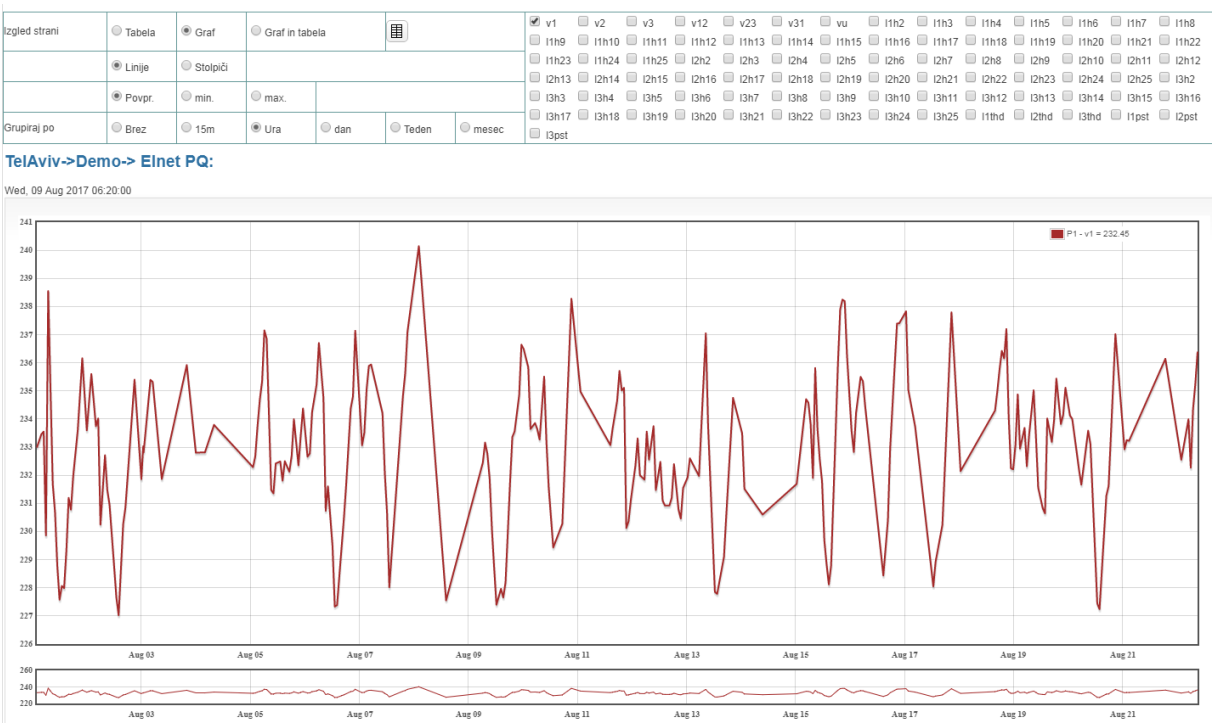


Figure 75 An example of a chart PQ

10. Billing of electricity

If you have leased a module for charging electricity in the menu show icon

By clicking on the icon selected to generate a report (expense) for the selected counter (only possible for you. Meters or virtual. Collecting points). Example charged is shown in the figure below.

In order to properly use this module, your administrator software sets all necessary settings (format output, energy prices, consumption places, addresses of the parties ...)

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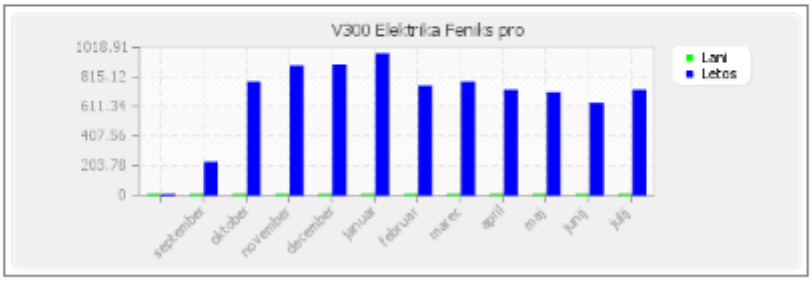
Obračun porabe

do
Naslov

Feniks pro d.o.o.
Zagrebška cesta 90
2000 Maribor

Datum: 22.08.2017

Številka naprave V300
ID naprave 16050089
Cenovna skupina KPI
Komentarji Elektrika Feniks pro
Za datume 01.07.2017 - 31.07.2017
Dnevi 31

Tarifa	Datum		Odčitek (kWh)		Poraba (kWh)	Cena [cent/kWh]	Skupaj (Euro)
	Prvi	Zadnji	Prvi	Zadnji			
Tarifa 2	30.06.2017	31.07.2017	2.910,72	3.223,16	312,44	7,00	21,87
Tarifa 1	30.06.2017	31.07.2017	4.423,01	4.830,45	407,44	12,00	48,89
Plačilo za porabo za datume 01.07.2017 - 31.07.2017					719,88		70,76
Poraba skupaj					719,88		70,76
					Skupaj		70,76
					DDV - 22,00%		15,57
					Skupaj z DDV		86,33