

## Learn about good practices and first inspiring results of the EURONET 50/50 MAX project!



We are happy to present you the third issue of the EURONET 50/50 MAX project newsletter. It is already a second year of the implementation of the 50/50 energy-saving concept in over **500 schools** and **48 other public buildings** from **65 municipalities**, who undertook efforts to reduce energy consumption by changing behaviours of pupils, teachers and other building users. And our work brought first results - today we can show you not only what we did, but also how much money and energy we have saved so far.

From the next articles you will learn more details about the first inspiring results of the work done by the energy teams established at schools and other public buildings, as well as about their conclusions and lessons learnt concerning the project. We also report on the 50/50 celebrations organised in different project countries to reward children for their energy-saving efforts, as well as present project observers, who help us in spreading the 50/50 concept wide, and the Coopenergy project, which is a source of numerous case studies on energy saving in public buildings. You can learn more about our up-to-date developments and achievements from the EURONET 50/50 MAX Facebook profile.

### Follow EURONET 50/50 MAX on Facebook!

We would like to remind you that EURONET 50/50 MAX project is present on Facebook. From our English (<https://www.facebook.com/EURONETMAX/>) and national Facebook profiles you can learn about our most interesting activities, as well as about activities & achievements of the schools, public buildings and municipalities involved in the 50/50 Network. You can also use them to share your actions and present your ideas and innovative approaches to energy saving. Inspire others and get inspired by them!

Some inspirational good practices have also been presented in this newsletter. From the short articles you can learn about the competition organised for Styrian schools implementing the 50/50 concept (Austria), about model energy saving actions undertaken in the Junior High School of Kastelli (Greece) and the Succursal School Šmartno ob Dreti (Slovenia) and about the 50/50 celebration organised in Dąbrowa Górnicza (Poland). Also Spanish partners presented a number of good practices, including the ACTIWATT educational game, trainings on 50/50 methodology designed for future school teachers and awareness raising events at schools, including cooking meals in a solar oven. Congratulations to everybody!!

### About EURONET 50/50 MAX

EURONET 50/50 MAX is an IEE-funded project aiming at mobilizing energy savings in public buildings through the implementation of the 50/50 methodology, which actively involves building users in energy management. Achieved financial savings are shared equally between the school and the local authority, which covers the energy bills.

## What are we doing now?

### First results of the EURONET 50/50 MAX project

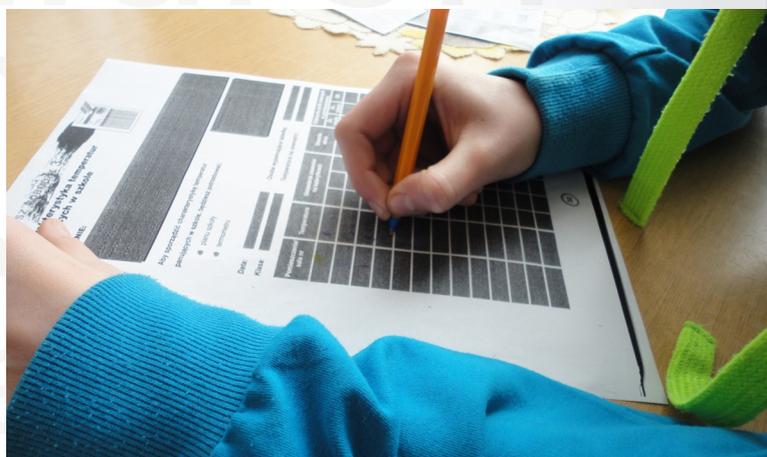
The 1<sup>st</sup> cycle of the 50/50 implementation at schools and other public buildings has been completed and evaluated, proving that energy saving pays off! Within the project pupils and teachers from 516 European schools undertook efforts to analyze energy situation of their buildings, design and implement energy saving measures and increase energy awareness of their colleagues and other members of the school community. In their work they showed great creativity and managed to achieve really impressive results.



*Energy team from the School Complex n° 4 in Krzeslawice, Poland, at work - measuring temperatures at school.*

The first calculations made by the partners show that most of the schools managed to reduce electricity consumption, heat (heating fuels) consumption or both, thus achieving also financial savings and gaining extra money for their needs. Out of 233 schools, for which all the calculations have already been completed, 172 (over 70%) achieved savings with the following specific results:

- 1 728 tons of CO<sub>2</sub> less emitted into the atmosphere;
- more than 5 806 MWh saved;
- 439 928,80 € saved (2 572,68 €/school).



*Energy team from the School Complex n° 4 in Krzeslawice, Poland, at work - noting the results of conducted measurements.*

The biggest financial savings were achieved by the Vladimir Prelog Science School in Zagreb, Croatia, which saved 16 846,74 €! Half of this money will be given back to the school by the municipality and the energy team will have a difficult task of deciding on the best way of using it for the benefit of the whole school community.



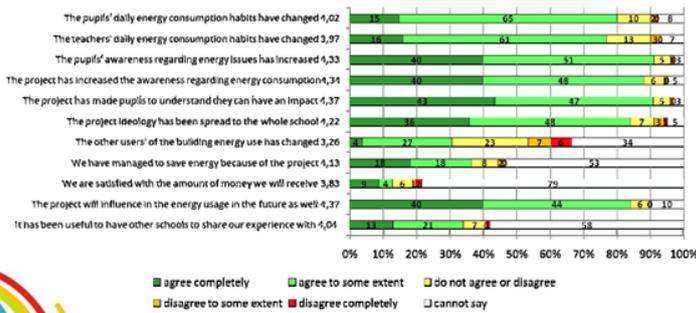
*Educational poster on energy prepared by one of the Slovenian energy teams.*

## What are we doing now?

All of the above have been achieved only through the change of behaviour of the pupils and teachers and through some small investments, such as sealing leaky windows, installing thermostatic valves on the radiators or replacing old light bulbs with energy efficient ones. The pupils also did their best to engage their colleagues in energy saving actions, i.e. by labeling windows, light switches and water taps with energy-saving slogans, preparing posters with tips how to use energy more responsibly, organising school energy days and many others. The results obtained prove that there is a great energy-saving potential in our everyday actions and small investments can bring significant results!

fit the project into the everyday work schedule, most of the schools confirm their active involvement in project activities and agree that it has resulted in the increase of energy awareness of pupils and teachers and in the change of their daily energy consumption habits. What is important, 84% of the respondents believe that the project will influence school's energy usage in the future, and 90% of them are convinced that it has made the pupils understand that they can have impact on the energy situation and that their actions can make a difference!

### Results of the project - Schools



Some results of the evaluation survey conducted among the teachers participating in the EURONET 50/50 MAX project.

Since qualitative results are as important as quantitative ones – and we were really interested in the opinions of the pupils, teachers and other building users involved in the EURONET 50/50 MAX project – an evaluation survey was conducted. The feedback gathered (314 responses in total!) shows that the project is considered as interesting both by pupils, teachers and other users. Although it is not always easy to



Vaasa City Library - one of the 32 non-school buildings that decided to join the 50/50 Network.

Not only schools, but also other public buildings joined the 50/50 Network and undertook efforts to save energy by changing their users' behaviour. 32 non-school buildings, including sports facilities, offices, museums, libraries and cultural centers, tested implementation of the 50/50 methodology in different conditions. And proved that energy saving is possible everywhere with a little bit of motivation and engagement. You will learn more about their achievements from the next issue of this newsletter.

## What are we doing now?

### Meet the project observers

Project observers are a very important part of our 50/50 community. They are following our activities and results, support us with their advice and help us to disseminate the 50/50 concept as widely as possible using their network of contacts.

In each project country there is at least one institution, which plays the role of an observer and is regularly informed about our developments. These are energy agencies, educational organisations, professional associations, NGOs active in the field of environmental education, public authorities, thematic networks and many others. You can see, who they are, in the new section of our website: [www.euronet50-50max.eu/en/about-uronet-50-50-max/project-observers](http://www.euronet50-50max.eu/en/about-uronet-50-50-max/project-observers). If you would like to join the team and become the EURONET 50/50 MAX observer yourself, please contact us!

### 50/50 celebrations

To reward the pupils for their hard work on reducing energy consumption in their schools, some festive activities were organised in each of the project countries. The 50/50 celebrations were an opportunity for children and teachers to meet, discuss their experience and promote their achievements in terms of energy saving, water saving and waste management. The events included many different attractions, such as energy-related experiments, various contests with attractive awards, performances, poster exhibitions, dissemination of eco-friendly gadgets and material, etc. They not only let the children

check and prove their knowledge in the field of energy, energy saving, RES use and counteracting the climate change, but they also helped them to learn new things and acquire new skills. And the events were great fun for everybody, which can be proved by many "energetic pictures" taken during the celebrations! To learn more, visit your national version of the project website.



EURONET 50/50 MAX party at Maritime Museum of Barcelona.

## What are we doing now?

### Networking with other EU projects - learn about Coopenergy

A lot is going on in the field of energy on the EU level. Except for EURONET 50/50 MAX, there are also other interesting projects and initiatives supporting energy saving and global fight against the climate change. In this issue of our newsletter we would like to introduce you the three-year **Coopenergy project**, also co-funded from the IEE programme. It aims at finding, testing and sharing good examples of partnership work on energy initiatives. 60 of such examples are already available as case studies on the Coopenergy website, including great examples of joint efforts to save energy in public buildings.

The database includes *inter alia* the descriptions of the **ESCOLIMBURG 2020 initiative** - a joint project focused on accelerating energy renovation of public buildings in the Province of Limburg, the **ELENA-funded initiative** for the renovation of municipal buildings in the Province of Milan and the **SensorCIS M&R tool** used by the Sustainable Energy Authority of Ireland (SEAI) to monitor and report on the energy usage of every public sector organisation in Ireland.

Visit the Coopenergy website for the full database of energy-related case studies: <http://www.coopenergy.eu/good-practice-resources>. To learn more contact **Samantha Simmons**, Coopenergy communication leader, using following e-mail: [climate.change@kent.gov.uk](mailto:climate.change@kent.gov.uk).



## News from schools and other public buildings

Below you may find selection of new best practices developed in different countries participating in the EURONET 50/50 MAX project. Get inspired by them and share them with the others!

### Austria

**Good practice 1: Competition for the Styrian schools involved in the 50/50 scheme.** In Austria there are now 25 schools using the 50/50 concept to save energy. The Climate Alliance Styria and the Government of the Province of Styria decided to give the Styrian schools participating in the scheme more reward for their efforts to reduce energy consumption and thus started an inspiring competition. Of course, the most important thing in this competition is to save as much energy as possible in the school building by changing the behavior of the users. In addition, all participating schools can earn extra points by working on

given monthly topics related to climate protection and energy saving, like mobility, responsible shopping / consumption, ways of saving energy and water, waste management or renewable energy.

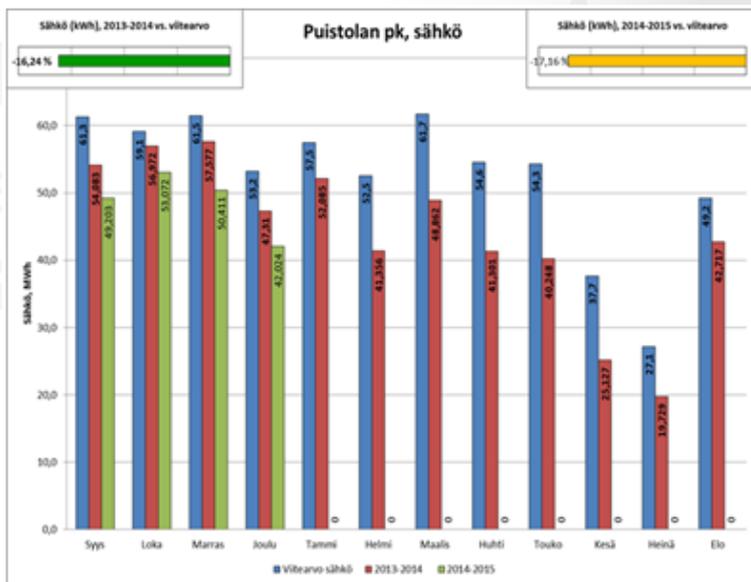
Winners are all participating schools that reduce their energy costs, but the three most successful energy teams get additional prizes, such as a trip to a sustainable destination.

### Finland

**Good practice 2: Monitoring of energy consumption in Finland.** One of the most important issues in implementing energy saving projects is monitoring the building's consumption



The energy team of the primary school Weiz with the new waste separation, which was established in all classes. The kids created checklists to make the separation easier!



Consumption figures from one of the 50/50 schools from Finland.

on a regular basis. By doing this, it is much easier to see the impacts of the measures undertaken and to be updated on the success of the project. Also, reviewing the energy consumption figures monthly allows noticing possible problems in the

## News from schools and other public buildings

building relatively quickly – for example, broken equipment or leakages. It is possible to react to sudden peaks much easier. The other significant benefit is also that it is easier to motivate the users of the building to save energy when they can observe the results of their work.

In Finland the monthly monitoring is central part of the 50/50 project. Each public building will receive a monthly (or bi-monthly) summary of its consumption of electricity, heat and water in a form that is easy to understand for all users of the building – no technical or energy related expertise is needed. Monthly monitoring is easy to arrange in Finland, where all the buildings are equipped with smart meters and where the municipalities have been already following the consumption on a monthly basis for all public buildings for a long time. What is new with 50/50, is that this information is introduced also to the users of the building. The 50/50 energy teams have given a lot of positive feedback because the monitoring of the consumption is now easy.

The graph published with this article introduces consumption figures from one of the 50/50 schools in Finland. The blue column represents the reference value. It is an average of the consumption in each month during the past three years. The red column shows the consumption figures in the first implementation year and the green one shows the consumption in the second year. Finally, the horizontal pillar on the top of the page shows the cumulative consumption in each year compared to the reference values. The one on the left shows the success in the first implementation year and the right one represents the second year. In the given example, the school has saved huge amount of electricity during the 50/50 implementation!

### Greece

**Good practice 3: Energy saving in action in the Junior High School of Kastelli.** When EURONET 50/50 MAX was introduced to the students of the second grade of the Junior High School of Kastelli, they had no doubt that it is a brilliant way to put the energy saving in action! Together with their teachers, Mrs. Olga Riga and Mrs. Stella Markaki, they immediately started the work on the implementation of the 9 steps of the 50/50 methodology and by now they have created an integrated energy-saving action plan!



*The students of the 2nd grade of the Kastelli Junior High School (Crete, Greece) with their teachers, Mrs. Olga Riga and Mrs. Stella Markaki, presenting the posters that they created.*

In fact, they materialized a series of good ideas to enrich their action and to spread the message on energy saving. Firstly, they prepared thematic slides and presented them in each class to inform all the students about the project and to engage them in the joint effort to reduce energy consumption. Secondly, they created a large informative poster about the greenhouse effect

## News from schools and other public buildings

and another one, where they illustrated simple, everyday actions ensuring that we consume less energy. In addition, they investigated and recorded all the minor but important problems or damages related to the school building and infrastructure, which are responsible for the loss of heat and electricity, and they informed the school's Director about them.

Students' families did not stay out of the action. The children prepared a special questionnaire to make them realize that they waste energy and to ask them to change their energy consumption behaviours at home. The students also wrote down all the practical guidelines on energy saving and included them in an illustrated leaflet, which was printed on recycled paper. All their energy saving activities are also published on the web blog of the school.

The students, the teachers and the Director of the Kastelli Junior High, Mr. Giorgos Sfakianakis, would like to invite all other schools to implement the 50/50 methodology, as they know very well that work on the wise use of energy is not only for fun or for present benefits, but it is also an important legacy for the future of the environment.

### Poland

**Good practice 4: EURONET 50/50 MAX celebration in Dąbrowa Górnicza.** More than 200 students and almost 30 teachers participated in the EURONET 50/50 MAX celebration in Dąbrowa Górnicza, which took place on the 29<sup>th</sup> of May 2015. The event was organised in the city park and was joint with the Days of Dąbrowa Górnicza. It was officially opened by the Deputy Mayor, Mr. Henryk Zaguła, who emphasized the

role of energy teams created in 28 municipal schools, which made efforts to save energy and improve environmental awareness of their pupils.



*Students taking part in the EURONET 50/50 MAX celebration in Dąbrowa Górnicza (photo: PNEC).*

During the event, the students had an opportunity to take part in the energy contest, which consisted of many different attractions. Participating energy teams had 7 tasks to complete while visiting 7 stands. They were equipped with task cards filled with tasks' descriptions, questions to answer and energy crosswords. In each case, after providing the correct solution or answer, the team received a colored card with a letter. After completing all the tasks the students could build up the project name - "EURONET" - from the cards that they have gathered.

After collecting all the letters and building the project name, the students posed for an energetic photo. The energy teams had a lot of fun and their photos were full of positive energy and optimism! Afterwards, they also had a chance to participate in the lottery, where - as in our project - everybody won.

## News from schools and other public buildings



One of the experiments (photo: P. Zieliński).

The EURONET 50/50 MAX celebration in Dąbrowa Górnicza was a wonderful opportunity for the energy teams to meet, present their posters in the gallery, take part in a competition, where they could share their knowledge, and have good fun at the same time. It was also a reward for the hard work of the students and for their active engagement in the project implementation. These young people showed not only knowledge and artistic talent, but also commitment, positive energy, creativity and capacity to work together.

### Slovenia

**Good practice 5: model actions in the Succursal School Šmartno ob Dreti.** Students of the Succursal School Šmartno ob Dreti in Slovenia show great commitment towards energy saving and changing energy behaviours of their colleagues and teachers. The interest to work in the energy team was so strong among pupils that they decided to work on the project voluntarily, outside the school hours, since it was hard for the teachers to include project activities in their

regular work. Their activities included making signs, posters and stickers with energy-saving advices ("Don't use too much water", "Turn of the light", "Separate waste"... ) and hanging them in different parts of the school. They even wrote an eco-anthem, which says: *"We are separating the waste in different-coloured bins, plastic goes to yellow, paper goes to red. We save water, we are turning off the lights!"*.



Solar system on the school building.

Following the 50/50 steps, the students thoroughly inspected their school building. Seeing that it is not in a good shape, they wrote a letter to the principal suggesting some investments, like replacing old, inefficient windows, investing in thermostatic valves, etc. And it worked! The windows are now being gradually replaced in the whole building, so is the lightning. School also invested in thermostatic valves, which will allow regulating temperatures in different rooms.

## News from schools and other public buildings



*The energy team of the Succursal School Šmartno ob Dreti.*

Probably the biggest achievement of the energy team is helping with the school's decision to put a small solar system on the roof of the school building (in partnership with a private investor). The system has mainly a demonstrative value, but it is still very important for pupils. School can now use it for teaching purposes. Energy team regularly collects the data, now having a better idea, what RUE and self-efficiency of buildings really mean.

### Spain

**Good practice 6: ACTIWATT – learning by playing in the Province of Barcelona.** ACTIWATT is a game developed in the framework of the EURONET 50/50 MAX project by Barcelona Provincial Council. It aims at helping the students to consolidate their knowledge related to energy efficiency and energy saving in an entertaining way. The game can be played not only in the schools participating in the 50/50 Network, but

also in any other school or during any event or activity organised by the school or the municipality.



*The ACTIWATT game developed in the framework of the EURONET 50/50 MAX project by the Barcelona Provincial Council.*

ACTIWATT is a large-format board game, which is designed for 4 to 16 players divided into teams consisting of 2 to 4 people each. It is intended for children from 6 years onwards and includes questions of different difficulty, depending on the age of the participants. Playing the game is very simple. The dice is being thrown and this indicates how many squares can be moved forward. Then the team needs to carry out the task from the square, where it landed. The tasks are always related to the concepts of energy efficiency and energy savings. They might take a form of questions, mime plays, drawing tests or tests of skills. For each task completed the team earns points, and for each failure or mistake it goes back few squares.

The whole game has been prepared following sustainability criteria, i.e. by using local, natural materials such as cork, wood and cardboard.

## News from schools and other public buildings

ACTIWATT was officially launched during the the project celebration, which took place on the 9<sup>th</sup> of June 2015, and is available for the schools of the Barcelona Province from September 2015.

**Good practice 7: Training on the 50/50 methodology for future teachers.** Huelva Provincial Council, which is coordinating implementation of the EURONET 50/50 MAX project in the region, established fruitful collaboration with the Sustainability Department of the University of Huelva, which is one of the official project observers. In order to spread the 50/50 concept and ensure that it is included in different educational plans and programmes, the Council conducted three training initiatives designed for the students, who will become future teachers or future employees of the educational sector. The three actions carried out were aimed at three different groups of students:



50/50 training for future teachers organised at the University of Huelva.

- Students, who are currently completing the final year of the secondary education and are considering studying at the University of Huelva, as well as choosing the direction of

their future professional carrier. For them DIHU prepared a stand devoted to the EURONET 50/50 MAX project, which could be visited during the University of Huelva's Open Week, which took place from the 17<sup>th</sup> till the 20<sup>th</sup> of February 2015. Around 400 students per day visited the stand and learned about the initiative, also learning a bit more about different ways to save energy.

- Students who are currently studying at the Univeristy and are planning to become teachers. On the 22<sup>nd</sup> of January 2015 there was organised a special training session at the Paulo Freire Pavilion designed for the students of the 3rd year of the teaching course. It was organised within the subject named "Teaching of Experimental Sciences I and II". During the session future teachers learned about the project and the 50/50 methodology, as well as its potential application as the practical educational tool to be used with their future pupils.
- Graduate students, who decided to specialize in education through a Master in Teaching course. On the 5<sup>th</sup> of February 2015 these students received a two-hour training, which was organised within the subject named "Teaching of Secondary Education and Language Teaching". Besides that, it was also agreed that DIHU and the coordinator of the master studies will keep in touch to include the contents of the 50/50 methodology in the official program of the master studies for the next year (2015/2016).

## News from schools and other public buildings



*EURONET 50/50 MAX stand at the Open Days of the University of Huelva.*

These training activities helped to establish first contact with students, who are planning to work as teachers. Their aim was to train them on the implementation of the 50/50 methodology so that they could apply it during their future work with pupils from both primary and secondary schools. To organize the training sessions, DIHU has been in touch with the Faculty of Educational Sciences of the University of Huelva. For the next course (2015/2016), the 50/50 concept will be included in the official master program, as well as will be introduced on a compulsory subject of Primary Teacher's Degree.

DIHU is also in touch with the Educational Department of the Government of Andalusia to organise a course on the 50/50 methodology designed for teachers, as well as to launch implementation of the 50/50 project in all primary schools of the province.

**Good practice 8: Awareness workshops on energy efficiency.** In order to strengthen project activities and increase energy-related knowledge of the energy teams established in 12 schools from the Province of Huelva, a series of

awareness-raising workshops on energy efficiency was organised. One-day workshop took place in each of the schools and focused on the thematic content of the EURONET 50/50 MAX project. Each session consisted of a theoretical and practical part and included such topics as energy, energy units, energy sources, processing of energy, rational use of energy and other resources. Also the topic of greenhouse effect and the climate change was raised. Regarding practical application of the knowledge gained, the pupils used solar oven for cooking some food, which they ate at end of the session.



*Awareness workshop in the Primary School of Menendez y Pelayo.*

The budget secured for the workshop allowed also for the preparation of some additional training material, including not only the solar oven, but also a kit of 6 solar toys. In the Primary School of Menendez y Pelayo (Valverde del Camino municipality) – after the workshop and in the framework of the activities organised within the Sustainable Energy Week – the students conducted themselves a series of workshops for children of 3, 4 and 5 years. They talked about energy and greenhouse effect and cooked different types of food using the solar oven in a sessions that they named "Masterchef Solar".

## Contact the project partners

The EURONET 50/50 MAX project is implemented by a consortium of 16 motivated partners from 13 European countries, with great experience in the fields of energy saving and energy education.

### Experienced partners:



**Diputació Barcelona**  
**Barcelona Provincial Council (DIBA) – project coordinator**

Website: [www.diba.cat](http://www.diba.cat)  
E-mail: [euronet@diba.cat](mailto:euronet@diba.cat)



**UfU**  
**Independent Institute for Environmental Issues (UfU)**

Website: [www.ufu.de](http://www.ufu.de)  
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**A.L.E.S.A. srl**  
**Local Agency for Energy and Environment (ALESA)**

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University of Vaasa

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E-mail: [merja.pakkanen@uva.fi](mailto:merja.pakkanen@uva.fi)



**Association of Municipalities Polish Network “Energie Cites” (PNEC)**

Website: [www.pnec.org.pl](http://www.pnec.org.pl)  
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REGION OF CRETE

**Region of Crete**

Website: [www.crete.gov.gr](http://www.crete.gov.gr)  
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**KSSENA**  
**Energy Agency of Savinjska, Šaleška and Koroška Region (KSSENA)**

Website: [www.kssena.si](http://www.kssena.si)  
E-mail: [info@kssena.velenje.eu](mailto:info@kssena.velenje.eu)

### New partners:



**Climate Alliance Austria (CAA)**

Website: [www.klimabuendnis.at](http://www.klimabuendnis.at)  
E-mail: [office@klimabuendnis.at](mailto:office@klimabuendnis.at)



**City of Zagreb**

Website: [www.zagreb.hr](http://www.zagreb.hr)  
E-mail: [maja.sunjic@zagreb.hr](mailto:maja.sunjic@zagreb.hr)



**Cyprus Energy Agency (CEA)**

Website: [www.cea.org.cy](http://www.cea.org.cy)  
E-mail: [info@cea.org.cy](mailto:info@cea.org.cy)



**Energy Agency of Vysocina (EAV)**

Website: [www.eav.cz](http://www.eav.cz)  
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**KREA**  
**Kaunas Regional Energy Agency (KREA)**

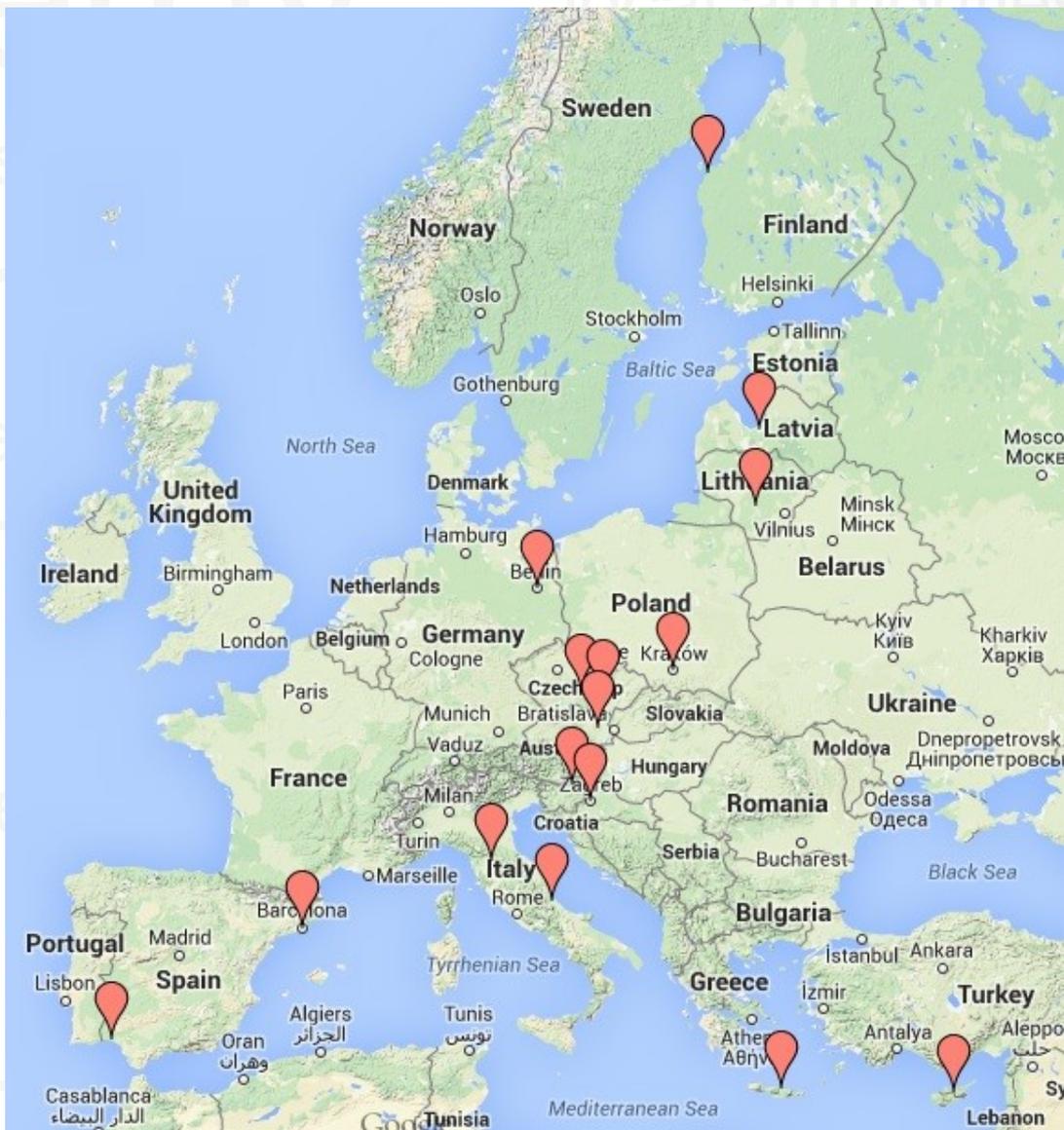
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## The “EURONET 50/50 MAX” network map



Join the 50/50 Network of energy-saving schools and other public buildings!

To receive more information about the project you can contact us at [euronet@diba.cat](mailto:euronet@diba.cat) or visit the EURONET 50/50 MAX project website:

[www.euronet50-50max.eu](http://www.euronet50-50max.eu)



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