

Interreg
CENTRAL EUROPE



European Union
European Regional
Development Fund

ENERGY@SCHOOL



ENERGY SMART SCHOOLS

BROCHURE 2019

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ENERGY SMART SCHOOLS BROCHURE 2019

Translation into
another language

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ENERGY@SCHOOL



This transnational cooperation project
is funded by **Interreg CENTRAL EUROPE**
and aims to increase energy efficiency
in public infrastructure.





1. What is ENERGY@SCHOOL

Translation into
another language

1. What is ENERGY@SCHOOL

ENERGY@SCHOOL: ENERGY OPTIMIZATION AND BEHAVIOURAL CHANGE OF CENTRAL EUROPEAN SCHOOLS is a cooperation project financed by the Interreg Central Europe Programme, aiming to increase the capacity of the public sector to implement energy smart schools.

The Interreg CENTRAL EUROPE Programme improves capacities for regional development in innovation, carbon dioxide reduction, the protection of natural and cultural resources as well as transport and mobility. With a budget of 246m EUR, this EU cohesion policy programme supports public and private organisations to work together across central Europe.

ENERGY@SCHOOL results have been reached thanks to an integrated approach educating schools staff and pupils to become Senior and Junior Energy Guardians (EGs). During the span of this programme, there were 8 tested pilot solutions of



Translation into another language

EE & RES applications in schools under direct contribution of EGs in form of guidelines, toolboxes, and best practices, all of which will be capitalized after the project conclusion. The aim is to set up an Energy Management System for public schools in order to monitor and improve energy consumption. The project, led by the Union of Bassa Romagna Municipalities, started in July 2016 and will finish in June 2019 and involves 12 partners from 7 European countries.

Austria

- Provincial capital Klagenfurt on Lake Wörthersee
- Graz Energy Agency

Croatia

- City of Karlovac

Hungary

- City of Szolnok
- Local Government of Town Ujszilvas

Italy

- Union of Bassa Romagna Municipalities
- University of Bologna, Department of Industrial Chemistry
- CertiMaC s.c.r.l

Poland

- City of Bydgoszcz

Germany

- City of Stuttgart

Slovenia

- KSENN Energy Agency of Savinjska, Saleska and Koroska Region
- City of Celje

Project budget:

EUR 2.581.379,75 out of ERDF EUR 2.127.776,08.





2. What we have achieved

Translation into another language

2. What we have achieved

2.1 Cultural campaign

For the cultural campaign, students both from secondary and from primary schools recorded a series of short stop-motion videos focused on how to save energy in relation to the seasons and the weather conditions.

Pupils of the JEG classes created posters and stickers in order to place them in sensitive areas of the school building (in the vicinity of energy-consuming equipment, in places frequently used by several classes, etc.) with the purpose of reminding students of good rules for energy saving. Stickers and posters have also been given to other classes during a peer-to-peer presentation of the project, so they could be easily applied directly by students in all the classrooms of the school building.

JEG classes designed a system of points and markers to highlight that in a given period (weekly, biweekly, etc.) there has been energy savings or not. These markers can be used during the competition to share the results to the other classes and to encourage all the students to commit themselves more or to maintain the good results obtained. Moreover, children have composed some official slogans of ENERGY@SCHOOL for the schools of





Translation into another language

Fusignano. Pupils identified a series of keywords for the project and then created slogans for every energetic instrumentation or critical environment in terms of energy dissipation. The slogans have been used during communication and awareness activities aimed at parents and later other citizens (e.g. events at school, main events in the city of Fusignano, etc.).

For the campaign, students filled out a “logbook” with images and small captions that collects the highlights of the project during the school year 2017-2018. They also wrote a survey addressed to teachers and the staff of the IC Battaglia, in order to record their habits in terms of energy saving. The survey can also be administered to families and will become an opportunity for pupils to compare themselves on the subject of energy and energy saving in their home.

2.2 Senior Energy Guardians in action!

The overall objective of this work package was building competences and raising awareness in public buildings with the support of developed guidelines and trainings on how to create and educate energy teams in schools or in public buildings. In all schools involved, we have set up the teams of educationists, building managers and maintenance workers, which were named Senior Energy Guardians. With the help of developed guidelines and implemented training programs, our goal to prepare, educate and train this energy teams was



Translation into another language

achieved. Now, our well-prepared Senior Energy Guardians can now mentor and guide school staff and pupils to reduce energy use, to be more aware of energy efficiency and to foster others to behavioural changes at school and in their homes.

During the project, we have developed basic and advanced training programs with the intent of facilitating the reduction of energy costs in schools to allow reinvestment in more energy efficiency measures or simply leaving schools and local authorities with more funds to carry out their primary activity - education. Trainings are useful for various relevant stakeholders active within the educational process (educationists, building managers, maintenance workers and pupils) and to all that are interested in implementing energy management systems in their buildings.

2.3 Communication is central!

Communication as a crucial issue of all projects and has always been important for us. Our main objectives via communication events and tools are:

- To change behaviour of local and regional authorities, schools, energy agencies etc., to raise awareness and to get engagement of students, pupils, families,
- To share and to spread 'energy culture' and many more.

You can check our newsletters, project events, social media, website, storytelling and tutorial video, media releases, T-shirts, leaflets, brochure-



Translation into another language

res, manuals as well as Bar Camps via which we have had schools attention and collaboration.

Transnational cooperation is central for our project. The Project Partners joint efforts result in benefits that bring better quality of life to the cities and schools. We hope that Junior Energy Guardians, who were engaged in ENERGY@SCHOOL, will share and spread the idea of 'energy culture' at home and among friends.

Stay tuned on:

<https://www.interreg-central.eu/Content.Node/ENERGY@SCHOOL.html>

<https://www.facebook.com/EnergyatSchool>

2.4 Info about our meetings and study visits

Regular partner meetings have characterized project implementation in order to plan the activities and share experiences and strategies. However, the most interesting meetings with the partners have been the organised study visits.

The study visits in Celje, Bydgoszcz, Lugo, Szolnok and Stuttgart allowed to discover interesting examples and best practices of installations for energy efficiency, solutions for the use of alternative energy sources (solar, thermal, geothermal, etc.), plants for thermal waste valorisation, systems to encourage energy savings and to support the consumption monitoring as well as the utilization of efficient energy production systems.



3. Why improving ENERGY EFFICIENCY in SCHOOLS?

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Translation into
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Energy saving is considered to be the most effective and cost-efficient method for reducing emissions and costs. Very popular methods to reduce energy consumption and to increase energy efficiency are behaviour-changing initiatives. We all tend to do things the way we have always done and to do tasks in the simplest way possible. By focusing on behaviour changes, we target routine behaviours such as turning lights on and off or setting the temperature for the heating and cooling system. For that reason, we summarized a few simple tips and hints for teachers and students in schools and for their daily life at home.



Translation into another language

Tips improving energy efficiency

- Take advantage of natural light and adjust the use of lighting.
- Always take care of switching off the lights when leaving the rooms, bathrooms, wardrobes, halls and other places.
- Before the arrival of students, keep the lights off.
- After the use of computers and other electrical equipment, turn them off or switch to energy-saving options, avoid keeping the standby lights on.
- When ventilating the rooms in winter, turn off the radiators and open windows wide for a short period of max 5 minutes.
- Adjust the temperature of thermostatic valves to ensure good thermal comfort in classrooms, which is between 18 °C and 21 °C.
- When you buy a new computer/printer/monitor or electronic device, please remember to check for “ENERGY STAR” and/or “Ecolabel” certification. It means that the product has low consumption.
- Remember to reduce temperature or turn-off air-conditioning in environments when empty (laboratories, gyms, etc.)



4. People and facts

4. People and facts



Kevin Hegedűs
PP8 Újszilvás HUN JEG

(8th grade student - Tápiószőlős Primary School)

We have experienced that we are important and have an important role in energy saving. If more people pay attention to proper energy use and try to avoid energy waste, it will be a positive outcome for our future.

As Junior Energy Guardians, our exemplary behaviour is important for our fellow students to join us.

Hegedűs Kevin
PP8 Újszilvás HUN JEG
(8. osztályos tanuló - Tápiószőlős Általános Iskola)

Megtiszteltetés, hogy mi diákok is, mint junior energia őrök ennek a projektnek aktív részesei lehetünk. Megtapasztalhattuk, hogy fontosak vagyunk és fontos feladatunk van az energiatakarékosság területén is. Ha minél többen figyelünk a megfelelő energiafelhasználásra és egyre többen lépünk fel az energiapazarlás ellen, annak a jövőnk szempontjából meg lesz az eredménye. Mint Junior Energiaőrök fontos a példamutató magatartásunk, hogy tanuló társaink csatlakozzanak hozzánk.



Edit Tanács
PP8 Újszilvás HUN SEG
(Teacher - Tápiószőlős Primary School)

Our school has been awarded the title of an Eco-School since 2008, so we are committed to environmental awareness, including energy saving. ENERGY@SCHOOL has created a great opportunity to deepen this approach in our Junior Energy Guardians' minds and awaken their sense of duty. It is good to see that they have become committed to their tasks, which are embedded in their everyday school routine.

From the parents' feedback, we are happy to see that this behaviour has also occurred at home.

Tanács Edit
PP8 Újszilvás HUN SEG
(pedagógus - Tápiószőlős Általános Iskola)

Iskolánk 2008. óta Ökoiskola címmel rendelkezik, így elkötelezettek vagyunk a környezettudatosság és ezen belül az energiatakarékosság terén. Ez a projekt nagyszerű lehetőséget teremtett arra, hogy ezt a szemléletet iskolánk junior energiaőreiben még jobban elmélyítsük és felébresszük bennük a kötelességtudatot. Jó látni őket, hogy elkötelezettek a feladataik iránt, amelyek beépültek iskolás mindennapjaikba. Szülői visszajelzésekből örömmel értesültünk arról, hogy ez a magatartás otthon is megjelent náluk.





Szilvia Dömök
PP8 Újszilvás HUN SEG
(Teacher - Újszilvás, Primary School)

Initially, curiosity motivated me to join the project, but later on, I have supported its goals with conviction and enthusiasm. It has always been important in our school to educate environmentally conscious students. This project focuses on smart energy use, and we have received a lot of useful new information in this area.

Motivating children have not been a problem. They are happy to promote the principles of the project. I find it particularly useful to have a RES demonstration centre installed in the physics room, where children could study the operation of alternative energy sources in an interactive way.

Dömök Szilvia
PP8 Újszilvás HUN SEG
(pedagógus - Újszilvás, Általános Iskola).

Kezdetben a kíváncsiság motivált, hogy csatlakozzam a projekthez, de később már meggyőződéssel és lelkesen támogattam annak céljait. Iskolánkban mindig is fontos volt, hogy környezettudatos diákokat neveljünk. Ez a projekt a tudatos energiahasznosításra fókuszál, és kifejezetten ezen a területen sok hasznos, új információhoz jutottunk. A gyerekek betanítása nem okozott gondot. Szívesen népszerűsítik a projekt elveit. Különösen hasznosnak tartom, hogy a fizika teremben felépült egy megújuló energiaforrásokat bemutató demonstrációs központ installáció, ahol az alternatív energiaforrások működését tudják tanulmányozni a gyerekek interaktív módon.



Adél Simon and Lili Lénárt
PP8 Újszilvás HUN JEG
(8th grade students - Újszilvás, Primary School)

We are good friends. Being Junior Energy Guardians together has been a good idea! Every day we go around the classrooms. We turn off the lights, close water taps, disconnect the unused electric appliances and check the temperature in each classroom.

If the temperature is too high, we ask classmates to turn down the heating. Since we have been members of the project, we are also paying more attention to energy saving at home.

If we have our own house, we hope that we will have the opportunity to install solar panels to protect our planet.

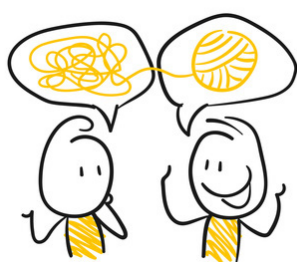
Simon Adél és Lénárt Lili
PP8 Újszilvás HUN JEG (8. osztályos tanulók - Újszilvás, Általános Iskola)

Mi barátnők vagyunk. Együtt, junior energiaőrnek lenni jó ötlet! Minden nap körbejárunk a tantermekben. Lekapcsoljuk az égve felejtett villanyokat, elzárjuk a vízcsapot, áramtalanítjuk a használaton kívüli fogyasztókat, ellenőrizzük a hőmérsékletet minden tanteremben. Ha túl magas a hőmérséklet, kérjük, hogy vegyék lejjebb a fűtést. Amióta a projekt tagjai vagyunk otthon is jobban figyelünk a takarékoskodásra. Ha saját házuk lesz, reméljük, lesz lehetőségünk napelemeket telepíteni, hogy ezzel is példát mutassunk és óvjuk bolygónkat.



“Official slogans of ENERGY@SCHOOL

made by pupils of IC Battaglia school
in Fusignano - Italy”



Translation into
another language

“Official slogans of ENERGY@SCHOOL
made by pupils of IC Battaglia school
in Fusignano - Italy”

“Energy is what gives movement to matter that fills our universe. It is important not to waste it because it has a cost in environmental and economic terms.”

“Energy is the basis of all our activities; it allows us to move, to study and to grow up. Wasting energy means wasting our future!”

Translation into
another language

“Energy is all that allows us to do something or generate changes. A change of mentality is necessary to face new challenges and problems related to the excessive use of resources. Engaging new generations in energy-saving activities is extremely important.”

“It is difficult to give a definition of energy. With this project, we have learned about the different forms of energy, what renewable and non-renewable sources are and what we can do every day to reduce energy waste. Even at home, we can save energy resulting in saving money too.”

FOTO

pupils of IC Battaglia school
in Fusignano - Italy





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FUSIGNANO · LUGO · MASSA LOMBARDA · SANT'AGATA SUL SANTERNO

Lugo Emilia-Romagna



Újszilvás
Község



Università Degli Studi di Bologna
Dipartimento di Chimica Industriale
"Toso Montanari"



Szolnok Megyei



Miasto
Bydgoszcz



Landeshauptstadt
Klagenfurt am Wörthersee



Landeshauptstadt
Stuttgart



Mestna občina
Celje

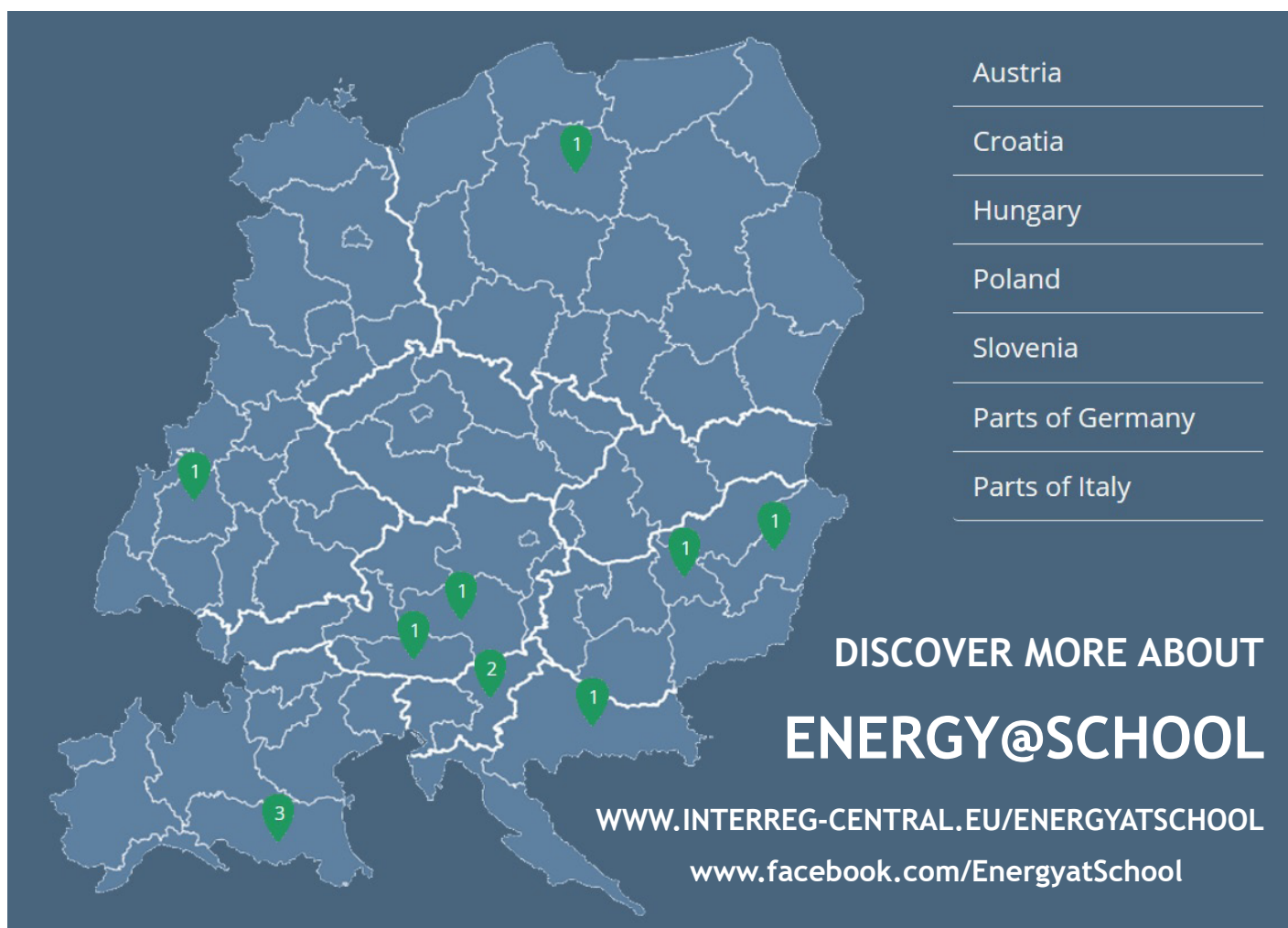


KSSENA

Zavod Energetska
Velenje



Grad
Karlovac



Austria

Croatia

Hungary

Poland

Slovenia

Parts of Germany

Parts of Italy

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