

# D.T3.4.2 REPORT CRITERIA FOR THE REALIZATION OF ENERGY SAVING CAPACITY-RAISING PLAN

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Version 02

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Edited by PP4 KSSENA







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## Introduction

The building sector has high potential for energy optimization, being the most consuming one in European union. In terms of public buildings, energy consumption in schools is the second highest consumer of Municipalities in total running costs. This sector offers potential remarkable achievements in terms of energy efficiency, renewable energy sources application and carbon footprint reduction.

With reference to the public stock of buildings and infrastructures, for sure educational facilities are an important opportunity to achieve substantial energy savings, as they constitute a relevant part of the overall amount of energy consumption and therefore of the expenses paid by the national budgets.

Energy consumption in schools is the second most significant expense to total running costs and they account up to 70% of the thermal energy cost of Municipalities. Schools are the best environment for behaviour change and awareness raising of students and indirectly, their families because they are the privileged place for the dissemination of culture and information as a whole and therefore also in the field of energy saving and efficiency. Consumption in schools can be quite variable depending on country, climate, building year of construction and type.

Public building sector with reference to schools is therefore one of the main issues and there is concrete need to develop energy efficient management and strategies on how to improve the energy efficiency. There is also the need to raise the awareness of school staff and students, and to involve them in the energy saving activities.

This deliverable is a technical document with the aim of helping energy managers in public buildings, in our case for well prepared and educated senior energy guardians to use it in schools to create the team and how to organize and motivate this team to implement Energy saving capacity-raising plan.



## 1. What is an Energy saving capacity-raising plan?

Energy saving capacity-raising plan is a document that will contribute to Sustainable energy action plan - SEAP, developed within Covenant of Mayors. The action plan is a comprehensive document which include monitoring energy consumption, collecting and organizing the data, identifying opportunities to save energy and analysing their impact, taking targeted action towards implementing technological and organizational measures that address these opportunities and monitoring the progress in terms of reducing CO<sub>2</sub> emissions.

Within Energy@school project Energy saving capacity-raising plan will be prepared by:

- Energy manager - Senior energy guardians
- Energy team - Junior energy guardians

## 2. Energy manager and energy team

Energy manager is an individual who optimizes the energy performance of a building with the aim to improve efficiency by evaluating energy use and putting in place new policies and changes where needed. Their job is to coordinate all aspects of energy management from establishment of energy team, introducing them to energy profile, to prepare and implement the action plan with the goal to reduce CO<sub>2</sub> emissions. Positive impact of having an energy manager in building is lowering energy use, which in turn means lower energy costs. They also provide a positive - green look for the building.

### 2.1 Representative for Energy manager

- Senior energy guardians
- School staff
- Teachers

### 2.2 Representatives of Energy team

- Junior energy guardians
- Pupils
- School staff
- Teachers



## 2.3 Tasks of energy manager with the help of energy team

1. Establishment of energy team
2. Introducing the energy team to energy consumption profile
3. Set a goal
4. Prepare and implement energy saving capacity-raising plan
5. Motivate others to change user behaviour and raise awareness among others in community
6. Monitor and update the energy saving capacity-raising plan

### ■ Establishment of energy team

First step towards establishing the energy team is to select people who are motivated and interested in work and above all, they need to be interested in energy savings, the energy efficiency and the use of renewable energy sources. Any previous knowledge is welcome but is not a requirement for inclusion. In order to ensure the best opportunities for success, invite all employees and pupils to volunteer for the role of energy team member.

You have to consider about the appropriate tasks regarding the age of team members.

Discuss about the experience that your team members already have and based on their abilities assign them with tasks that they can handle.

Set the time and dates when your team will meet and report to Energy manager what tasks was accomplished and what goals achieved.

### ■ Introducing the energy team to energy consumption profile

Performing an energy audit is usually done by Energy expert or by very well prepared Energy manager with the help of Energy team, with the aim to get to know how building uses energy and thus identify opportunities to reduce energy consumption.

### ■ Set a goal

The general goal of SEAP is to reduce the CO<sub>2</sub> emissions by 2020, but the exact goal is set by individual Municipality that signed Covenant of Mayors. Energy manager with the help of Energy team should set their own goals based on energy consumption profile.

It is important to set the ambitious and reasonable goals that are quantitative as possible, so it is easier to follow the achieved results and also more interesting and motivating for all team members. The goals should be related to sustainability efforts in terms of emission reduction, energy savings, cost savings or created jobs. Good motivation for energy team and for others is to display the current situation and the set goals in the most frequently used room, so everyone can see what goals was already achieved.



- Prepare and implement energy saving capacity - raising plan

When preparing Energy saving capacity - raising plan is a comprehensive plan:

- Prepare analysis of energy consumption in building
- Prepare and select actions and measures to implement
- Consider about mechanisms of financing

*For more details see Deliverable D.T3.4.1 Format of an energy saving capacity-raising plan for public building of Municipality.*

- Motivate others to change user behaviour and raise awarnes among others in community

Energy team with the help of Energy manager should discuss about possible ways to achieve change in user behaviour. In this task it is good to include other pupils and employees in the development of ideas and measures.

You could consider variety of methods and techniques such as brochures, newsletters, exhibitions, site visits, updating website, organizing public events, surveys and questionnaires, workshops, etc.

Foster energy awareness among employees and pupils to achieve greater sustainability beyond the scope of the project, since they can disseminate what they have learned in the project at home and everywhere.

- Monitor and up date the energy saving capacity-raising plan

After implementation of the plan, monitor and follow up the process to see what goals was already achieved and what is still needing to be done to achieve the final goal. The energy saving capacity-raising plan is not meant to be fixed document but to be updated when realized there is another measure to be implemented or action to be taken.

Always remember that with every new project arise the opportunity to update the Energy saving capacity-raising plan with actions that will contribute to reduction of CO<sub>2</sub> emissions. The impacts of missed out opportunities can be significant and will last for a long time. This means that energy efficiency and emission reduction considerations should be taken into consideration for all new developments.



## What about the future?

The ENERGY@SCHOOL project has been developed in coherence with the methodologies and tools that the European Union has identified and which the Member States are using for the reduction of energy consumption, for the reduction of pollution and for a progressive decrease impact on the climate change. The Plan that each school has developed follows the Plan that the municipalities have dealt with by joining the Covenant of Mayors and with the tools of Energy Audits. The plan of each school that has joined the project, in fact, starts from the definition of a consumption baseline, chooses sustainability goals to be achieved in a defined time, chooses which indicators to use to measure the results and finally chooses which actions to put into practice to reach the goals.

In analogy, the work carried out by the Energy Guardians (Senior and Junior) is that of Energy Teams and Energy Managers in the Municipality. We therefore believe that the initiatives, methodology and tools identified by the project represent the basis for the future processes of energetic and environmental / climatic planning, but which can immediately be linked to the structures such as the Sustainable Energy Action Plans already prepared by the Municipalities that have joined to the Covenant of Mayors.