

# D.T4.4.1 POLICY RECOMMENDATION AND ACTION PLAN

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Partners name: ZMVA

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## Objective of the report

The main objective of this report is to summarize policy recommendations and a strategy in each partner country to pursue for a widespread and homogeneous application of energy efficiency measures in school buildings based on previous activities and bilateral meetings with policy makers to foster the policy implementation.

**Target Users:** *Local authorities, policy makers*



# 1. Current situation on energy efficiency in public buildings

There is a significant energy saving potential in improving the energy efficiency of public building stock of about 10-12 thousand buildings in Hungary. Improving energy efficiency and cost-effective use of buildings together can significantly reduce operating costs and thus reduce the budgetary amounts utilised for this purpose. From 1 January 2017, Section 11/A of the Energy Efficiency Act requires the head of an organisation in charge of operation and maintenance of a building involved in public services owned and used by public institution to prepare an energy savings action plan according to a relevant template every five years. For the first time, it has to be sent to the competent regional office of the National Energy Network by 31 March 2017. The annual renewal obligation is 3 %, which means building renovations of nearly 14,500-15,000 m<sup>2</sup> of floor area per year. Renovations are done on an ongoing basis.

## 1.1. National legislation and provisions for public buildings

Hungary's energy policy is summarised in the National Energy Strategy adopted by Parliamentary Decision No 77/2011 of 14 October 2011. The main findings of the National Energy Strategy are described in Action Plan III.

By its Decision No 5/2015 of 20 March 2015, the Parliament has decided that the Government is responsible for regular review of the Energy Strategy energy use forecast, which must be decided every two years in a government decision. In accordance with this Parliamentary Decision, the Government adopted Government Decision No 1160/2015 of 20 March 2015 on updating the energy use forecasts of the National Energy Strategy.

According to Parliamentary Decision No 5/2015 of 20 March 2015, the values of the forecast specified in the relevant government decision must be considered as authoritative in the course of energy planning. In the course of review of Government Decision No 1160/2015 of 20 March 2015 in 2017, the energy consumption paths were reviewed and corrected as necessary. This will also serve as a basis for the objectives of the Integrated National Climate and Energy Plan for energy efficiency.

Action Plan III has specified the energy efficiency targets in Government Decision 1160/2015 of 20 March 2015 on updating the energy use forecasts of the National Energy Strategy on the basis of an energy consumption forecast for 2020.

Based on this, the primary energy consumption target for 2020 is: 1009 PJ (according to the 'joint effort' path). The final energy consumption target is 693 PJ. In line with the energy savings target for 2020, the difference in primary energy use is 92 PJ according to the 'Sitting idly' and 'Joint effort' scenarios, whereas the following has been

chosen as a basis for our energy consumption undertakings: 73 PJ calculated in terms of final energy consumption.



## 1.2. National Energy Action Plans and other planning documents

The West-Transdanubian Regional Energy Strategy (ESPAN), the Zala County Climate Strategy, adopted in 2018, and the SEAP of Nagykanizsa (with SEAP alone in the region, Nagykanizsa alone) formulate comprehensive targets for energy efficiency and renewable energy energy sources. As a result of the transforming institutional system, specific interventions, their preparation and timing are the competence of Vocational Training Centers to maintain local governments, government agencies and some of the schools. The organizations concerned must take into account the energy efficiency requirements for a given building when building energy and other technical interventions.

There is no local or regional document that would formulate specific goals for public buildings.

Zala County's climate strategy mitigates its target of 40% reduction of emissions from the operation of buildings by 2050 compared to 2015 levels. Among the related measures, the strategy outlines the "Complex energy efficiency modernization in renewable energy use in public institutions", but the quantified target value is not related.

## 1.3. Local and regional legislation and provisions for public building

Local and regional governments however have a key role in education of the local citizens, organising awareness raising programs. In several cases, local governments also have the financial deed to provide (additional) financial aid to speed up energy renovations.

## 1.4. Local action plans for public buildings

Municipalities can allocate funds for the refurbishments of public buildings. However a lot of local governments do not have sufficient budget for this purposes due t lacking local incomes and funds. For the first time, it had to be sent to the competent regional office of the National Energy Network by 31 March 2017. Meeting the energy savings action plan must be reported on an annual basis and such reports must be sent by 31 March of the subsequent year to the regionally competent office of the National Energy Network. The energy saving plan is a first step in improving the energy efficiency of public institutions by starting from the assessment of the current situation, exploring energy loss resources, and proposing energy efficiency improvement measures and investments that meet the technical specifications of the building. It is important that the plan propose concrete measures in the short, medium, and long terms.



## 2. National, local and regional measures to stimulate energy renovation of public buildings

### 2.1. Financing from regional/local budget

State funded schools are eligible for normative subsidy which is defined by a special calculation methodology based on the number of students resulting in pedagogical status as the base of subsidy. There are different financial mechanisms and methodologies for primary schools, secondary schools and vocational training. The Act regulates yearly planning of national budget including planning, execution, asset and debt management, public debt management and details of public servants financing. The payments of teachers are defined by this regulation based on a matrix considering teachers' education (type of diploma), time spent in service etc.

### 2.2. Funding from ERDF

This financing method is not relevant for school renovations in Hungary at present.

However, within Economic Development and Innovation Operational Programme a new combined grants and loans call was introduced for SME's in 2016. Support is provided for projects where activities aiming to improve energy efficiency will be combined with the use of renewable energy. Within the project the part aiming to energy efficiency must account for at least 30% of the costs, the part aiming for the use of renewable energy must account for at least 10% of the costs.

- Non-refundable support: min. 3 million HUF, max. 50 million HUF
- Loan: min. 3 million HUF, max. 50 million HUF
- Level of non-refundable support: max. 45%

### 2.3. National funding

Theoretically, for financing of energy efficiency projects in Hungary, investment and related expenditures, depending on founder's decision following financing may be available, such as

- EU grants for energy efficiency investments,
- Borrowings - there are substantial funds for low interest rate loans handled by the Hungarian Development Bank,
- Public Private Partnership,
- Energy Performance Contracting (EPC).

However, through the re-nationalisation of schools between 2014-2016 (previously owned and operated by local and county governments), the local governments have no actual role anymore in energy efficient refurbishments in schools in Hungary.



All schools are state owned, therefore all ongoing deep renovations are financed either from domestic budgetary or EU structural funds. No other financial methods applied.

In the 2014-2020 programming period, for school refurbishments there are cc. HUF 32,4 Billion available, from which

- HUF 21 Billion for elementary schools,
- a further HUF 8 Billion for vocational schools, and
- HUF 3,4 Billion for ecclesiastic schools allocated.
- In county Zala, cc. HUF 1.47 Billion available for local elementary schools.

## 2.4. EPC

Because of the re-nationalisation of schools (previously owned and operated by local and county governments), the local government loses interest in energy efficiency or RES investments in schools. General information on the conclusion of energy efficiency-based contract, the description of contents of the contracts is available on the Energy Efficiency website where a contract template can also be downloaded. Available at: <http://enhat.mekh.hu/index.php/esco-konstrukcio/>

The once flourishing (1990- cc. 2008) Hungarian ESCO market drastically declined into recession due to numerous factors. The possibilities narrowed, market volume shrank and the number of ESCO companies decreased from 20-30 to 6-8 by 2014. There is little prospect of ESCOs at local government level before 2017, until the TOP (Territorial and Settlement Operational Programme) grants have been distributed. Afterwards, more creative financing solutions will be a necessity. The remaining ESCO activities occur mainly in private companies, however the low energy prices caused a hold up in that sector as well.

The Energy Efficiency Directive creates some market potential for ESCOs: 1600 large companies have to prepare energy audits. These audits provide a pool of potential energy efficiency projects - many of them likely to be ESCO-financed. The government set up a public ESCO (the entrance of a public ESCO can either distort the competitive market or beneficial via enhancing knowledge and trust), and a Green Bank was announced in early 2015, with functions including ESCO financing, among many others. Nevertheless, the Bank has not been set up yet.

## 2.5. Loans

In Hungary, there are special lending programs for environmental protection projects, energy efficiency and renewable energy sources operated by the Hungarian Development Bank (MFB).

The different financial solutions offered by MFB with favourable interest rates provide municipal governments with opportunities to finance infrastructural investments as part of their obligatory or voluntary tasks, and to have the necessary own contribution for participating in tenders published for them



- On a discounted rate (cc. 1,5%), it can be applied for a long term period,
- It can be used as an additional resource for any grant the municipalities receive,
- Without own contribution, it is also suitable for large loan applications,
- It can also be used to fund an investment it already started,
- Investments in local government cooperation can also be funded.

## 2.6. PPP financing

There is no complex PPP legislation in Hungary - including a proposed context of the. PPP contracts considered as a general contract form.

Because of the re-nationalisation of schools (previously owned and operated by local and county governments), the local government loses interest in energy efficiency or RES investments in schools.

## 2.7. Other measures

No further comments

# 3. Pilot projects findings

- *Number of audits held: 8*
- *Local specifications/problems with energy efficiency renovations (to nZEB standard)*

During pilot action activities energy audits in 8 schools were performed, discussion with school managers on energy efficiency topic were held and the energy efficiency measures leading to nZEB standard were proposed and explained. The results of the energy audits were presented to school managers and respective local authorities, open lessons on energy efficiency with pupils in schools were organized.

It can generally be concluded based on the findings of above mentioned activities that the schools buildings need some renovation activities for operating of energy efficiency.

Energy-saving measures leading to the nZEB standard: replacement of doors and windows, flat roof with 20 cm XPS insulation, facade insulation, lighting modernization and mount radiators with thermostatic heads, due to the possibility of regulation per room. The criterion of close to zero is room-to-room control.

The buildings are now ventilated naturally. We do not plan for artificial ventilation because of the expensively expensive construction and often lack of maintenance and improper use that can easily lead to sick building syndrome, which is not recommended in an educational institution.

Educated students and adults using the building on how to use the building (eg ventilation intensity, time, reduce water waste, turn off lights, etc.) Demonstrate animations, videos, and demonstrations of the thermal chamber, before and after renovation. What is changing is the benefit of energy upgrades.

The level of technical knowledge on energy efficiency issues of the school staff and local authorities administration officers is generally low and not sufficient for the energy efficiency projects settings.





## 4. Barriers and opportunities

During the Feedschools activities performed in *Hungary* were identified following barriers obstructing more extensive growth of number of energy efficiency projects in schools.

### 4.1. Financial barriers

Barrier	Description	Opportunity
lack of equity	Small investments made from own resources (eg replacement of some windows, replacement of led lights) cannot be planned in advance as they only see the financial resources available for this type of intervention as the budget is approaching the end of each fiscal year. for these If there is money left in the School's budget, they can make smaller renovations, eg: 20 classrooms in 2 classes with open doors. For a large part of the school buildings, the refurbishments are more likely to be used for the building	Schools have little or no own resources to invest, but they can only make renovation from EU or public money.
price increases (e.g.: building materials)	During the long evaluation of applications, the drastic increase in material prices and labor costs is a problem in implementation, as these activities were not budgeted for high costs when preparing the proposal.	-
the specific limits in the tender specifications do not cover the necessary costs in some cases	The maximum specific cost limits set out in some calls for proposals are in fact insufficient to carry out the activity in question	-

### 4.2. Legislation barriers

Barrier	Description	Opportunity
clarification of ownership	Most of the school buildings are owned by the Municipality, but there is no problem with justifying them, but in some institutions, especially in the case of rural schools, the newly built part of the building is already the property of the maintainer due to the extension of the building,	clarifying these and certification may be a problem when submitting applications.





Legislation is not in line with practice	e.g.: a solar system produces energy in the summer, but there is no consumption due to the summer break, so schools do not get the savings	-
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### 4.3. Technical barriers

Barrier	Description	Opportunity
skills shortages	As a result of the many construction projects running in the country, it is very difficult to find a freelance specialist, a specialist company (designer, constructor).	Involve constructor from abroad
the skills of the professionals are incomplete	the majority of the available specialists do not have the right expertise, which leads either to poorly designed or incorrectly implemented projects. The professionals involved are unprepared for the OTSZ.	Involve constructor from abroad
heritage monument: costs are disproportionately high compared to energy savings	it is true that not many educational buildings are under protection, but for such buildings or parts of buildings, the cost of the technical solutions expected by the authority is disproportionately high compared to the targeted energy savings	
obsolescence of planned technical solutions until the start of investments	Due to the long tendering procedure, the planned technical solutions (eg solar panels) become obsolete or no longer exist.	

### 4.4. Communication and organizational barriers

Barrier	Description	Opportunity
the effectiveness of decision-making between school management	Institutions belong to a center (Tank District or	The process of decision is centrally regulated.



	<p>Vocational Training Center), so decision-making takes place on two levels, which in some cases may be slow. Decisions on the launch of investments are made only if the investment is available, the contract is signed by the economic director.</p>	
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#### 4.5. Information and knowledge barriers

Barrier	Description	Opportunity
<p>incomplete construction documentation from the 1980s.</p>	<p>Buildings built in the 1970s and 1980s do not have or only have incomplete construction documentation available. If this is not the case, you will have to carry out a building survey to prepare the projects, but in many cases no financial resources are available. In addition, due to the shortage of the specialist and the overload of human resources, the institutions are not able to make these or only with a significant delay. 80% of these documents are in the County Archives, but they have to be paid for and the original is not issued. The construction of the new construction documentation is costly and the maintenance of the new construction is required.</p>	<p>summarize the available documents</p>

## 5. Policy recommendations and action plan

### 5.1. To overcome the financial barriers

- e.g.: lack of equity: schools have little or no own resources to invest and they have to involve EU sources or state aid to renovation



## 5.2. To overcome the legislation barriers

- e.g.: clarification of ownership: clarifying these and certification may be a problem when submitting applications.

## 5.3. To overcome technical barriers

- e.g.: the skills of the professionals are incomplete: Involve constructor from abroad

## 5.4. To overcome communication and organizational barriers

- e.g.: the effectiveness of decision-making between school management: The process of decision is centrally regulated.

## 5.5. To overcome information and knowledge barriers

- e.g.: incomplete construction documentation from the 1980s: summarize the available documents