Demand Side Management Tools

Interreg CENTRAL EUROPE
European Union
European Regional Development Fund
TOGETHER

Green Schools Competition

An example of a building competition for animating the energy reduction involving the end-users

CE51 TOGETHER

INTERREG CENTRAL EUROPE 2014-2020

TOGETHER

TOwards a Goal of Efficiency THrough Energy Reduction

Green Schools Competition

An example of a building competition for animating the energy reduction involving the end-users

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Executive summary

In order to inspire the partners, the Province of Treviso decided to translate into English the text of the 6th edition of the so called Green Schools Competition, that is targeting a part of the Italian pilot buildings involved in the TOGETHER project. The Green Schools Competition is an example of a Building Competition that can be implemented though the use of devices such as the smart meters.

The Province of Treviso has always been promoting the sustainable development of the territory. The actions are mainly directed to the young generation, generators of a future based on the preservation of the environment and landscape. Schools are the best spaces to create the environmental sensibility, becoming innovation laboratories. The Province of Treviso created the web portal Green Schools to share the green schools projects implemented both in Treviso and in the world. In this way every activities will have a strong resonance. The Province through Green Schools aims to involve the entire community to take actions aimed to the protection and preservation of the environment through various activities such as energy usage rationalization, spaces sharing, environmental didactic projects. The Province of Treviso wants to lead their people towards the common path of sustainability.

According to the Lead Partner, it could be an inspiring example that points out:

- The need of a lifelong dialogue between buildings owners and buildings managers
- The need of clarifying that they are co-responsible of energy consumption and have to work together in order to improve energy efficiency, limiting the use of the resources and using them better.
- A concrete example on how it is possible to use the smart meters for benchmarking data about the energy consumption in relation to a prefixed goal of reduction
- A concrete example of gamification that is quoted in another crucial deliverable developed by the project that is the DSM tools for the engagement of the building users (reference D.T2.3.3) together with e.g. “pupils’ energy tour”, “information campaign”etc.

The 6th Green School Competition was published in the following and promoted though the TOGETHER webpage.

Contents

1. Introduction

The Province of Treviso has always been promoting the sustainable development of the territory. The actions are mainly directed to the young generation, generators of a future based on the preservation of the environment and landscape. Schools are the best spaces to create the environmental sensibility, becoming innovation laboratories. The Province of Treviso created the web portal Green Schools to share the green schools projects implemented both in Treviso and in the world. In this way, every activities will have a strong resonance.

The Province through Green Schools Competition aims to involve the entire community to take actions aimed to the protection and preservation of the environment through various activities such as energy usage rationalization, spaces sharing, and environmental didactic projects.

Since 1999, Province of Treviso started a program to update the management of Secondary Schools building estates, made of 41 schools with 100 buildings, aimed to acquire a deep knowledge of the estate itself and to involve all users in the responsible management of this common asset and in the use of common spaces. The project 3rd Generation Global Service was developed in this context, with the goal to change all schools of the province in Sustainable Campus, following the example set by the Center for Green Schools project, to develop a new mentality for sustainability and energy saving. The sustainability process established in the schools results from the combination of innovating technologies and active participation of all citizens/users.

This is the reason why the Integrated Global Service can be summarized.

In the sustainability equation in which:

AR technological actions conducive to energy saving
AC communicating strategies
E saving obtained from the combination of the two selected actions typologies

Technological innovation will give a new configuration to the schools real estate through:

- Renewable energies plants
- Plant revamping
- Energy improvement
- Energy consumption measurement and monitoring

Communicating strategies are aimed to educate and inform pupils and all school users as well as gamification tools such as energy saving contest like the Green Schools Competition.

The competition is launched in the frame of Global Service 3rd generation GSI Green school project, with the objective to involve all people acting within the various schools (Principals, Professors, students, Energy Teams, Facility Officers, supporting personnel) in the themes of energy saving and environmental sustainability.

2. The competition relevance

2.1. The 6th Greenschools Competition as energy saving contest

The competition involved all people acting within the various schools in the Province of Treviso (Principals, Professors, students, Energy Teams, Facility Officers, supporting personnel). The current edition of the competition has been strongly influenced from the prons and cons of the previous five contest. This edition is strongly inspired to the goal of concretely reducing the energy consumption and cut the energy bill.

2.2. The connections with the TOGETHER project

First of all 8 out of 20 pilot buildings involved in the project TOGETHER could participate at the Competition that is concretely aiming at registering energy reduction, that are monitored thought the smart meters already installed several years ago in all the buildings belonging to the Province of Treviso. The terms of registration to take part to the Green Schools Competition present some important changes introduced also considering the implementation of the TOGETHER, that has allowed to highlight the necessity of measuring the consumptions and the possible actions of improvement/containment based also on the behaviours of those stakeholders that live in the public buildings: managers, owners and final users. In fact, thanks to TOGETHER project, it has been possible not only to update the measuring capacity of the Province of Treviso, but also to extend the measurement idea also to the management systems of 12 municipal public buildings.

In addition, TOGETHER permitted to organise possible paths of the so called “Behavioural Demand Side Management e Analytic Demand Side Management” that are present in the frame of the tools elaborated by the partnership and published in the project website. The main focus of the sixth edition will be concentrated on the electricity savings and their monitoring that will be assessed and awarded with monetary prises.

Moreover the sixth edition is organized after the logic of the Living Lab that is crucially featuring the TOGETHER project. As matter of the fact the end-users are not only the target of education trainings or of decisions taken in their regards, but they are part of the decisions as involved in the so called Negotiating Panel, developed in a specific tool proposed by the TOGETHER project and available in the project library (see URL http://www.interreg-central.eu/Content.Node/TOGETHER.html).

Finally, the current competition is a strong “gamification” example that is defined by Wikipedia as the application of game-design elements and game principles in non-game contexts.

The structure and terms of reference of the competition can be of inspiration for the TOGETHER partners as well as for other interested administrations. The added value provided by this kind of competition that is based on the real measurement and not only based on general criteria and assessment of “good intention”.

3. The Green Schools Competition

3.1. Introduction into the competition

The Green Schools Competition Project was born within the framework of the third generation Global Service project-GSI Green Schools, with the goal of turning, according to the example of the project "The Centre for Green Schools", the schools of the province into Sustainable Campuses, incubators for the development of a new mentality geared to sustainability and energy saving. The sixth edition is organized after the logic of the Living Lab.

A Living Lab is a laboratory of sustainable testing where users and producers can co-create innovation. The Living Labs were conceived by the European Commission like Public-Private- People Partnership (PPPP) for a user-driven innovation process.

The Living Lab is based on four main activities:

- Co creation: co design by users and producers
- Exploration: discovering emerging usages, behaviours and market opportunities;
- Experimentation: implementing live scenarios within communities of users;
- Evaluation: assessment of concepts, products and services according to socio-ergonomic, socio-cognitive and socio-economic criteria

The Province of Treviso turned the Green Schools project into a real and proper Living Lab through the participation in the project Energy ViLLab Living Lab for Sustainable Development, (www.energyvillab.eu), i.e. it aims at promoting virtuous behaviours in the use of energy, serving as a community (distributed) laboratory.

Through the participation in the EnergyViLLab project the Province of Treviso had the opportunity to be admitted in the European Network of Living Labs ENOLL which gathers the most significant experiences of Living Lab at European and Global level. The participation in the ENOLL network represents a further chance of development through the discussion and exchange of ideas with similar experiences in other contexts and other countries.

In this perspective, the sixth edition of the Green Schools Competition, on the basis of the experimentation and of the indications proposed by its players, was updated and redesigned.

3.2. Other initiatives carried out by the Province of Treviso in the environmental training

During the years, thanks to the initial input of the Green Schools Competition, other two important initiatives started dealing with the environmental issues, both promoted by the Province of Treviso They are the **TOGETHER** and **EduFootprint projects.**

3.2.1. TOGETHER project

The aim of TOGETHER project is to encourage the Public Administrations of the Central Europe to improve the Energy efficiency of their buildings involving also the users in the Energy management. The initiative is financed by the ERDF and promotes the collaboration among the institutions of different countries

(Austria, Croatia, Check Republic, Germany, Hungary, Italy, Poland Slovakia and Slovenia). The project aims at changing the current atomist vision of the buildings in a holistic approach, as a complex of functions and relations among physic spaces, technological devices and needs-behaviours of the users.

3.2.2. EduFootprint project

EduFootprint is a 28 month modular project co financed by the ERDF in the framework of MED Programme. The initiative aims at improving the capability of owners and managers of the public buildings in the energy efficiency, considering not only the direct energy impacts of the buildings (consumptions), but also the indirect ones (public tenders, awareness and behaviours of the users etc.). The project actions focus on testing and transferring an energy strategy integrated with an approach based on the Life Cycle Assessment in the school buildings. Elaborating and implementing efficient energy consumptions practices integrated with the municipal Sustainable Energy Action Plans (SEAPs).

3.3. The sixth edition of the competition

These are the news of the sixth edition:

1. Simplification of the competition categories
2. Change in the registration and participation rules
3. Operative support for the Energy Teams

3.4. Registration and participation terms

The terms of registration to take part to the Green Schools Competition present some important changes introduced also considering the implementation of the **Interreg CENTRAL EUROPE TOGETHER**, that has allowed to highlight the necessity of measuring the consumptions and the possible actions of improvement/containment based also on the behaviours of those stakeholders that live in the public buildings: managers, owners and final users. In fact, thanks to TOGETHER project, it has been possible not only to update the measuring capacity of the Province of Treviso, but also to extend the measurement idea also to the management systems of 12 municipal public buildings. In addition, TOGETHER permitted to organise possible paths of **the so called "Behavioural Demand Side Management e Analytic Demand Side Management"** that are present in the frame of the tools elaborated by the partnership and published in the project website. The main focus of the sixth edition will be concentrated on the electricity savings and their monitoring. The Province of Treviso has installed many devices aiming at controlling the electricity consumptions.

The schools will be able to register to create an Energy Team, with the aim of implementing actions and activities for the **electricity saving in a measurable perimeter.**

The Organisation will support the creation of the Energy Team so that:

- Each Energy Team will be responsible for the energy saving in a measurable and well defined perimeter;
- One and only one Energy Team will be assigned to each determined and measurable perimeter.

It is a new approach and, for this reason, the Organisation will offer its support since the creation of the Teams. Once sent the request of participation, the Organisation will contact the participating Energy Teams to define clearly the assigned perimeter.

The choice of promoting the monitoring of the electricity consumption is also framed in the perspective of reaching a clear and long-term objective in the next years: the sharing of the obtained savings produced by virtuous behaviours between the Province and the more deserving schools for the future editions.

The schools have to fill the specific form attached to the current call and to send it by the reserved e-mail (competition@greenschools.it) within 07th December 2017. The Organisation will send an e mail confirming the registration.

The Organisation will send a notification for each participation request. Each Energy Team will identify a **Contact Person** among the teachers. The Contact Person will manage the Team and interact with the Organisation.

3.5. The selections of the Competition

The competition is based on the participation to **3 selections**:

- reduction of the electricity consumption**.** **The participation is compulsory;**
- **the Best Energy Teams;**
- **Sustainable Coach.**

The details of the 3 selections will be explained in the following paragraphs.

1. Delivery and evaluation of the projects

At the end of the evaluation of the documents and projects of the different schools, the Commission will draw up the final classification of all selections and a prize money will be distributed. The total amount of the prize is **€ 22,000.00**, of which € 15,000.00 covered by Provincial resources (the sum depends on the availability of the resources in the 2018 budget) divided as follows: € 15,000.00 for the "Green Schools Competition" and the remaining € 7,000.00 will be given by the temporary grouping Sinergie s.p.a and Engie s.p.a. (subject to availability), as a prize for the best Energy Teams (€ 3.500 for the school personnel and € 3.500 for the students). Specifically, the different selections will be awarded as follows:

- "Reduction of the Energy consumption" selection. The prize money for the winners is € 12,000 (subject to availability), offered by the Province, in addition to a possible amount (subject to the contract terms) given by the temporary grouping Sinergie s.p.a and Engie s.p.a., for 25% of the bonus stated in chapter 7 of the Special Contract Specifications. The first 10 schools of the "Reduction of energy consumption" selection will be awarded.
- The Commission will determine the prize typologies. Subsequently, the Province, considering the available resources, will identify the funds for the final prizes, with an overall value equivalent to the stated prize money. The school will have to report the purchase to the Province by the invoice in order to be reimbursed of the sum equal to the prize.

- "Sustainable Coach" selection. The prize money for the winners is € 3,000 (subject to availability), given by the Province. The first 3 schools of the "Sustainable Coach" selection will be awarded.

- The Commission will determine the prize typologies. Subsequently, the Province, considering the available resources, will identify the funds for the final prizes, with an overall value equivalent to the stated prize money. The school will have to report the purchase to the Province by the invoice in order to be reimbursed of the sum equal to the prize.

- "Best Energy Teams" selection. The prize money for the winners is € 3,500 (subject to availability) for the prizes for the students and € 3,500 (subject to availability) for the prizes addressed to the school personnel, offered by the temporary grouping Sinergie s.p.a and Engie s.p.a.. The prize money will be subsequently divided considering the number of the winners. The prizes, expressed in Euro, will be not awarded in money but through bonus of equivalent value.

The participation to the "Reduction of Consumption" selection does not require any documentation. On the contrary, for the participation to the "Best Energy Team" and "Sustainble Coach" selections it is necessary to send the documents attesting the performed activities. The schools can send the final documents using competition@greenschools.it account from 21st May 2018 and within 15th June 2018. In summary, for the statement of the activities, the Energy Team have to present the following documents:

- **Presentation of the activities (PPT format):** it has to be a concise PPT document where all the developed activities are illustrated. At the beginning of the document it is necessary to present the composition of the Energy Team (teachers, students and school personnel);
- **Attachments and projects in the recommended formats:** if it is necessary to detail some further activities, it is possible to attach other specific documentation to the presentation.

The sent documentation will be evaluated by a specific **Commission** composed by some representatives belonging to the Province, the Local Education Authority and the temporary grouping Sinergie s.p.a and Engie s.p.a (the manager of the Global Service).

2. REDUCTION OF THE ELECTRICITY CONSUMPTION

ACTIVITIES TO DEVELOP:

As regards the "Reduction of the energy consumption" selection, the Energy Teams will work to reduce the electricity consumption in the assigned perimeter. The Energy Teams can implement any kind of actions they think suitable to reduce the consumption, in agreement with the School Manager. Each Energy Team will be supported by the Organisation.

ARE THERE COMPULSORY ACTIVITIES?

To define the consumption it is necessary to check the data in the "Energy Sentinel" portal (see the instructions in appendix). The only compulsory activity is to test weekly if the data are registered in the Energy Sentinel portal. The data entry is automatic but, sometimes, the Internet connection can interrupt for different reasons. Then, the check is only to control if all the periods are monitored. In case there are not monitored periods, the Energy Team has to inform the Organisation **immediately**, using the following e mail: **competition@greenschools.it**.

WHAT IT IS NECESSARY TO DELIVER AT THE END OF THE SCHOOL YEAR TO PARTICIPATE IN THIS SELECTION?

As regards this selection, it is necessary to send a simple list of the Energy Team members. The saving assessments will be verified by the Organisation. However, the Energy Teams are recommended to check the effectiveness of the implemented actions monitoring the Energy Sentinel portal, an activity that makes it possible to check in real time if the actions are achieving the planned objectives.

HOW THE FINAL CLASSIFICATION WILL BE DETERMINED?

The final classification will be defined by the percentage of obtained saving considering the average consumption calculated on the previous four-year period.

2.1 The importance of the selection for the "Reduction of the Electricity consumption"

This year the "Reduction of the Consumption" selection is very important and focuses on the electricity. The reduction of the electricity consumption reflects our education on Energy saving and it is, then, the most important educative issue in the frame of the Green Schools Competition. In fact, as indicated in the paper BEHAVIOURAL FACTORS' INFLUENCE ON ENERGY SAVINGS, "consumer behaviour can affect the energy consumption resulting from using a given technology (e.g. leaving the room light on when there is nobody there)".

Our behaviours have an extremely relevant weight in the consumption of the devices and buildings we use. We can mainly affect on this point as the impact of the daily behaviours is very significant as regards the electricity consumption.

Let's take a concretean example. The electrical appliances, although turned off, if they are plugged in, they consume small quantities of electricity in any case. For example, a turned off PC, if it is switched on, it consumes 20 W on average. If it is used for about 4 hours per day, it means that it is turned off for the other 20 hours. On the contrary, during the summer, when the schools are closed, the PCs are switched off for 24 hours per day. It means that we can count about 7.960 hours of use during the year, with PCs that are plugged in. Considering a consumption of 20W, these hours translates into 159.200 Wh that is 159 kWh.

Considering a hypothetical cost of 15 cents per kWh, the total amount will be € 23,88 per year of costs due to the turned off PC.

It may seem irrelevant, but how many computers are there in your school? And considering all the schools in the province of Treviso, how many are they? The Province of Treviso is managing 38 high schools distributed in 103 buildings, with more than 40.000 students, adding the teachers and the school personnel. It is a medium sized town.

Calculating (it is a cautious estimation) 60 PC per school, among labs and computers for the personnel, we count 2.280 computers. Considering € 23.88 per year per each computer, the total amount will be € 54,446.40 to keep them turned off. And we are considering only the PCs. There are also the coffee distributing machines, lights, monitors, spotlights, Smartphone, drinking and food distributors. If we sum up all these elements, the costs rise and they are resources taken off by other services. They are public resources, belonging to all of us, thrown away. They are resources that, on the contrary, could be recovered and used for services addressed to the citizens, for better schools, better roads etc. It would be enough to disconnect them from the electricity grid. A single gesture!

It is only an example of how the behaviours can concretely become an advantage for the community. This section of the competition has to be faced with **high awareness**.

2.2 Clear objectives

The objectives to reach have to be clear for all the selections and, fortiori; they have to be for the "Reduction of Consumption" selection, given its importance in the frame of the competition. **Then, the objective of the competition is the Saving of Electricity**. Accordingly, the activities have to focus on this objective and on the **achievement of the result.**

2.2.1 Be rude … with the waste!

The evaluation of the effects of the activities on the reduction of consumption and the subsequent energy saving need large scale activities. For example, if the participants decide to verify that the lights are turned off only in their classroom, the activity, although commendable, it will be not detected by the monitoring devices because it will not impact sufficiently on the total consumption of the building. For this reason, we offer some suggestions:

IF NECESSARY, BE RUDE!

After receiving the necessary support by the School Manager. Firmly open the range of your activities on the widest possible part of the building. If, for example, you switched off the light because the natural resources are sufficient, do not include only your classroom: go to the other classrooms, explain to the other students what you are doing, spread the culture of saving and turned off the light of their classrooms! In the same way enlarge your range to the corridors, offices, public spaces where the automatic distributing machines are present that could be switched off when the school is closed, in order to obtain a more significant detectable and demonstrable impact on the consumptions;

TRY TO SET SOME "GUERRILLA MARKETING" INITIATIVES!

Try to promote your initiatives and virtuous behaviours getting outside the box. The guerrilla marketing, in fact, is an advertising strategy that gets out of the old patterns in order to penetrate in the collective imagination with a strong impact, directly, provocatively, ironically and in a baffling manner. These particular characteristics make the guerrilla marketing a disruptive communication strategy, able to break the consolidated behavioural patterns. In the side photo an example of guerrilla marketing.

2.3 The selection for the electricity reduction

The sixth edition of the competition confirms the aim to reduce the electricity consumptions. For this reason, the implemented actions/activities have to be finalised to the reduction of the electricity consumptions. Compared to the past years, this year the Energy Team can count on a more streamlined procedure. There are no limits for the activities to realise: **after the authorisation of the School manager, you have carte blanche, as long as the energy reduction objective is pursued and reached**. The classification of the selection for the "Reduction of the Electricity consumption" will be drown up according to the percentage of saving obtained taking into consideration the baseline calculated by the

Organisation, considering the previous four years. In short, **will be awarded those schools that, considering the previous years, will have saved more in percentage terms**.

2.3.1 Quality of the initiatives

As abovementioned, the Energy Teams can implement all those initiatives they consider valid (in accordance with the School Manager) to achieve the saving of Energy consumptions and **the classification will be based exclusively on the obtained saving considering the previous years**.

But the quality of the realised work and activities will be evaluated in any case and, considering the quality, the best Energy teams will be awarded (see paragraph 4 dedicated to the specific selections). As detailed in the attachment of each area of the competition. For this reason, at the end of the year it is useful to send, along with the forms, also as much material as possible for a proper evaluation of the activities. **Therefore, it is advisable to collect photos, videos and any other type of produced material and to send them at the end of the competition in PPT, PDF (for imagines and descriptive reports) and video format (avi, mkv etc.) for possible media materials. Alternatively, for the video material sit is possible to send them by a link if they are uploaded in You Tube (obtaining, then, additional points).**

3. BEST ENERGY TEAMS

ACTIVITIES TO DEVELOP:

It will be evaluated the quality of the activities developed in the selection for the reduction of the Energy Consumption. For this reason it will be necessary to produce materials stating the quality of the implemented activities.

ARE THERE COMPULSORY ACTIVITIES?

There are not compulsory activities to participate in the selection unless the delivery of the final documentation at the end of the school year.

WHAT IT IS NECESSARY TO DELIVER AT THE END OF THE SCHOOL YEAR TO PARTICIPATE IN THIS SELECTION?

At the end of the school year, in the period indicated by the call, the Energy Teams are supposed to deliver the documentation stating the implemented activities, started research projects and the achieved results to reach the planned objectives of energy reduction.

HOW THE FINAL CLASSIFICATION WILL BE DETERMINED?

The final classification will be based exclusively on a qualitative evaluation of the carried out activities.

3.1 The selection for the best Energy teams

The classification of the best Energy Teams will be based only on the quality of the implemented work regarding the reduction of the electricity consumptions, as an example of the efficiency of the carried out initiatives measurable by the available instruments (please refer to the Guidelines for the monitoring of the consumption data in the attached documents). As anticipated in paragraph 2, the parameters underpinning the evaluation of the Commission are essentially 3:

- **Originality of the carried out work;**
- **Coherence and effectiveness of the planned activities**
- **Exportability in other fields.**

For each of the above mentioned areas, the Commission will express a vote from 1 to 10. The sum of the obtained scores will create the classification of the best Energy Teams.

To demonstrate the quality of the taken in initiatives, the schools are asked to send the documentation proving the quality of the work implemented on the basis of the 3 guidelines, in order to facilitate the task of the Commission. The Commission itself will appreciate the delivery of the final material also in English, the collaboration among different schools and the dissemination activity through the social networks (Twitter, Facebook, You Tube and the school web sites).

In addition, it is better for the participating schools to proceed, as far as possible, in demonstrating the effectiveness, in terms of Energy saving, of the implemented activities. It will be possible thanks to the available tools for measuring the consumptions, for which please refer to the **"Guidelines for the monitoring of the consumptions"** (attached documentation in the appendix).

4. SUSTAINABLE COACH SELECTION

ACTIVITIES TO DEVELOP:

As regards the Sustainable Coach selection tutoring activities are required in the classrooms of those elementary, secondary and high schools that have not created the Energy Team to participate in the current competition. The faced topics need to be linked to energy and energy saving.

ARE THERE COMPULSORY ACTIVITIES?

It is compulsory to perform tutoring actions at least in one classroom, as well as to produce the documents certifying the performed activities.

WHAT IT IS NECESSARY TO DELIVER AT THE END OF THE SCHOOL YEAR TO PARTICIPATE IN THIS SELECTION?

At the end of the school year, in the period stated in the call, the Energy Teams will deliver the documents proving the carried activities and the achieved results.

In the presentation of the activities in power point, besides the summary of the realised activities, the following information need to be specified:

- Name/names of the tutored institute/institutes
- Number of the tutored classrooms
- Links to Facebook or Twitter
- Links to the realised activities in the schools webpage
- Links to videos in You Tube

HOW THE FINAL CLASSIFICATION WILL BE DETERMINED?

The final classification will be based on a score considering the performed activities (specified in a scale) and the quality of the activities (Commission vote).

4.1 The selection for the Sustainable Coach

The Sustainable Coach activity involves the participating high schools in the organisation and coordination of sharing events with the **primary and secondary and other high schools that have not created the Energy Team for the participation in the current school year**. The Energy Team will have to **co create innovative solutions** and supply useful suggestions for the **dissemination of participative policies of sustainable development linked to the Saving of Electricity.**

The aim is to make the students aware of the transferring of a "sustainable culture" acquired during the current competition or in the previous editions to those students that have not been involved by the project.

The selection of the schools to trail is up to the school participating in the competition. The proposed activities need to face the reasonable use of electricity.

In the form "Presentation of the activities", the "Sustainable Coach" is to be specified, in addition to the students and teachers actively involved in the project that will be awarded considering the classification of the deserving students and teachers (as specified in the paragraph DELIVERY AND EVALUATION OF THE PROJECTS)

The result of the activity need to be accompanied by the tutored school with a reportage of the developed activities, the used methods of involvement and the achieved results. The document needs to be presented in PPT format.

4.2 Definition of the score

The score will be given considering the following criteria:

SCORE OF THE SUSTAINABLE COACH SELECTION		
MEETING		
ACTIVITY	**SCORES**	**CRITERIA**
How many classrooms have been tutored?	1	from 1 to 2 classrooms
	2	from 3 to 4 classrooms
	3	from 5 to 6 classrooms
	6	7 classrooms or more
At least 1 tutored classroom has delivered the Reportage?	2	Yes
DISSEMINATION		
ACTIVITY	**SCORES**	**CRITERIA**
At least 2 events of the performed programme have been published in:	0,5	Facebook or Twitter
At least 1 event of the performed programme has been published in:	1	You Tube
At least 2 events of the performed programme have been published in:	0,5	School website
QUALITY		
ACTIVITY	**SCORES**	**CRITERIA**
Evaluation of the delivered programme	1-10	Commission evaluation

4.3 Meetings

In the meetings section some activities with the tutored schools are planned. The obtained scores depends on the number of the tutored classrooms.

Secondly, the scores will be obtained in case at least one classroom delivers a **reportage** of the realised activities. The reportage will be composed by two parts. The first one will be a form that the Organisation committee will supply to all the participating schools. The second part will include a description of the activities carried out by the classroom, possibly equipped with photos or other multimedia materials for a proper evaluation of the developed activities. The evaluating Commission will appreciate the delivery of the final material also in English.

4.4 Dissemination

In the Dissemination section the Commission will award the activities carried out in the Sustainable Coach in the framework of Internet and social media, considering the indications that are present in the table above.

Please remember that in the sharing activity in Facebook and Twitter, the following hash tags need to be used:

- @Green Schools Treviso for Facebook;
- @GSC_Treviso for Twitter

4.5 Quality

The developed activities will be finally evaluated by the Commission considering the supplied material. For this reason, it is very important that, at the end of the year, to deliver along with the required forms, as much material as possible for a fair evaluation of the activities. Therefore, it is advisable to collect photos, videos and any other type of produced material and to send them by PDF for the PPT (images and descriptive relations) and video format (avi, mkv etc.) for audiovisuals. Alternatively, it is possible to send via link if they are uploaded in You Tube (additional scores).

Appendix

a) Guidelines for monitoring the Consumption Data

In the past years the electricity consumption was monitored by the Energy Team mainly through the compulsory meter readings. From this year, instead, the use of the **Energy Sentinel** will be preferred as it allows to obtain easily a more refined result thanks to the monitoring equipment installed by the Province in the different school complexes.

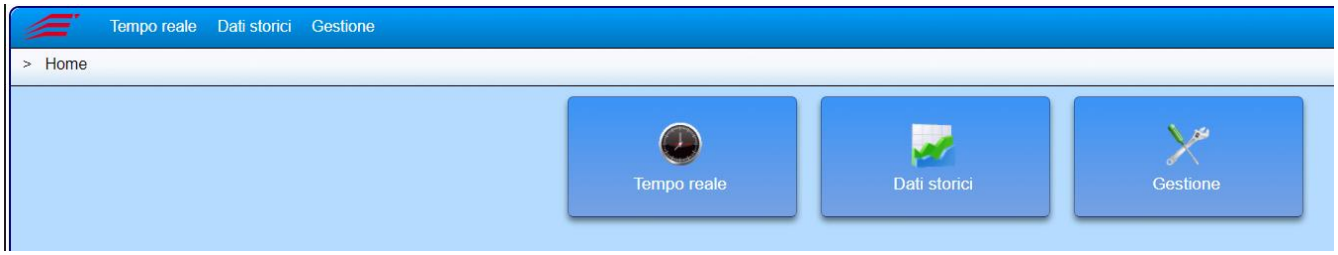
Herewith the explanation of the portal operation with some examples:

The portal is reachable using the following website address: http://es3.gsmtreviso.it/html/main.jsp.

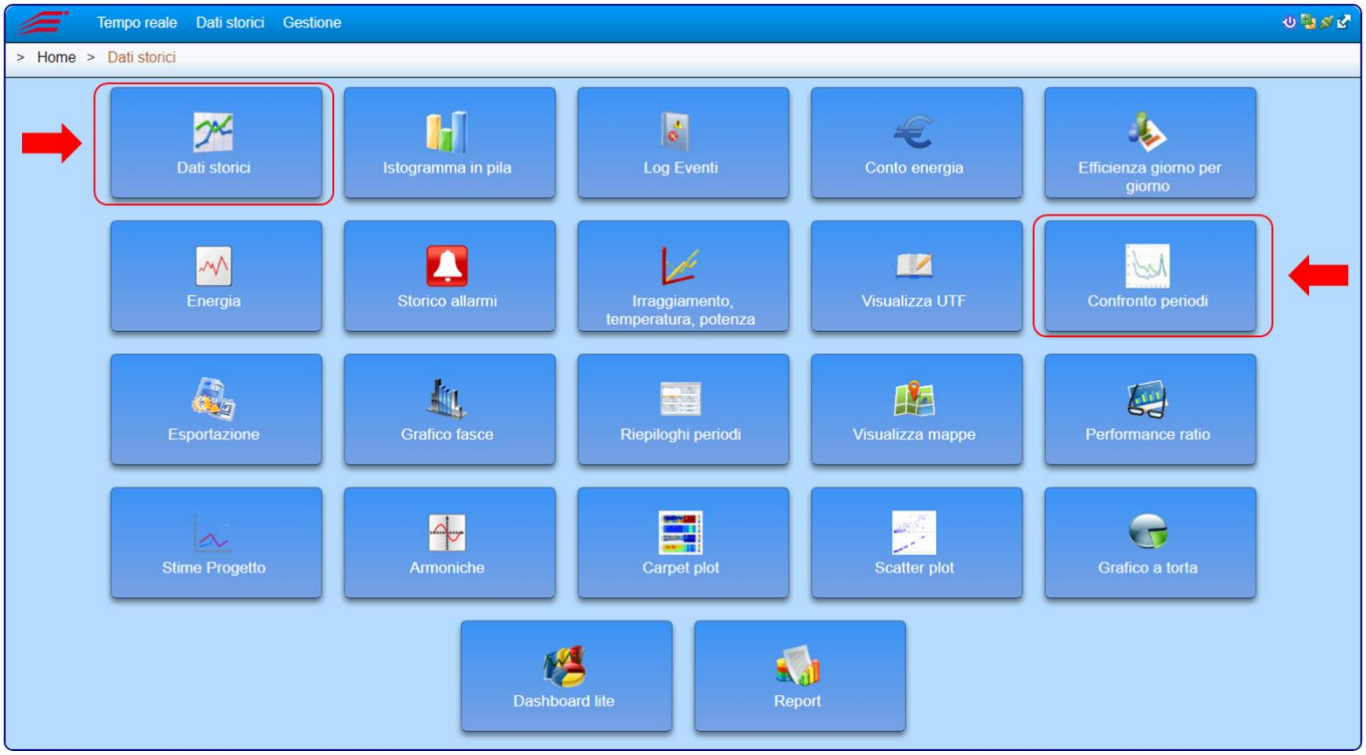
Many schools already possess the credentials to enter in the portal. Those schools that have not a username and password yet, can request the credentials to the Organisation.

Once logged in, three different areas are present:

- Real time data
- Historical data
- Management

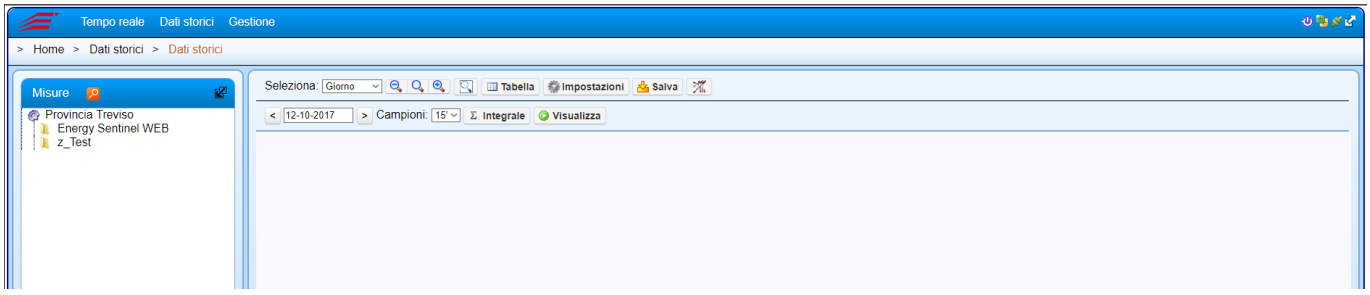


For our purposes it will be useful to look in detail at the area dedicated to the **historical data.** Clicking on the dedicated box you will enter into a second page from which you will have the access to different functions. Between all the functions, 2 are particularly interesting, the historical **data and the comparison periods.**

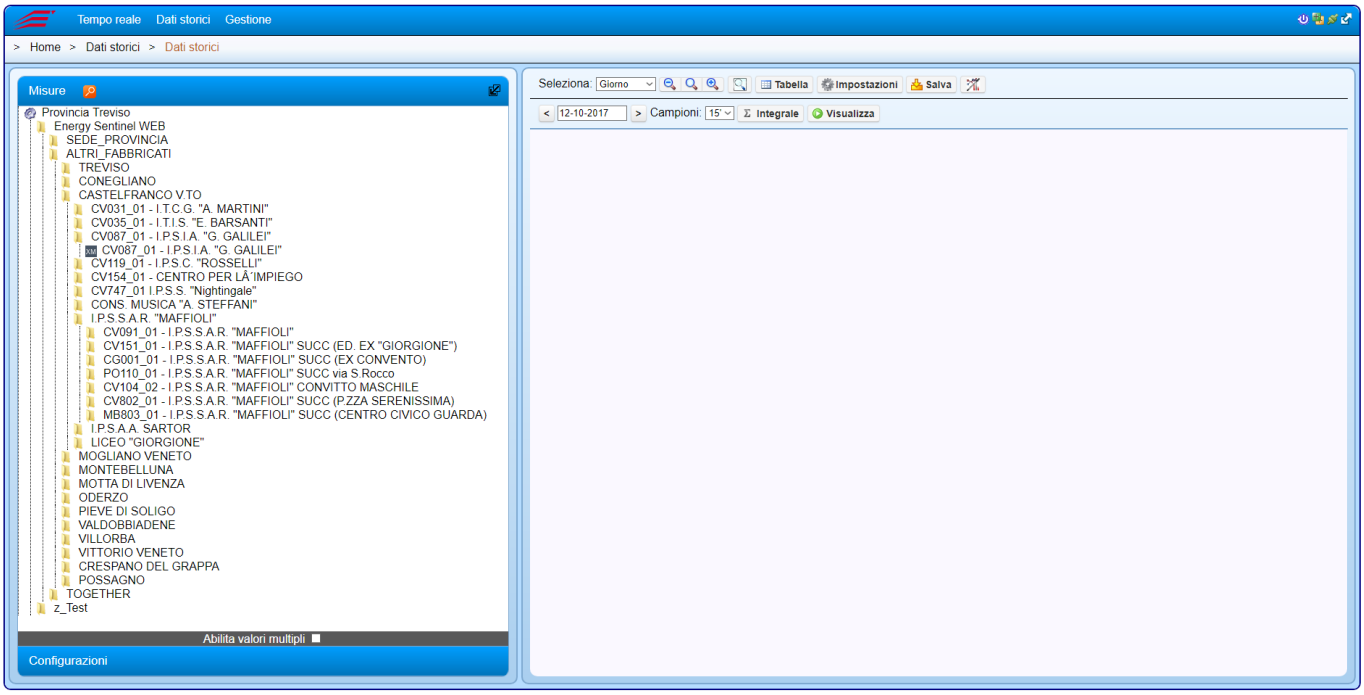


b) Historical data analysis

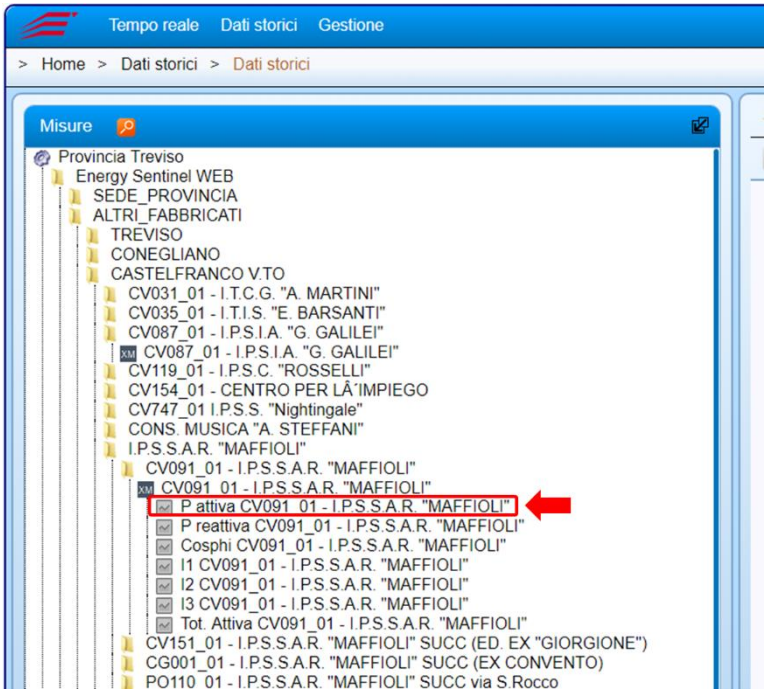
Clicking on the historical data box, you will access to this panel:



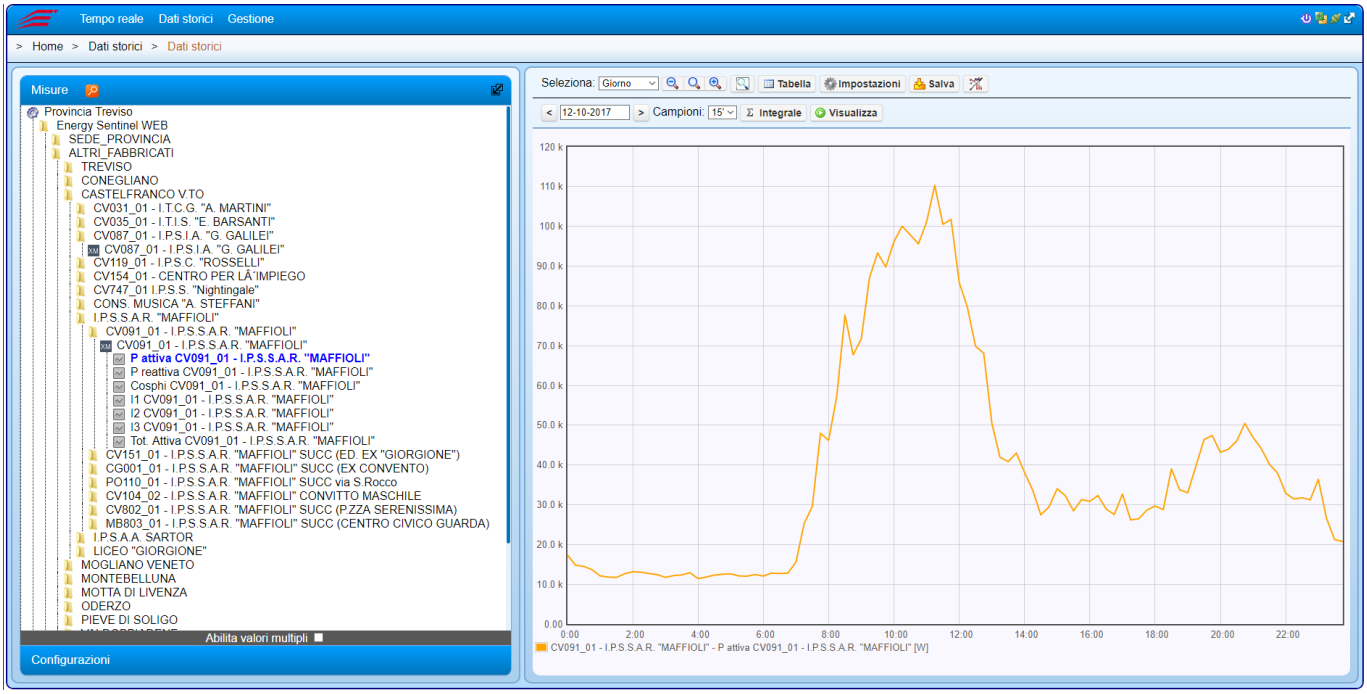
On the left side of the panel, under Treviso Province, there is a tree menu through which it is possible to monitor the consumption of each building where the X-Meter monitoring system is installed. In particular, clicking on "other buildings", the tree menu divides for “Municipality” and, finally, for institute.



In some cases, the installed X-meter system will monitor the entire assets of an institute (e.g. as in the case of the Galilei of Castelfranco). In other cases, the institute may be distributed over-multiple locations, independently monitored, and then in addition to the institute you will need to click on the specific building of interest (as in Maffioli's case). Once you have chosen the building to be tracked, you will need to click 2 twice on the entry that begins with "active P":



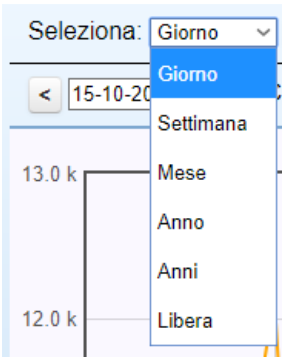
Once clicked, a side screen will appear with a graph that will show you the consumption trend:



Now let's look at the right panel. Above, we have several options. Down, we have the presentation of the data according to the selected options.

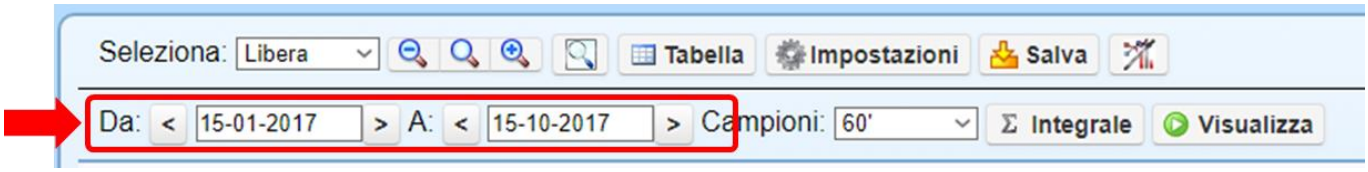
Let's now look at the available options:

The first entry, "Select", is beside a drop-down menu. The first 5 options are preconfigured to show the results of standard periods: day, week, month, year and years. The last option, "Libera" allows you to view data for a chosen period. It is the most useful option, because it allows us to test consumptions in one determined period of our interest. You can, for example, consider the entire monitoring period associated with the competition.



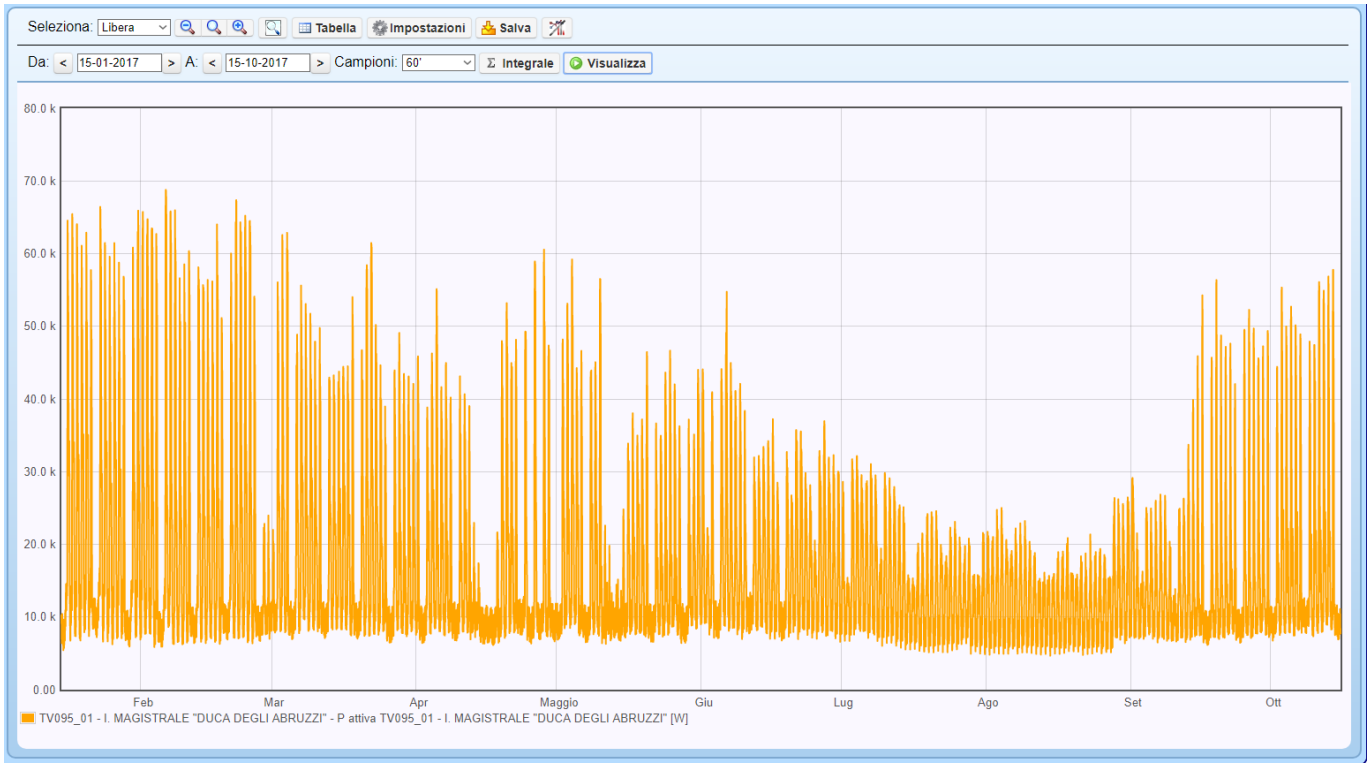
According to the selected period, the menu below- through which dates can be selected - changes.

If we choose "Free", we'll be able to select the start and the end of the sampling date:

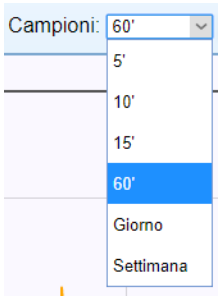


Once the period has been selected, simply click on View to get the required data.

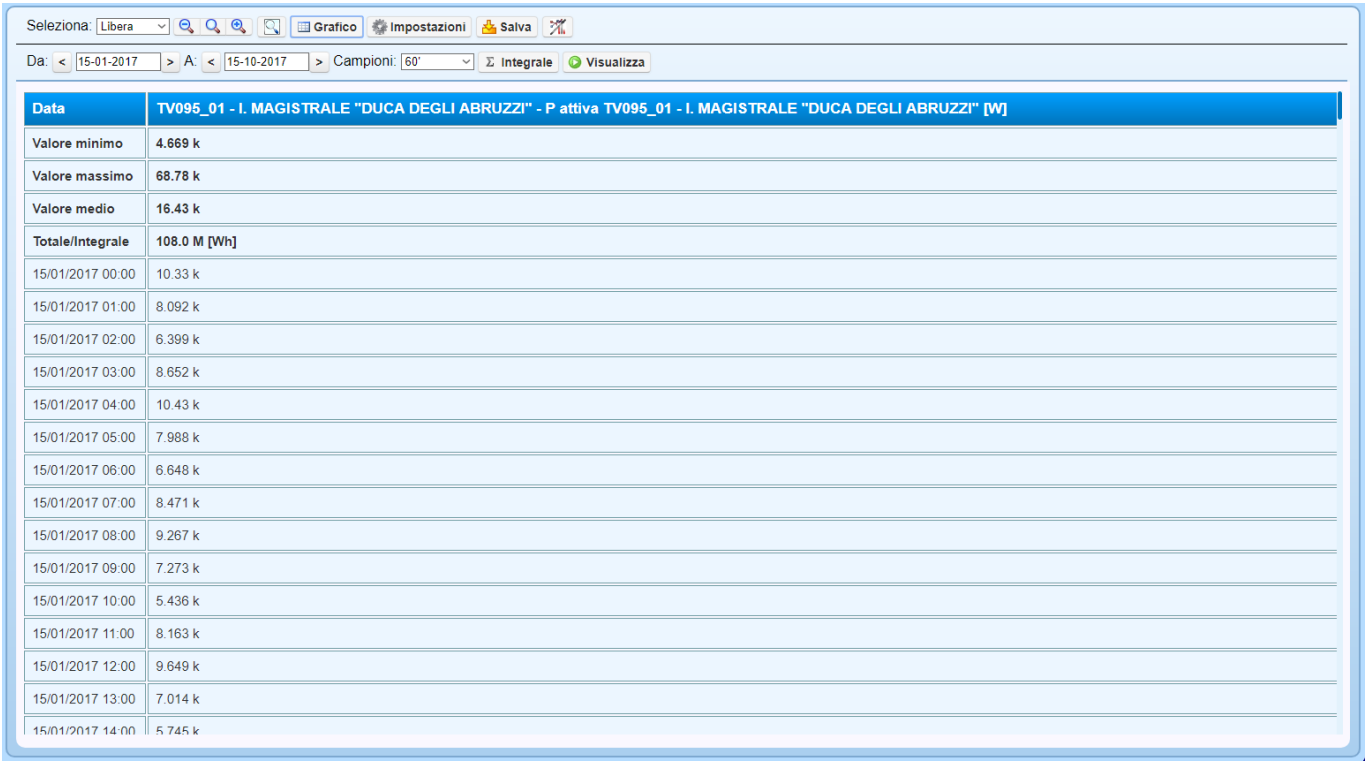
One very important thing to note is that the result is returned as a graph by default and it is very useful to have a quick understanding of the trend of the consumption.



Through the "Samples" drop-down menu, we can choose whether to get values grouped for 5, 10, 15 or 60 minutes, or even grouped values per day or week. Finally, by clicking the "Save" button, the graph will be saved in png image format, and usable as such.

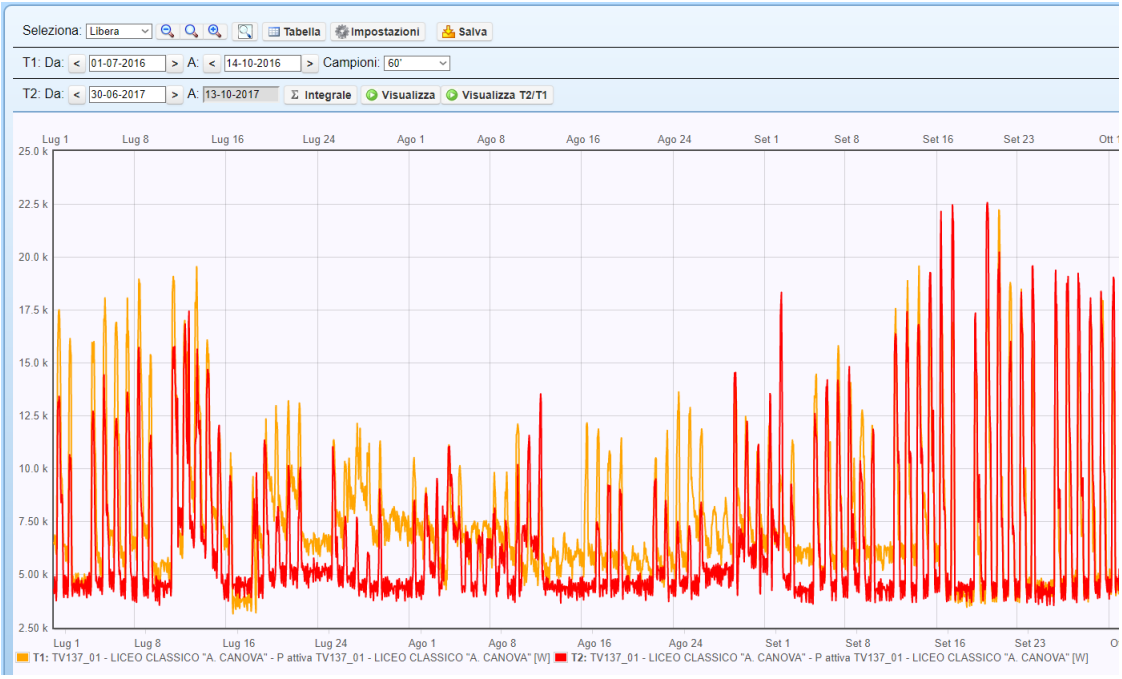


The graphic display is not the only possible one. Clicking on the button "Table", in fact, the data will be returned in a tabular form, allowing a different use of the same data:



Data	TV095_01 - I. MAGISTRALE "DUCA DEGLI ABRUZZI" - P attiva TV095_01 - I. MAGISTRALE "DUCA DEGLI ABRUZZI" [W]
Valore minimo	4.669 k
Valore massimo	68.78 k
Valore medio	16.43 k
Totale/Integrale	108.0 M [Wh]
15/01/2017 00:00	10.33 k
15/01/2017 01:00	8.092 k
15/01/2017 02:00	6.399 k
15/01/2017 03:00	8.652 k
15/01/2017 04:00	10.43 k
15/01/2017 05:00	7.988 k
15/01/2017 06:00	6.648 k
15/01/2017 07:00	8.471 k
15/01/2017 08:00	9.267 k
15/01/2017 09:00	7.273 k
15/01/2017 10:00	5.436 k
15/01/2017 11:00	8.163 k
15/01/2017 12:00	9.649 k
15/01/2017 13:00	7.014 k
15/01/2017 14:00	5.745 k

Clicking on “Save”, once in table format, the datum will not be exported as picture. It will also be possible to choose whether to export the data in csv format, or in excel format. In both cases it will possible to elaborate the data directly in the spreadsheet (excel, numbers, calc, etc.). Let's take a step back now. We've examined the use of Energy Sentinel for displaying historical data. However, if we had selected "Period Comparisons" instead of "Historical Data," we would have obtained a very similar result, but with a significant difference. It will be possible to select not one, but 2 monitoring periods, which will be compared by the system:



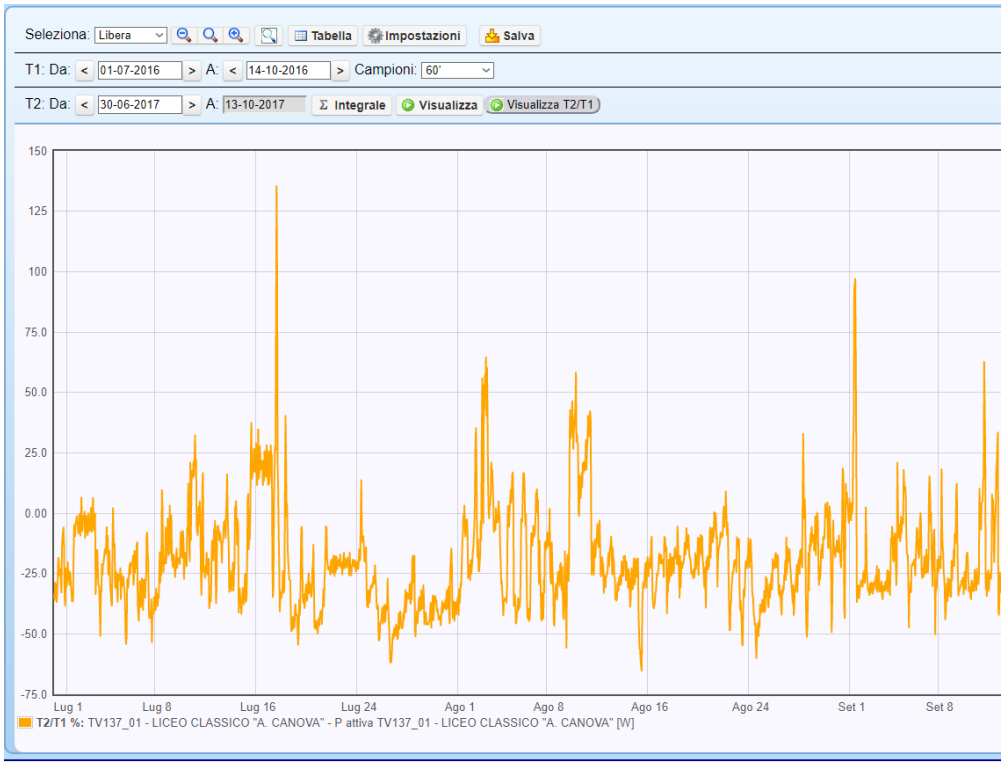
Note that in this example, the dates have been chosen to recalculate the same days of the week. Each year, the days of the week slip for a day compared to the previous year (especially the leap years, where, of course, after 29 February, the days slip of 2 units). For this reason, the same period over two consecutive years have been taken into consideration, anticipating a date unit at time T2, so you can compare the same days of the week (Mondays with Mondays, Sundays with Sundays, etc. .).

In this example, related to the headquarter of the Liceo Canova, we can see as in the orange chart in the periods between 07.16 and 09.15, roughly, the chart of the T1 period is markedly higher than the chart at the time T2 at certain hours of the day. Why? Try to make some hypotheses!

Returning to the "Period Comparison" module, we will have the same options as the "historical data" module: we will be able to view graphical and tabular data, choose the same periods, export using the same modality. The only difference is the addition of the button "displays t2 / t1", which will show, in a graph or in a chart, the ratio between the consumption of the period t2 and those of the period t1, according to the following formula:

[(Consumption2 / ConsumptionT1) x 100] – 100

Results equal to 0 will mean similar consumption between the two periods. Results below 0 will indicate lower consumption in the period t2 than the t1 period. Results higher than 0 will indicate higher consumption in the period t2 than the period t1:



More information about Energy Sentinel can be found in the producer's website (http://www.energyteam.it/energy-sentinel-web/) as well as on you-tube, via video tutorials (Https://www.youtube.com/watch?v=sak45W3eAbU).

Through the use of Energy Sentinel, the Energy Team will be able to assess the effectiveness of their initiatives to reduce electricity consumption. The Organisation is available for any required clarification about the use of the tool.

c) Guidelines for sharing in the social network

For the 6th edition, it was decided to reward the dissemination through the social networks in the framework of the “Best Energy Team” and “Sustainable Coach ", as detailed in the sections devoted to the aforesaid competitions.

Each share must be made by the Institute's account, and shared by the members of the Energy Team on different social networks. This implies that the Institute will have to have an available. account.

In addition, when sharing in Facebook and Twitter, the shared messages have to contain an hash tags: @Green Schools Treviso, for Facebook and @GSC_Treviso for Twitter.

Under the current privacy law, the Province shall not be liable for the use and publication of material containing pictures of children sent by the institutes.