

D.T3.5.3 criteria for monitoring results of the energy saving plan

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| Version 01  01.03.2019 |  |

Edited by PP4 KSSENA

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| D.T3.5.3 CRITERIA FOR MONITORING RESULTS OF THE ENERGY SAVING PLAN  Version 01  **01.03**.201**9** |

Edited by PP4 KSSENA

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ABSTRACT

Deliverable D.T3.5.3 Criteria for monitoring results of the energy saving plan is a technical document in which we will describe the monitoring system based on the approach Plan – Do – Check – Act (PDCA).

The energy management system – EMS, enables schools to achieve the set goals and take actions as needed to improve its energy performance. The EMS encourage and remind all actively involved to constantly improve and actively monitor the progress to reach the goal of maximum energy savings potentials. The PDCA approach is a four-step model for achieving greater results. Just as a circle has no end, the PDCA approach should be repeated again and again for continuous improvement.

1. PLAN

First steps in PDCA approach are to conduct the energy review and establish the energy baseline, energy performance indicators, objectives, targets and action plans that will deliver results which will improve energy performance. These data and evaluations form the basis of the following improvement processes. They also make it possible to identify potentials for improvement of energy efficiency.

Energy baseline

To set the baseline year it is recommended to collect the energy consumption for three years or at least for one whole year. It is necessary to verify that no major measures have been implemented on the building system, during the defined period, because such data is not correct (example: replacement of energy carrier for heating). In case that the three years data are not available, it is required to collect the data that extends for at least one year to account for the effects of outdoor temperatures in all seasons.

This kind of data can be easily collected from smart metering systems. When becoming a “Smart school” the investment in smart meters is mandatory. (For more, read D.T3.5.2 Joint methodology for monitoring results)

Objectives and targets in action plan

Objectives and targets are set after we conduct the energy review in the action plan. It should include:

* Designation of responsibility
* Time frame by which individual targets are to be achieved
* A statement of the method of verifying the results

Action plans shall be documented and updated at defined intervals.

*We have defined the energy baseline, objectives and targets in the D.T1.6.1 Energy guardian smart school management plan.*

1. DO

Next step is based on prepared action plan and other outputs resulting from the planning process. The designated energy teams can now start with implementation and operation of action plan.

Firstly, you should ensure that all persons that will be working in energy team has received or have the appropriate education, trainings, skills and experiences for the implementation of measures. If not, you should organize the educational trainings and workshops for preparing them for work. In Energy@school project our energy teams are represented by senior and junior energy guardians.

Energy team should be familiarized with:

* their roles, responsibilities in achieving the targets and objectives,
* the benefits of improved energy efficiency in their school since that is the best motivation to get them to do the work,
* how their activities and behaviour change contribute to the achievement of energy objectives and targets.

Communication

Internal communication is essential to managing change. It keeps the team updated of implemented activities, measures, incentives and successes, which strengthens commitment, motivation and participation.

Design

When the school is considering of buying new and modified equipment, which can a have a significant impact on its energy performance, it shall consider the energy efficiency improvement opportunities.

1. CHECK

The third step is to verify the results obtained from the action plan. The action plan that was implemented in the “Do” phase must continually be checked to ensure that the measures are effective and whether the defined objectives were achieved or not. The results can now be compared to the previously-established objectives in action plan. Collective the data and preparing reports will give us the sufficient information for defining new measures and actions if necessary.

Every school involved in Energy@school project has successfully prepared the action plan D.T1.6.1 Energy guardian smart school management plan. In this step you have to make an energy review of your building so you can compare the data of past year to the data of baseline (defined in D.T1.6.1). Also check which of planned measures were actually implemented in the past year.

When calculating the achieved results there are many factors to take into account:

* Has the number of pupils and school staff changed in comparisons to baseline year? (This can affect the use of electricity in your school.)
* Were there any major measures implemented on the school systems that weren’t planned in action plan?
* Did the school bought new, more energy efficient equipment for offices or kitchen?
* You have to consider about impact that measures implemented from the action plan has.
* Number of temperature degree day has a significant impact on difference in thermal energy use.

All of these factors above have to be taken into account when you would like to represent the achieved objectives and targets. It is rather complex process to define the affect of organizational measures on achieved results.

1. ACT

In the final step “Act” the measurements are broken down in reports. These form the basis for further improvement and shows the possibilities for more energy savings. After all the steps, you can start with the first step of the PDCA approach again to keep the continuous improvement of the energy efficiency in your school. Best way is to upgrade and improve the previous version of D.T1.61 EGSSMP and start the implementation phase again.

As you will see by know it is always better to set the objectives and targets that are easily achievable to get even greater motivation for energy team and to all that are considering joining.

1. Implementing Plan – Do – Check – Act approach

**PLAN**

We have prepared energy action plan for each school involved in the D.T1.6.1 Energy guardian smart school management plan.

**DO**

Step do was implemented with measures and through trainings for Senior and Junior energy guardians, educational workshops, cultural campaigns, other activities etc.

**CHECK**

In the step check we have to make an overview of successfully implemented measures and actions in previous year. Here you describe all successfully implemented measures and if any significant change has occurred in last period. Prepare a list for each involved school.

**ACT**

In the step act we have to update the energy action plan with new measures. Here you can describe if during the previous year you have encounter an opportunity to implement measures to achieve more saving. Describe if you have any measures or significant changes planned for the next year.

1. CONCLUSIONS

The PDCA approach can be implemented in a number of actions, whether in educational routines or other school related activities such as planning, implementing, measuring and promoting continuous improvement.

The benefits that PDCA approach brings to the school:

* reliability and effectiveness in the execution of activities,
* process optimization,
* continuous improvement,
* best practices in the school routine,
* cost reductions,
* detailed and accurate vision of the process in which it is inserted,
* team productivity and cooperation,
* it is possible to understand that the PDCA cycle is a basic but very efficient tool when it comes to solving problems in school.

The PDCA approach is good tool that will support you when becoming a “Energy smart school”. It will help you achieve the set objectives and targets and improve the energy efficiency in school and raise awareness on use of renewable energy sources in school, at home and in world.

1. MONITORING REPORT
   1. PP1 – UNIONE DEI COMUNI DELLA BASSA ROMAGNA IT

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| **ITALY - 3. Primary School Fusignano (RA)** | | | |
| **CATEGORY heating/ electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Heating | Temperature check | Teachers are responsibility for checking the temperature in the class. | Yes |
| Electricity | Check the light | A student has the task of checking that lights are turned off when leaving the classroom for recreation.  A student is in charge of checking that lights are off when leaving the classroom to go to the canteen  A student has the task of preventing that the lights are turned off when leaving the room to go home | Yes |
| Electricity | Check the electrical boiler | A student has the task of checking that boilers are turned off before the weekend and before the holiday. In negative case, teachers (SEG) need to be advised. | Yes |
| Electricity | **Check the informatics room** | A student has the task of checking that computer room switches are turned off to avoid even consumption in standby when the classroom is not used over the weekend and holidays. | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| **ITALY - 3. Primary School Fusignano (RA)** | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Heating | Temperature check | Teachers are responsibility for checking the temperature in the class. | Yes |
| Electricity | Check the light | A student has the task of checking that lights are turned off when leaving the classroom for recreation.  A student is in charge of checking that lights are off when leaving the classroom to go to the canteen  A student has the task of preventing that the lights are turned off when leaving the room to go home | Yes |
| Electricity | Check the electrical boiler | A student has the task of checking that boilers are turned off before the weekend and before the holiday. In negative case, teachers (SEG) need to be advised. | Yes |
| Electricity | **Check the informatics room** | A student has the task of checking that computer room switches are turned off to avoid even consumption in standby when the classroom is not used over the weekend and holidays. | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| **ITALY - Secondary school Luigi Emaldi - Fusignano (RA)** | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Heating | Temperature check | Teachers are responsibility for checking the temperature in the class. | Yes |
| Electricity | Check the light | A student has the task of checking that lights are turned off when leaving the classroom for recreation.  A student is in charge of checking that lights are off when leaving the classroom to go to the canteen  A student has the task of preventing that the lights are turned off when leaving the room to go home | Yes |
| Electricity | Check the electrical boiler | A student has the task of checking that boilers are turned off before the weekend and before the holiday. In negative case, teachers (SEG) need to be advised. | Yes |
| Electricity | Check the informatics room | A student has the task of checking that computer room switches are turned off to avoid even consumption in standby when the classroom is not used over the weekend and holidays. | Yes |
| Electricity | Check the PV production | Check the daily and weekly electric production of the PV system and share with the daily and weekly estimated electric consumption. | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| **ITALY - Secondary school Luigi Emaldi - Fusignano (RA)** | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Heating | Temperature check | Teachers are responsibility for checking the temperature in the class. | Yes |
| Electricity | Check the light | A student has the task of checking that lights are turned off when leaving the classroom for recreation.  A student is in charge of checking that lights are off when leaving the classroom to go to the canteen  A student has the task of preventing that the lights are turned off when leaving the room to go home | Yes |
| Electricity | Check the electrical boiler | A student has the task of checking that boilers are turned off before the weekend and before the holiday. In negative case, teachers (SEG) need to be advised. | Yes |
| Electricity | Check the informatics room | A student has the task of checking that computer room switches are turned off to avoid even consumption in standby when the classroom is not used over the weekend and holidays. | Yes |
| Electricity | Check the PV production | Check the daily and weekly electric production of the PV system and share with the daily and weekly estimated electric consumption. | Yes |
| Electricity | Replacement of remaining old lighting with LED lighting | Expert, Senior energy guardian | Yes |
| Heating | Replacement of remaining inefficient thermostatic valves | Expert, Senior energy guardian | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| ITALY - 3. Primary school Il Cerchio - Fusignano (RA) | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Heating | Temperature check | Teachers are responsibility for checking the temperature in the class. | Yes |
| Electricity | Check the light | A student has the task of checking that lights are turned off when leaving the classroom for recreation.  A student is in charge of checking that lights are off when leaving the classroom to go to the canteen  A student has the task of preventing that the lights are turned off when leaving the room to go home | Yes |
| Electricity | Check the electrical boiler | A student has the task of checking that boilers are turned off before the weekend and before the holiday. In negative case, teachers (SEG) need to be advised. | Yes |
| Electricity | Check the informatics room | A student has the task of checking that computer room switches are turned off to avoid even consumption in standby when the classroom is not used over the weekend and holidays. | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| ITALY - 3. Primary school Il Cerchio - Fusignano (RA) | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Heating | Temperature check | Teachers are responsibility for checking the temperature in the class. | Yes |
| Electricity | Check the light | A student has the task of checking that lights are turned off when leaving the classroom for recreation.  A student is in charge of checking that lights are off when leaving the classroom to go to the canteen  A student has the task of preventing that the lights are turned off when leaving the room to go home | Yes |
| Electricity | Check the electrical boiler | A student has the task of checking that boilers are turned off before the weekend and before the holiday. In negative case, teachers (SEG) need to be advised. | Yes |
| Electricity | **Check the informatics room** | A student has the task of checking that computer room switches are turned off to avoid even consumption in standby when the classroom is not used over the weekend and holidays. | Yes |

* 1. PP2 – MIASTO BYDGOSZCZ - PL

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | | | |
| POLAND - Zespół Szkół nr 12 im. Jana III Sobieskiego, Bydgoszcz  POLAND - Zespół Szkół Budowlanych im. Jurija Gagarina, Bydgoszcz  POLAND - Zespół Szkół Mechanicznych Nr 2 im. Tytusa Maksymiliana Hubera, Bydgoszcz  POLAND - Szkoła Podstawowa Nr 65 z Oddziałami Integracyjnymi i Sportowymi im. Czesława Tańskiego, Bydgoszcz  POLAND - Zespół Szkół Medycznych im. E. Warmińskiego, Bydgoszcz | | | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | | **Was the measure provided in the context of E@S project?** | |
| Electricity | Installed energy smart meter | External Expert, Municipality | | Yes | |
| Heating | Installed energy smart meter | External Expert, Municipality | | Yes | |
| Heating and electricity | Installed sensors | External Expert, Municipality | | Yes | |
| Heating | Installed 30 thermostatic valves | External Expert, Municipality | | Yes | |
| Electricity | 50 Led lamps installed | External Expert, Municipality | | Yes | |
| Heating and electricity | Tablet to monitor energy usage and to use the E@S app | Municipality, Senior and junior energy guardians | | Yes | |
| Heating and electricity | Laptop to overview and control system of internal energy usage | Expert, Senior energy guardian | | Yes | |
| Heating | System for automatic control of temperature depending on internal and external conditions | External Expert, Municipality | | Yes | |
| Heating and electricity | Training on energy usage | Expert, Senior and junior energy guardians | | Yes | |
| Heating and electricity | Training on E@S app | Expert, Senior and junior energy guardians | | Yes | |
| Heating and electricity | Campaigns on climate change and energy savings | Municipality, Senior and junior energy guardians, other pupils | | Yes | |
| Heating and electricity | Study visit to places with exemplary energy saving and RES solutions | Expert, Senior and junior energy guardians | | Yes | |
| Heating and electricity | Implementation of the E@S game | Senior and junior energy guardians | | Yes | |
| Heating and electricity | Improving energy status of classrooms through solving ghosts | Senior and junior energy guardians | | Yes | |
| Heating | Adjustment of temperatures to heat comfort zones | Senior and junior energy guardians | | Yes | |
| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | | | |
| POLAND - Zespół Szkół Ogólnokształcących Nr 4  im. Kazimierza Wielkiego, Bydgoszcz  POLAND - Zespół Szkół Samochodowych, Bydgoszcz | | | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | | **WHO PARTICIPATED?** | | **Was the measure provided in the context of E@S project?** |
| Electricity | Installed energy smart meter | | External Expert, Municipality | | Yes |
| Heating | Installed energy smart meter | | External Expert, Municipality | | Yes |
| Heating and electricity | Installed sensors | | External Expert, Municipality | | Yes |
| Heating | Installed 30 thermostatic valves | | External Expert, Municipality | | Yes |
| Electricity | 50 Led lamps installed | | External Expert, Municipality | | Yes |
| Electricity | Solar lantern | | External Expert, Municipality | | Yes |
| Heating and electricity | Tablet to monitor energy usage and to use the E@S app | | Municipality, Senior and junior energy guardians | | Yes |
| Heating and electricity | Laptop to overview and control system of internal energy usage | | Expert, Senior energy guardian | | Yes |
| Heating | System for automatic control of temperature depending on internal and external conditions | | External Expert, Municipality | | Yes |
| Heating and electricity | Training on energy usage | | Expert, Senior and junior energy guardians | | Yes |
| Heating and electricity | Training on E@S app | | Expert, Senior and junior energy guardians | | Yes |
| Heating and electricity | Campaigns on climate change and energy savings | | Municipality, Senior and junior energy guardians, other pupils | | Yes |
| Heating and electricity | Study visit to places with exemplary energy saving and RES solutions | | Expert, Senior and junior energy guardians | | Yes |
| Heating and electricity | Implementation of the E@S game | | Senior and junior energy guardians | | Yes |
| Heating and electricity | Improving energy status of classrooms through solving ghosts | | Senior and junior energy guardians | | Yes |
| Heating | Adjustment of temperatures to heat comfort zones | | Senior and junior energy guardians | | Yes |

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| **MEASURES TO BE IMPLEMENTED** | | | |
| POLAND - Zespół Szkół Budowlanych im. Jurija Gagarina, Bydgoszcz  POLAND - Zespół Szkół Mechanicznych Nr 2 im. Tytusa Maksymiliana Hubera, Bydgoszcz | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Heating and electricity | Complex thermal rehabilitation of the school buildings | Municipality | No |
| Electricity | Replacement of old lighting with LED lighting | Expert, Municipality | Yes |
| Heating | Replacement of remaining inefficient thermostatic valves | Expert, Municipality | Yes |
| Electricity and Heating | Earth and Energy days | Municipality, Senior and junior energy guardians, pupils | Yes (partially – some activities would be implemented anyway) |
| Electricity and Heating | Trainings on energy efficiency | Expert, Municipality, Senior and junior energy guardians, pupils | Yes |
| Electricity and Heating | Awareness raising campaign | Senior and junior energy guardians, pupils, parents | Yes (partially – some activities would be implemented anyway) |
| Electricity and Heating | Pilot action on energy efficiency at home | Senior and junior energy guardians, pupils, parents | Yes |
| Electricity and Heating | Control and adjustment of energy usage at school | Senior and junior energy guardians | Yes |
| Electricity | Installation of PV modules – DEPENDS ON AVAILABLE RESOURCES | Municipality | Yes (partially – some activities would be implemented anyway) |
| Heating | Installation of remote heat control system - DEPENDS ON AVAILABLE RESOURCES | Municipality | Yes (partially – some activities would be implemented anyway) |

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| **MEASURES TO BE IMPLEMENTED** | | | |
| POLAND - Szkoła Podstawowa Nr 65 z Oddziałami Integracyjnymi i Sportowymi im. Czesława Tańskiego, Bydgoszcz  POLAND - Zespół Szkół Medycznych im. E. Warmińskiego, Bydgoszcz  POLAND - Zespół Szkół Samochodowych, Bydgoszcz  POLAND - Zespół Szkół Ogólnokształcących Nr 4  im. Kazimierza Wielkiego, Bydgoszcz  POLAND - Zespół Szkół nr 12 im. Jana III Sobieskiego, Bydgoszcz | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | Replacement of old lighting with LED lighting | Expert, Municipality | Yes |
| Heating | Replacement of remaining inefficient thermostatic valves | Expert, Municipality | Yes |
| Electricity and Heating | Earth and Energy days | Municipality, Senior and junior energy guardians, pupils | Yes (partially – some activities would be implemented anyway) |
| Electricity and Heating | Trainings on energy efficiency | Expert, Municipality, Senior and junior energy guardians, pupils | Yes |
| Electricity and Heating | Awareness raising campaign | Senior and junior energy guardians, pupils, parents | Yes (partially – some activities would be implemented anyway) |
| Electricity and Heating | Pilot action on energy efficiency at home | Senior and junior energy guardians, pupils, parents | Yes |
| Electricity and Heating | Control and adjustment of energy usage at school | Senior and junior energy guardians | Yes |
| Electricity | Installation of PV modules – DEPENDS ON AVAILABLE RESOURCES | Municipality | Yes (partially – some activities would be implemented anyway) |
| Heating | Installation of remote heat control system - DEPENDS ON AVAILABLE RESOURCES | Municipality | Yes (partially – some activities would be implemented anyway) |

* 1. PP5 – GRAD KARLOVAC

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| Croatia - PP5. Primary school Braca Seljan | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Electricity | Part of old lighting will be replaced with LED lighting | Expert, Senior energy guardian | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | Yes |
| Heating | Installed thermostatic valves | Expert, Senior energy guardian | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| Croatia - PP5. Primary school Braca Seljan | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | Replacement of remaining old lighting with LED lighting | Expert, Senior energy guardian | Yes |
| Heating | Envelope | Expert | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| Croatia - PP5. Primary school Dubovac | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Electricity | Part of old lighting will be replaced with LED lighting | Expert, Senior energy guardian | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | Yes |
| Heating | Installed thermostatic valves | Expert, Senior energy guardian | Yes |
| Heating | Refurbrished envelope and energy efficient windows | Expert | No |
| **MEASURES TO BE IMPLEMENTED** | | | |
| SLOVENIA - 3. Primary school Dubovac | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | Replacement of remaining old lighting with LED lighting | Expert, Senior energy guardian | Yes |
| Heating | Envelope, Energy efficient windows | Expert | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| Croatia - PP5. Primary school Mahicno | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Electricity | Part of old lighting will be replaced with LED lighting | Expert, Senior energy guardian | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | Yes |
| Heating | Installed thermostatic valves | Expert, Senior energy guardian | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| SLOVENIA - 3. Primary school Mahicno | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | Replacement of remaining old lighting with LED lighting | Expert, Senior energy guardian | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| Croatia - PP5. Primary school Recica | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Electricity | Part of old lighting will be replaced with LED lighting | Expert, Senior energy guardian | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | Yes |
| Heating | Installed thermostatic valves | Expert, Senior energy guardian | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| SLOVENIA - 3. Primary school Recica | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | Replacement of remaining old lighting with LED lighting | Expert, Senior energy guardian | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| Croatia - PP5. Primary school Svarca | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Electricity | Part of old lighting will be replaced with LED lighting | Expert, Senior energy guardian | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | Yes |
| Heating | Installed thermostatic valves | Expert, Senior energy guardian | Yes |
| Heating | Refurbrished envelope and installed energy efficient windows | Expert | No |
| **MEASURES TO BE IMPLEMENTED** | | | |
|  | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | Replacement of remaining old lighting with LED lighting | Expert, Senior energy guardian | Yes |

* 1. PP7 – SNOLZOK MEGYEI JOGÚ VÁROS ÖNKORMÁNYZATA – HU

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| HUNGARY - Kodály Zoltán Elementary-music Primary School, Szolnok | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Heating | Replacing a part of the thermostatic radiator valves | Expert | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | Yes |
| Heating and electricity | JEG trainings | Junior energy guardians, Senior energy guardians, | Yes |
| Electricity | At the end of the last education lesson, a team look at the lights, faucets that have been turned off and locked everywhere. | Junior energy guardians, | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| HUNGARY - Kodály Zoltán Elementary-music Primary School, Szolnok | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | In the case of the need to replace electric consumers, they would have to purchase energy-efficient and energy-efficient consumers at the time they were purchased. | Operator, Senior energy guardian | Yes |
| Heating | Replacement of remaining inefficient thermostatic valves | Expert, Senior energy guardian | Yes |
| Heating and electricity | In order to maintain an environmentally conscious attitude, students and teachers are involved in related events | Senior and junior energy guardians | Yes |
| Heating and electricity | Continuous monitoring of tender support options for renewable energy sources | Operator | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| HUNGARY - Primary School in Liget street Preparatory Skills Special Vocational School and EGYMI, Szolnok | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Heating | Replacing a part of the thermostatic radiator valves | Expert | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | Yes |
| Heating and electricity | JEG trainings | Junior energy guardians, Senior energy guardians, | Yes |
| Electricity | At the end of the last education lesson, a team look at the lights, faucets that have been turned off and locked everywhere. | Junior energy guardians, | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| HUNGARY - Primary School in Liget street, Preparatory Skills Special Vocational School and EGYMI, Szolnok | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | In the case of the need to replace electric consumers, they would have to purchase energy-efficient and energy-efficient consumers at the time they were purchased. | Operator, Senior energy guardian | Yes |
| Heating | Replacement of remaining inefficient thermostatic valves | Expert, Senior energy guardian | Yes |
| Heating and electricity | In order to maintain an environmentally conscious attitude, students and teachers are involved in related events | Senior and junior energy guardians | Yes |
| Heating and electricity | Continuous monitoring of tender support options for renewable energy sources | Operator | Yes |
| Heating and electricity | In the study created in the pilot project, the implementation of energy investments in case of availability of resources is proposed | Operator | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| HUNGARY - Technical School of Petőfi Sándor School, Secondary School, Szolnok | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Heating | Replacing a part of the thermostatic radiator valves | Expert | Yes |
| Electricity | Installing solar panels | Expert | No |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | Yes |
| Heating and electricity | JEG trainings | Junior energy guardians, Senior energy guardians, | Yes |
| Electricity | At the end of the last education lesson, a team look at the lights, faucets that have been turned off and locked everywhere. | Junior energy guardians, | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| HUNGARY - Technical School of Petőfi Sándor School, Secondary School, Szolnok | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | In the case of the need to replace electric consumers, they would have to purchase energy-efficient and energy-efficient consumers at the time they were purchased. | Operator, Senior energy guardian | Yes |
| Heating | Replacement of remaining inefficient thermostatic valves | Expert, Senior energy guardian | Yes |
| Heating and electricity | In order to maintain an environmentally conscious attitude, students and teachers are involved in related events | Senior and junior energy guardians | Yes |
| Heating and electricity | Continuous tracking and recording of savings data due to installed solar panels, investment of savings funds into further energy efficiency steps | Senior and junior energy guardians,  Operator | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| HUNGARY -II. Rákóczi Ferenc Bilingual Primary School, Szolnok | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | Yes |
| Heating and electricity | JEG trainings | Junior energy guardians, Senior energy guardians, | Yes |
| Electricity | At the end of the last education lesson, a team look at the lights, faucets that have been turned off and locked everywhere. | Junior energy guardians, | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| HUNGARY - II. Rákóczi Ferenc Bilingual Primary School, Szolnok | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | In the case of the need to replace electric consumers, they would have to purchase energy-efficient and energy-efficient consumers at the time they were purchased. | Operator, Senior energy guardian | Yes |
| Heating | At the end of the teaching time, minimize the performance of the convectors. | Senior and junior energy guardians | Yes |
| Heating and electricity | In order to maintain an environmentally conscious attitude, students and teachers are involved in related events | Senior and junior energy guardians | Yes |
| Heating and electricity | Continuous monitoring of tender support options for renewable energy sources | Operator | Yes |
| Heating and electricity | In the study created in the pilot project, the implementation of energy investments in case of availability of resources is proposed | Operator | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| HUNGARY -Széchenyi Sports Primary School, Szolnok | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Heating | Replacing a part of the thermostatic radiator valves | Expert | Yes |
| Heating | External thermal insulation | Expert | No |
| Electricity | Installing solar panels | Expert | No |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | Yes |
| Heating and electricity | JEG trainings | Junior energy guardians, Senior energy guardians, | Yes |
| Electricity | At the end of the last education lesson, a team look at the lights, faucets that have been turned off and locked everywhere. | Junior energy guardians, | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| HUNGARY - II. Rákóczi Ferenc Bilingual Primary School, Szolnok | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | In the case of the need to replace electric consumers, they would have to purchase energy-efficient and energy-efficient consumers at the time they were purchased. | Operator, Senior energy guardian | Yes |
| Heating | At the end of the teaching time, minimize the performance of the convectors. | Senior and junior energy guardians | Yes |
| Heating and electricity | In order to maintain an environmentally conscious attitude, students and teachers are involved in related events | Senior and junior energy guardians | Yes |
| Heating and electricity | Continuous monitoring of tender support options for renewable energy sources | Operator | Yes |
| Heating and electricity | In the study created in the pilot project, the implementation of energy investments in case of availability of resources is proposed | Operator | Yes |

* 1. PP8 – ÚJSZILVÁS KÖSÉG ÖNKORMÁNYZATA – HU

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | | | |
| HUNGARY - Tápiószőlős - Újszilvás Calvinistic Primary School and Kindergarten - It is a member institution of Újszilvás | | | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** | |
| Heating and electricity | Installed energy smart meters | | Expert, Senior energy guardian | Yes | |
| Heating | Replacing a part of the thermostatic radiator valves | | Expert | Yes | |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | | Senior and junior energy guardians | Yes | |
| Heating and electricity | VEGTP and CEGE trainings | | Senior energy guardians, municipality employees | Yes | |
| Heating and electricity | JEG trainings | | Junior energy guardians, Senior energy guardians, | Yes | |
| Electricity | At the end of the last education lesson, a team look at the lights, faucets that have been turned off and locked everywhere. | | Junior energy guardians, | Yes | |
| **MEASURES TO BE IMPLEMENTED** | | | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@School activities?** | |
| Electricity | In the case of the need to replace electric consumers, they would have to purchase energy-efficient and energy-efficient consumers at the time they were purchased. | | Operator, Senior energy guardian | Yes | |
| Heating and electricity | In order to maintain an environmentally conscious attitude, students and teachers are involved in related events | | Senior and junior energy guardians | Yes | |
| Ventilation, air conditioning | Building and installing an automated system  Continuous monitoring of tender support options for renewable energy sources Operator | | Operator, Senior energy guardian | Yes | |
| Heating and electricity | Continuous monitoring of tender support options for renewable energy sources | | Operator | Yes | |
| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | | | |
| HUNGARY - Tápiószőlős - Újszilvás Calvinistic Primary School and Kindergarten - It is a member institution of Tápiószőlős | | | | | |
| **CATEGORY heating/ electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | | | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | | | Yes |
| Heating | Replacing a part of the thermostatic radiator valves | Expert | | | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | | | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | | | Yes |
| Heating and electricity | JEG trainings | Junior energy guardians, Senior energy guardians, | | | Yes |
| Electricity | At the end of the last education lesson, a team look at the lights, faucets that have been turned off and locked everywhere. | Junior energy guardians, | | | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | | | |
| HUNGARY - Tápiószőlős - Újszilvás Calvinistic Primary School and Kindergarten - It is a member institution of Tápiószőlős | | | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | | | **Did you decide for the measure based on Energy@School activities?** |
| Electricity | In the case of the need to replace electric consumers, they would have to purchase energy-efficient and energy-efficient consumers at the time they were purchased. | Operator, Senior energy guardian | | | Yes |
| Heating | Replacement of remaining inefficient thermostatic valves | Expert, Senior energy guardian | | | Yes |
| Heating and electricity | In order to maintain an environmentally conscious attitude, students and teachers are involved in related events | Senior and junior energy guardians | | | Yes |
| Heating and electricity | Continuous monitoring of tender support options for renewable energy sources | Operator | | | Yes |
| Heating and electricity | In the study created in the pilot project, the implementation of energy investments in case of availability of resources is proposed | Operator | | | Yes |

* 1. PP9 – LANDESHAUPTSTADT STITTGART – DE

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| Germany – Ferdinand-Porsche-Gymnasium, Stuttgart | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert | Yes |
| Heating, electricity and water | Installation of an Energy Management System | Expert | Yes |
| Electricity | Replacement of lighting with LEDs | SEG | Yes |
| Heating | Perimeter insulation | Expert | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | SEG and JEG | Yes |
| Heating and electricity | VEGTP and CEGE trainings | SEG, municipality employees | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| Germany – Ferdinand-Porsche-Gymnasium, Stuttgart | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@School activities?** |
| Electricity | Replacement of remaining old lighting with LEDs | SEG | Yes |
| Electricity | Extension of the PV plant | Expert | No |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| Germany – WG-West, Stuttgart | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert | Yes |
| Heating, electricity and water | Installation of an Energy Management System | Expert | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | SEG and JEG | Yes |
| Heating and electricity | VEGTP and CEGE trainings | SEG, municipality employees | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| Germany – WG-West, Stuttgart | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@School activities?** |
| Electricity | Replacement of remaining old lighting with LEDs | SEG | Yes |
| Electricity | Potential determination for PV plant |  |  |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| Germany – Birkenrealschule, Stuttgart | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert | Yes |
| Heating, electricity and water | Installation of an Energy Management System | Expert | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | SEG and JEG | Yes |
| Heating and electricity | VEGTP and CEGE trainings | SEG, municipality employees | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| Germany – Birkenrealschule, Stuttgart | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@School activities?** |
| Electricity | Replacement of remaining old lighting with LEDs | SEG | Yes |
| Electricity | Potential determination of the PV plant extension | Expert | No |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| Germany – Realschule Feuerbach, Stuttgart | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert | Yes |
| Heating, electricity and water | Installation of an Energy Management System | Expert | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | SEG and JEG | Yes |
| Heating and electricity | VEGTP and CEGE trainings | SEG, municipality employees | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| Germany – Realschule Feuerbach, Stuttgart | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@School activities?** |
| Electricity | Replacement of remaining old lighting with LEDs | SEG | Yes |
| Electricity | Potential determination of the PV plant extension | Expert | No |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| Germany – Geschwister-Scholl-Gymnasium, Stuttgart | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert | Yes |
| Heating, electricity and water | Installation of an Energy Management System | Expert | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | SEG and JEG | Yes |
| Heating and electricity | VEGTP and CEGE trainings | SEG, municipality employees | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| Germany – Geschwister-Scholl-Gymnasium, Stuttgart | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@School activities?** |
| Electricity | Replacement of remaining old lighting with LEDs | SEG | Yes |
| Electricity | Potential determination of the PV plant extension | Expert | No |

* 1. PP10 – KLAGENFURT AM WÖRTHERSEE

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| Austria – in no. 14 participating schools in Klagenfurt on lake Wörthersee  VS 1 Benediktinerschule (primary school)  VS 8 / VS 24 Rennerschule (primary school)  VS 21 Hörtendorf (primary school)  NMS 3 Hasnerschule (secondary school)  VS 23 Wölfnitz (primary school)  NMS 5 Wölfnitz (secondary school)  NMS 11 Annabichl (secondary school)  VS 22 Ponfeld primary school)  NMS 2 Waidmannsdorf (secondary school)  VS 9 / VS 10 Körnerschule (primary school)  NMS 6 / NMS 10 St. Peter (secondary school) | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating, electricity and water | Installation of energy monitoring systems | Expert, Senior energy guardian | Yes |
| Heating and  electricity | Raised awareness among  pupils with cultural campaigns | Senior energy guardians  and junior energy guardians | Yes |
| Heating and  electricity | VEGTP and CEGE  trainings | Senior energy guardians,  municipality employees, expert | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@School activities?** |
| Electricity | Replacement of remaining old lighting with LED lighting systems | Expert, Senior energy  guardian | Yes |
| Electricity | Installation of photovoltaics | Expert, Senior energy guardian | In parts |
| Heating | Replacement of remaining inefficient thermostatic valves | Expert, Senior energy guardian | Yes |
| Heating | Replacement of remaining oil-fired  heating systems with renewable energy sources | Expert, Senior energy guardian | In parts |
| Heating | Hydraulic balancing of heating systems | Expert, Senior energy guardian | In parts |
| Electricity | Installation of efficient circulating pumps | Expert, Senior energy guardian | Yes |
| Heating, Cooling | Optimization sunscreens; avoid summer overheating | Expert, Senior energy guardian | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| AUSTRIA – in no. 1 participating school in Klagenfurt on lake Wörthersee  NMS 11 Annabichl (secondary school) | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating | Installed energy smart meters | Expert, Senior energy  guardian | Yes |
| Electricity | LED lighting system in  two classrooms | Expert, Senior energy  guardian | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| AUSTRIA – in no. 1 participating school in Klagenfurt on lake Wörthersee  NMS 3 Hasnerschule (secondary school) | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Electricity | LED lighting system in  one sports hall | Expert, Senior energy  guardian | Yes |

* 1. PP12 – MESTNA OBČINA CELJE – SI

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| 3. Primary school Celje  Primary school Ljubečna | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Electricity | Part of old lighting will be replaced with LED lighting | Expert, Senior energy guardian | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | Yes |
| Heating | Partial replacement of insufficient windows | Experts | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | Replacement of remaining old lighting with LED lighting | Expert, Senior energy guardian | Yes |
| Heating | Replacement of remaining inefficient thermostatic valves | Expert, Senior energy guardian | Yes |
| Electricity and heating | Organizing educational workshops and lectures | Expert, Senior energy guardian, Junior energy guardian | Yes |

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| **IMPLEMENTED MEASURES AND ACTIVITIES** | | | |
| 4. Primary school Celje  Primary school Lava  Primary school Hudinja  Primary school Frana Roša  Primary school Frana Kranjca | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO PARTICIPATED?** | **Was the measure provided in the context of E@S project?** |
| Heating and electricity | Installed energy smart meters | Expert, Senior energy guardian | Yes |
| Electricity | Part of old lighting will be replaced with LED lighting | Expert, Senior energy guardian | Yes |
| Heating and electricity | Raised awareness among pupils with cultural campaigns | Senior and junior energy guardians | Yes |
| Heating and electricity | VEGTP and CEGE trainings | Senior energy guardians, municipality employees | Yes |
| **MEASURES TO BE IMPLEMENTED** | | | |
| **CATEGORY heating/electricity)** | **TITLE OF THE MEASURE** | **WHO WILL PARTICIPATE?** | **Did you decide for the measure based on Energy@school activities?** |
| Electricity | Replacement of remaining old lighting with LED lighting | Expert, Senior energy guardian | Yes |
| Heating | Replacement of remaining inefficient thermostatic valves | Expert, Senior energy guardian | Yes |
| Electricity and heating | Organizing educational workshops and lectures | Expert, Senior energy guardian, Junior energy guardian | Yes |