



REPUBLIKA SLOVENIJA
MINISTRSTVO ZA INFRASTRUKTURO

Supplement

Long-term strategy for stimulating investment into energy renovation of buildings

in accordance with requirements and guidelines arising from Article 4 of Directive 2012/27/EU on energy efficiency

Ministry of Infrastructure
Langusova ulica 4
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Ljubljana 2018

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List of abbreviations

- AP RES – Action plan for renewable energy sources for the period 2010–2020
- AP ZEB – Action plan for almost zero-energy buildings for the period until 2020 AP
- EF 2020 – Action plan for energy efficiency
- ITI - Integrated territorial investment
- LSSERB - Long-term strategy for stimulating investment into energy renovation of buildings
- EFSI - European Fund for Strategic Investments
- EIB - European Investment Bank
- ELENA – European Local Energy Assistance
- ESCO – Energy service company
- ESIF - European Structural and Investment Funds
- JRC – Joint Research Centre
- PPP - Public-private partnership
- SME - small and medium-sized enterprises
- MI - Ministry of Infrastructure
- OP ECP 2014–2020 – Operational programme of the European Cohesion Policy for the period 2014–2020
- OP GHG - Operational programme for reducing greenhouse gas emissions by 2020
- RES - Renewable energy sources
- ERP - Energy renewal project
- SVRK - Government Office for Development and European Cohesion Policy
- EUE - Efficient use of energy

1 Introduction

As a full EU Member State, Slovenia has made a commitment to contribute its share to the realisation of EU goals in accordance with EU and national laws. On the basis of European legal requirements, its national laws and, in particular, the identified national needs, the Government of the Republic of Slovenia has adopted the 'Long-term strategy for stimulating investments into energy renovation of buildings (hereinafter: LSSERB). In accordance with Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (OJ L 315, 14.11.2012, p. 1; hereinafter: Directive 2012/27/EC), Slovenia must submit a new proposal for the LSSERB to the EU by 30 April 2017.

For the current LSSERB¹, Slovenia received a positive assessment from the JRC whose mission is providing support to the EU in the development of its policies. The Report states that the LSSERB meets the content requirements. The content of sections 'Assessment of building stock and renewal potential', 'Policies and measures for stimulating energy renovation of buildings' and 'Assessment of savings and wider benefits' were assessed as very appropriate. The content of sections 'Cost efficient approaches to renovation of buildings' and 'Toward future directed perspective for directing investment decisions' were assessed as somewhat poorer but still satisfactory.

Due to a relatively short time since the adoption of the LSSERB, a question arose whether it would make sense to draw up a new LSSERB. During this time there have not been any significant changes to the building stock nor to the policies and measures in force, which would entail major changes to the existing LSSERB. Considering these circumstances, a decision was adopted to retain the initial form of the LSSERB and to upgrade individual areas in a supplement to the existing document. The supplement emphasises recommendations of the JRC.

The Ministry responsible for implementing the LSSERB has identified areas that have been addressed in the current document but for which it was shown during the implementation of the strategy that a more detailed elaboration and upgrading was needed. Areas identified as critical are 'quality management', creating 'financial instruments' and issue of the 'moderately developed energy performance contracting market'.

During the preparation of the Supplement, working meetings were held with those responsible for implementing the LSSERB and certain other stakeholders from the building sector. The findings and recommendations from the following European projects were taken on board when drawing up the Supplement: EPC Plus, Transparens, Build Upon, Build Up, GarantEE, QualitEE, CoNZEBs and Quantum.

¹ Synthesis Report on the assessment of Member States' building renovation strategies.

2 REVIEW OF NATIONAL OBJECTIVES IN THE FIELD OF ENERGY RENOVATION OF PUBLIC SECTOR BUILDINGS

2.1.1 Operational goals of the LSSERB in the public sector by 2023

- **Yearly renovation of 3 % of public buildings of the central public sector**

In accordance with the guideline of the exemplary role of public bodies' buildings, Article 5 of Directive 2012/27/EC requires each Member State to ensure that, as from 1 January 2014, 3 % of the total floor area of heated and/or cooled buildings owned and occupied by its central government is renovated each year to meet at least the minimum energy performance requirements that it has set in application of Article 4 of Directive 2010/31/EU on building energy efficiency (OJ L 153, 18.06.2010, p. 13; hereinafter: Directive 2010/31/EU). The LSSERB provides for renovation of buildings of the central public sector based on the calculation of the total floor area owned and used by the staff of the central public sector whose total useful floor area is greater than 250 m² and which by 1 January of each year do not comply with the national minimum requirements on energy efficiency as laid down in Article 4 of Directive 2010/31/EU. In accordance with the records of buildings owned and used by the central Government² with the useful floor area greater than 250 m², the floor area of the central Government is 782 158 m² (situation as of 1 January 2017). For this obligation it is necessary to renovate 23 465 m² of building floor area each year upon presumption that all floor areas needs renovation. Energy renovation of these buildings in 2014 and 2015 did not take place due to delays in adopting the LSSERB and in the set-up of a project office; first activities started only in 2016. According to the information of the project office for energy renovation of buildings, there were 11 307 m² building floor areas owned and used by the central public sector³ that were renovated in 2016 which amounts to around half of the required annual quote or 16 % of the planned renovation goal of 70 394 m² of floor areas in the period 2014-2016.

- **Renovation of 1.8 million m² of buildings of the broader public sector by 2023**

Since 2010, grants for comprehensive energy renovation of buildings of the public sector have been awarded from the Cohesion Fund. In the period 2012–2014, grants from the Eco Fund were available for comprehensive energy renovation of buildings owned by municipalities. In 2015, ECO Fund did not have any tenders for grants. Renovated floor areas of public buildings do not include comprehensive energy renovation supported by the European Fund for Regional Development since information on renovated floor areas is no available.

Renovation of buildings of the broader public sector in the period 2011–2015

The first energy renovation projects in the broader public sector were completed in 2012. In the period 2012–2015 there were 1 262 million m² of renovated building floor areas, most were renovated with the Cohesion Fund's resourced during the financial perspective 2007–

² http://www.energetika-portal.si/fileadmin/dokumenti/podrocja/energetika/javne_stavbe/evidenca_stavb_ojs_stanje_1.1.2017.htm.

³ Part of floor areas of 11 307 m² was renovated and part was replaced by moving into another building that complies with the required minimum energy efficiency criteria.

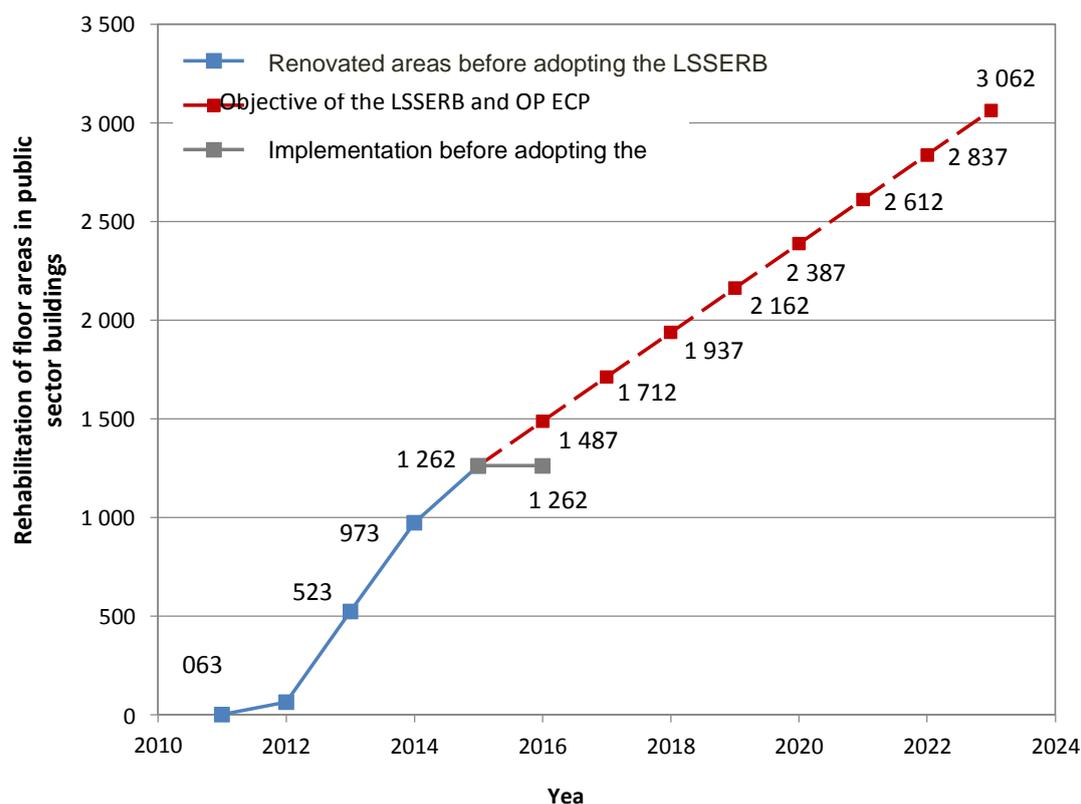
2013. The renovation was successful; however findings in other reports⁴ indicate that projects of energy renovation of public buildings in the past years resulted in a reduction of final energy use by 89 kWh/m². Since there is still great potential for achieving the objectives regarding the efficient use of energy and reducing CO₂ emissions, it would make sense for energy renovation in the future to be more comprehensive (almost zero energy), which has already been included as a goal in the LSSERB and the OP ECP.

Renovation of public sector buildings as part of the LSSERB and OP ECP for the period 2016–2023

The goal of the OP ECP, as summarised by the LSSERB, is comprehensive energy renovation of 1.8 million m² of public sector building surface area in the period 2015–2023. Therefore, renovation of 200 000 m² is planned on average per year; due to delays in implementing the programme, the goals for 2017 will have to be realised in seven and not nine years.

In 2016, in the first year after adopting the LSSERB, projects on comprehensive renovation of public buildings, supported by resources of the Cohesion Fund as part of the OP ECP, have not yet been carried out.⁵

Figure 1: Goals of the LSSERB for the period 2017–2023 are shown in comparison



⁴ Expert basis for the Second Year Report on the Implementation of OP GHG 2020, IJS CEU 2017 and Implementation Assessment AP EF 2020 for 2015

⁵ Information for the period 2010–2016 taken from the IJS study: Expert basis for the Second Year Report on the Implementation of OP GHG 2020, Final Report, part one: Indicators, IJS-DP-12292, 2017

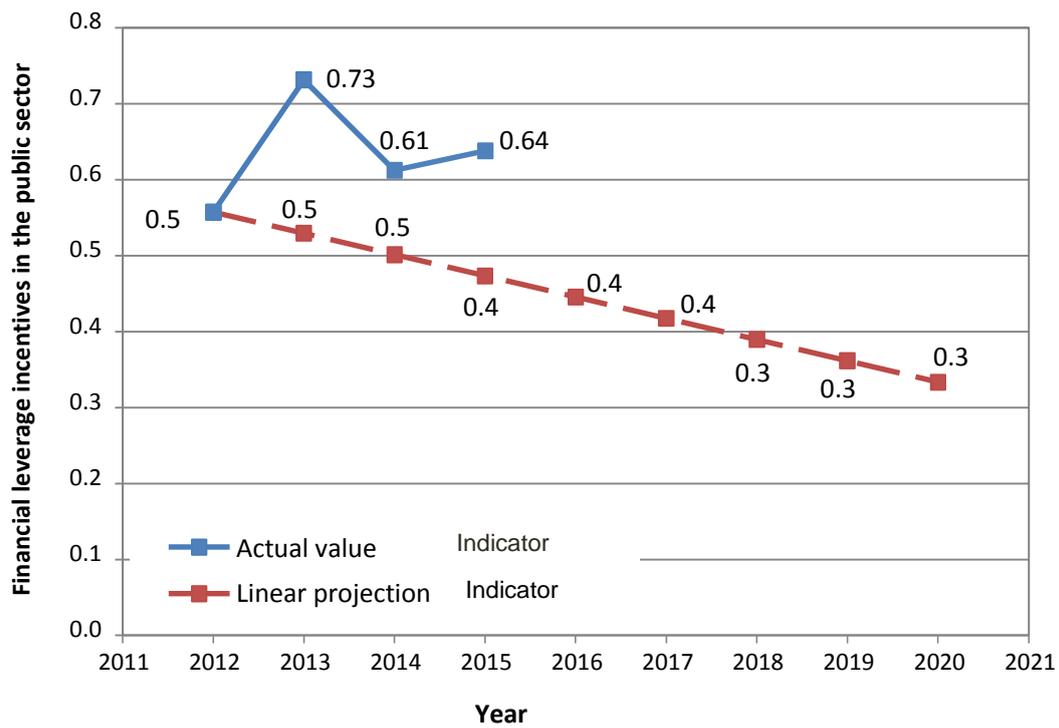


Figure 2: Financial leverage incentives in the public sector in the period 2012–2015 and their goal values until 2020 (source: *Expert basis for the Second Year Report on the Implementation of OP GHG 2020,IJS CEU*)

3 Directions for stimulating investments into comprehensive energy renovation of buildings and proposals for upgrading measures

3.1 Directions and proposals for upgrading existing development and horizontal measures

Table 1: Summary of the LSSERB directions for development and horizontal measures

Instrument/measure	Reference Document	Direction
1 Managing quality energy renovation	Supplement of the LDSEPS	It is necessary to develop guidelines that will define principles for assuring quality and requirements for system management and technical documents (for example for construction products and their installation). A coordinated cooperation of experts from many different fields (construction, architecture, town planning, electrical engineering, energy, health care, education, culture economy) will be necessary during upgrading processes of existing documents in order to provide quality of energy renovation of buildings as well as to form working groups to assess possible development direction of the system development for comprehensive provision of quality. Developing schemes for checking and confirming quality in accordance with the principles of sustainable construction that would define strategic principles and requirements laid down for a comprehensive approach, taking into account all building life cycles (project design, construction/renovation, management/operation, etc.) would be appropriate as well as to evaluate quality and compliance with requirements (for products, processes, staff training, etc.).
2 Regulations on energy efficiency of buildings		Implementation of the PURES-2 within set time frame.
3 Cultural heritage buildings	Supplement of the LDSEPS	Modifying criteria for awarding grants for investment into greater energy efficiency of buildings in private and public ownership to the effect that cultural heritage buildings enjoy a more of an equal treatment. The amount of grants is adjusted according to the difficulty and the extent of interventions (retaining cultural heritage and realising the requirements for energy renovation).
4 Financial instruments	LSSERB OP ECP 2014-2020	It is proposed to develop financial instruments which will set up a comprehensive support environment together with technical support and in connection with existing grant programmes and other investment sources (for example EFSI).

		<p>developing long-term loans and financing schemes that allow for risk sharing (guarantee scheme), refinancing of investments (factoring, etc.) would be reasonable since these provide seed capital for establishing new ESCO companies (capital injections).</p> <p>Financial instruments may not tear down the energy performance contracting model (e.g. transfer of risks onto the public sector). Developing of instruments must be acceptable in terms of budget stability restrictions and it must occur concurrently with the development of the ESCO market as a supporting, additional measures.</p>
Upgrading ECO Fund activities	Supplement of the LDSEPS	<p>It is necessary to determine barriers on increasing the implementation of measures in households due to the decline in drawing of ECO Funds resources by residents.</p> <p>Accompanying information and awareness programmes need to be strengthened, upgrading the support scheme for vulnerable groups needs to be implemented, renovation and upgrading of the EN SVET operation needs to be implemented and the programmes for financing measures for partial renovation of public sector buildings need to be upgraded (for buildings which are not entitled to a comprehensive energy renovation).</p>
6 Monitoring implementation of energy renovation of buildings	Supplement of the LDSEPS	<p>A system for monitoring the effects of implemented RES measures in buildings is to be established and information entered into official statistics.</p> <p>The monitoring of the effects of implementing the OP ECP is to be upgraded with an impact indicator (RES use in buildings).</p>
7 Setting-up systems for stimulating comprehensive sustainable renovation	Supplement of the LDSEPS	<p>A system for stimulating comprehensive sustainable renovation is to be set up as well as its support which will, aside from energy renovation, include other aspects of architectural, functional, anti-earthquake and fire renovation, other urgent construction-technical renovation aspects that retain the value of the building stock and follow the principles of sustainable construction.</p>

Re 1 Managing quality

The concepts of providing quality in the industry and in many service sectors are an established practice in areas where products are originals, in construction processes and in building renovation. In terms of their use, providing quality is mostly at the level of construction materials and safety and not at the systemic level which includes managing quality in the whole building life cycle. In practice, the meaning of quality in individual phases of a building life cycles is differently emphasised and treated and frequently, adequate quality is an expression of lack of professional competencies (during any phase) and time and cost pressures during building renovation process. If not sooner, an appropriate quality assurance is shown when a building is in use and time arrives for long-term 'payment' for construction or renovation mistakes which could be avoided in future phases through appropriate quality management.

In Slovenia, quality assurance for energy renovation of buildings is generally limited to checking requirements for quality of individual products, materials and services (e.g. testing or certifying construction materials, certifying production supervision) and on establishing a quality management systems (at producers or service providers). A system for evaluating products and services in construction has been developing in Slovenia since 1996. Due to complexity and lack of resources the development of the system and its expansion into other areas (for example evaluating multi-apartment buildings) has stagnated and is very stunted.

There is no single standard of methodology that would deal with the complex area of managing quality of preparing and carrying out energy renovation of buildings; however, there are many documents that address individual parts, phases or aspects.

At the European level, there are many on-going and upcoming international projects that address the content of quality assurance in which partners from Slovenia are participating such as QualitEE whose objective is helping establishing management system and certification schemes for energy efficiency services, and the development of principles for quality technical criteria. Cooperation and support in carrying out such projects (e.g. in a form of participation in demonstration projects) must be recognised by system decision-makers (responsible ministries) and other stakeholders as an opportunity to gain knowledge and exchange experiences as one of the phases in developing quality assurance system in the field of energy renovation of buildings in Slovenia. The results of these projects must be evaluated in terms of their implementation suitability into the national scheme and programmes on quality assurance.

Proposal for next steps

Developing schemes in accordance with the principles of sustainable construction that would define strategic principles and requirements for a sustainable approach, taking into account all building life cycles (project design, construction/renovation, management/operation, etc.) and quality evaluation. When defining schemes, it is necessary to consider actual possibilities for their impartial and effective implementation by qualified providers and in doing so, their suitability for national needs and particularities that must be ensured while following internationally agreed standards and rules. Because of the extent and complexity of this area, it would be reasonable to develop development priorities in addition to comprehensive overview.

When developing and setting-up a comprehensive system for quality assurance of energy renovation of buildings, it is necessary to have a structured process of stakeholder participation in which renovation contracting authorities, providers, equipment producers, chambers (GZS, ISI, ZAPS, OZS), experts in related fields (construction, architecture, town planning, electrical engineering, energy, economy, etc.) participate and create formal working groups that would evaluate possible development directions of the comprehensive quality assurance system in this area.

Setting-up a national framework for certification in the field of sustainable construction, including system verification and confirmation of qualifications of certification bodies, for example, through accreditation processes.

Qualifications of individuals responsible for energy renovation and providers at all levels of preparation and implementation of a project (contracting authorities, offerors, promoters, entities taking measurements and verifying savings, project designers, etc.) need to be strengthened. It is necessary to set-up certified educational programmes (for energy managers, providers of energy inspections, etc.)

Re 2 Regulations on energy efficiency of buildings

The Ministry of the Environment and Spatial Planning adopted Rules on efficient use of energy in buildings with a technical guideline (Uradni List RS (UL RS; Official Gazette of the Republic of Slovenia) No 52/10 of 30.6.2010; hereinafter: PURES-2) on the basis of the Construction Act (UL RS No 102/04 – official consolidated text, 14/05 – corr., 92/05 – ZJC-B, 93/05 – ZVMS, 111/05 – CC Decision, 126/07, 108/09, 61/10 – ZRud-1,20/11 – CC Decision, 57/12, 101/13 – ZDavNepr, 110/13, 19/15, 61/17 – GZ and 66/17 – CC Decision). PURES-2 lays down technical requirements for new and reconstructed buildings in terms of their efficient use of energy. PURES-2 implemented the requirements of the recast Directive 2010/31/EU.

There were a number of new directives, regulations, action plans, laws, implementing regulations, technical standards, etc., adopted at the EU and national level when PURES-2 was adopted in 2017, all of which affect the determination of minimal standards for energy efficiency of buildings. For this reason, an amendment of the PURES-2 is necessary and current requirements and conditions need to be implemented (in particular the requirements for almost zero-energy buildings).

The first public call for reforming PURES-2 in buildings and of the technical guideline TSG-1 004:2010 - Efficient energy use was issued in November 2015. In November 2016, expert basis were developed; the report contains next steps required for a comprehensive reform of the regulation, to allow for building almost zero-energy buildings used by public bodies as owners by the end of 2018. Interim steps require analysis of cost optimal level of minimal requirements for energy efficiency of buildings to be repeated in accordance with the new accounting methodology and the classification of standards adopted under Directive 2010/31/EU.

- When reforming PURES-2, it is necessary to harmonise minimise requirements for energy efficiency of buildings that will enable showing of compliance with minimum requirements on energy efficiency of almost zero-energy buildings after 31 December 2018.
- Minimum requirements for energy efficient new buildings and for comprehensive energy renovations of existing buildings must, under Directive 2010/31/EU, be developed in accordance with the established cost optimal minimum level of energy efficiency.
- The regulation for calculating renewable energy sources (this in particular refers to the calculation of the share of renewable sources in relation to the energy supply distribution systems) must be methodologically upgraded.
- The regulation must allow for exceptions for almost zero-energy building requirements which depend on other technical, economic, environmental and spatial restrictions.

Re 3 Cultural heritage buildings

The Guidelines for energy renovation of cultural heritage buildings were developed in 2016 and they provide technical support to planners during a comprehensive energy renovation of buildings process, from the preparation of starting points until implementation. The guidelines contain measures that improve energy efficiency of cultural heritage buildings while retaining properties of buildings of cultural importance. They define processes necessary for successful planning and implementation of energy renovation. The guidelines contain a list of interim analysis, a selection of acceptable measures for improving energy efficiency with risk designation for cultural importance, and warning and recommendations on implementing these measures.

In 2016, the Ministry of Infrastructure published a call for submitting proposals of operations for carrying out a demonstration project on comprehensive energy renovation of a public building protected by cultural heritage regulations. On the basis of proposals submitted, one proposal was selected by the Ministry. The amount of planned grant for the selected demonstration project that was evaluated as suitable for implementation with the European cohesion policy resources is around 4 million EUR.

As part of the call, the Ministry set criteria for evaluating operations which, aside from its contribution to energy efficiency, the share of co-financing by a beneficiary and its contribution to social acceptance of evaluating the project, they include a cultural heritage element. By setting the criteria, operations were evaluated according to the importance of a cultural heritage building and the diversity of buildings included in the operation; the basis for a more equal treatment of cultural heritage buildings in relation to other public buildings were established.

For renovation of privately owned cultural heritage buildings, the criteria for awarding grants for investment into greater energy efficiency of buildings must be developed in a manner where energy renovation of residential cultural heritage buildings enjoy a more of an equal treatment. The amount of grants must be adjusted according to the difficulty and the extent of intervention (retaining cultural heritage and realising energy renovation requirements) in accordance with the Guidelines on State aid for environmental protection and energy for the period 2014-2020. It is necessary to develop rules for deciding on eligible costs.

Ad 4 Financial instruments for supporting the development of the energy performance contracting market and for carrying out energy renovation of public and multi-apartment buildings

To realise the goals for renovation of public sector buildings, it is planned that renovation of public buildings are to include private capital through energy performance contracting. It is planned for buildings to be renovated by using a planned implementation model without additional government borrowing. A parallel effect of including private capital in the renovation of public buildings should be a revive of the energy performance contracting market and this is one of the key measures under AP EF 2020 and is included in AP ECP 2014–2020.

The OP ECP 2014–2020 contains a new support framework which mostly arises from experiences obtained during the implementation of financial instruments in the previous cohesion policy cycle. In the new financial framework, the use of financial instruments is more important and it stimulates their further expansion and strengthening towards the search of more effective and sustainable replacement solutions that would supplement traditional grant financing. Grants of 115 million EUR are earmarked for the priority axis 4 for renovating public infrastructure for greater energy efficiency and grants of 50 million EUR for implementing financing through financial instruments. The resources may change depending on the availability.

When creating actual products of financial instruments, it was necessary to develop a prior assessment of market needs and market situation since financial instruments need to be developed according to the recognised gaps and defined sub-optimal conditions in the private capital investor market. For this reason, SVRK ordered a study titled 'Prior assessment of financial instruments in Slovenia'⁶ which contained a proposal for design

⁶ PwC: <http://www.eu-skladi.si/sl/dokumenti/financni-instrumenti/povzetek-predhodne-ocene-feb-2016.pdf>

scheme of financial instruments for stimulating investments in energy renovation of public and residential sector buildings. The proposal developed is based on three possible forms of financial instruments which could most efficiently stimulate investments into projects on energy renovation of buildings.

In the reports prepared as part of two European projects, Transparens and GarantEE⁷, it was found that the Slovenian energy performance contracting market is moderately developed. The financial scheme for projects on comprehensive energy renovation of public sector building in the period 2007–2014 (OP ROPI) (a contracting authority received 85 % of grant for eligible renovation costs for renovating public buildings) placed ESCO companies into uncompetitive position and energy renovation of public buildings projects were implemented exclusively through public procurement. The new impetus for developing the energy performance contracting market can be expected through the implementation of energy renovation programmes planned in the new financial perspective within the framework of which most renovation of public sector buildings will be carried out by employing the energy performance contracting model. Upon incentive of municipalities, a number of municipalities (Ljubljana Municipality, 23 coastal municipalities, a consortium of Novo Mesto municipalities, Kranj Municipality, Celje Municipality) implemented ELENA projects on international technical assistance that are supported by resources of the European Investment Bank and the European Bank for Reconstruction and Development that will be implemented according to the energy performance contracting model. Increased demand for energy performance contracting has brought a new market dynamic but despite this, the energy performance contracting market is moderately developed with a forecast entry of new national and foreign providers.

Currently, the energy performance contracting market is⁸:

- There are a number of national ESCO companies on the market, with adequate capital structure and appropriate technical knowledge which are able to implement projects on comprehensive energy renovation of buildings.
- The return in certain projects on comprehensive energy renovation of buildings is lower than private capital requirements (ESCO companies have greater interests for implementing certain sections) and for this reason, certain projects on comprehensive energy renovation are less interesting for private capital (comprehensive energy renovation include measures with long-term periods of return). The position is exacerbated by conditions on the energy products market with low prices for energy products.
- Increased market demand had not yet stimulated the establishment of new ESCO companies and the existing construction companies are not yet expanding their activities in the field of energy performance contracting. Neither are there any seed incentives for emerging ESCO companies.
- The market was previously not interesting for foreign ESCO companies but stepped-up demand and merging of buildings into larger projects is becoming interesting for these companies.

The implementation of programme on comprehensive energy renovation of public sector buildings according to the energy performance contracting model is being developed and is slowly following the plan set.

When shaping final forms of financial instruments it would be reasonable to take into

⁷ Project GarantEE – 'Report on the assessment of the EPC market in Slovenia', Project Transparens – D2.5A Country Report on Recommendations for Action for Development of EPC Markets.

⁸ The assessment arises from discussions with representatives of the ESCO companies, representatives of local energy agencies and those responsible for ELENA technical assistance as well as from the Report on the assessment of the EPC market in Slovenia

account the proposal from the Prior Assessment of Financial Instruments in Slovenia. It is also necessary to consider actual situation and market barriers. The selection of financial instruments must be appropriate for the actual situation, market development and investment environment, and it must take into account risks of projects on comprehensive energy renovation of buildings (implementation/project risks, ownership risks, financial risks, etc.).

It is proposed to develop financial instruments which will set up a comprehensive support environment together with technical support and in connection with existing grant programmes and other investment sources (for example EFSI).

Financial instruments may not tear down the energy performance contracting model (e.g. transfer of risks onto the public sector). Development of instruments must be acceptable in terms of budget stability restrictions and it must take place concurrently with the development of the ESCO market as a supporting, additional measures.

Re 5 Upgrading implementation programmes and a proposal for additional ECO Fund activities

A setback in implemented investments and realisation of measures on efficient use of energy (in particular with residents) was noticed in the residential sector in 2014. The annual amount of paid grants from the ECO fund is behind planned grants from the AP EF.

A proposal to strengthen and upgrade ECO Fund activities:

- ensuring as evenly as possible implementation of measures to the planned extent by identifying barriers preventing the increase of measures being implemented by households and by developing new instruments for the residential sector;
- strengthening accompanying information and awareness programmes;
- upgrading support schemes for vulnerable groups;
- carrying out renovations and upgrading of EN SVET operations;
- upgrading programmes for financing measures for partial renovation of public sector buildings (for buildings which are not entitled to comprehensive energy renovation);
- organising training for providers of energy renovation of buildings, publication, regular updating on the webpage of the ECO Fund for providers who have taken the training;
- financial strengthening of incentives for the use of wood for energy renovation of buildings projects without jeopardizing the realisation of savings of the ECO Fund.

Re 6 Monitoring implementation of energy renovation of buildings

The Slovenian statistics for monitoring energy use in the service sector, except for direct use of geothermal energy included in the statistics for 2010, does not follow the use of RES for heat production in this sector. This means that service sector buildings are not included in the statistics when replacing fossil fuel with RES (heat pump, solar panel components, wood biomass boiler).

Closing these existing gaps in the statistics is important for the realisation of ERP by 2020. This concerns mostly improving RES statistics in the service sector and upgrading national statistics (energy and construction), in particular, for monitoring the extent of all renovating buildings (including independent) for the purpose of monitoring energy savings under Article 7 of Directive 2012/27/EC. The improvements must be

made on time to be included in the energy statistics and for credible consideration in enforcing the goals.

Re 7 Setting up systems for stimulating comprehensive renovation

Comprehensive renovation usually mean high investment costs which significantly exceeds the value of energy renovation and for this reasons this is one of barriers for renovation. When carrying out comprehensive renovation we are, in particular, faced with the problem of financial inability of investors, disperse ownership which prevents reaching an agreement on renovation and lack of awareness of the public which does not feel or understand the need for renovation, or is able to implement it. Because of strong connection between energy renovation and comprehensive renovation with upcoming trends in sustainable construction, it is necessary to set up a system that will also stimulate and support comprehensive renovation where energy renovation is one of key elements. It is necessary to set up a wide interdisciplinary expert field where other aspects, such as safety, health, quality of technical realisation, usability, aesthetics, etc. are also considered within the framework of sustainable construction. The implementation of these activities should not affect the realisation of confirmed goals and directions in policies on energy renovation of building in Slovenia.

A total of 70 % of total floor surface areas in residential buildings and 60 % of total floor surface areas in non-residential buildings were built before 1985 and these are assessed as key potential for energy renovation. The fact that Slovenia is situated on an earthquake risk area must also be considered. A significant amount of buildings that are a potential for energy renovation were built with lower anti-earthquake resistance level than prescribed today. By taking into account the goals related to circular economy, the objectives for resource efficiency and waste reduction, giving priority to new constructions, these buildings are key potential for comprehensive renovation. In these cases, aside from energy renovation, emphasis must be also given to other aspects of comprehensive sustainable renovation. This would significantly improve the situation of the building stock and retain the value of real estate which will reduce the pressure to build new areas which in turn constitutes compliance with the State environmental goals.

Defining and leasing with other EU Member States who are also on earthquake risk areas and face similar problems in energy renovation (for example Italy, Greece, Hungary, Portugal, Turkey) is key within this measure. It is necessary to define contents and activities that will stimulate and direct comprehensive sustainable renovation in relation to energy renovation. It is necessary to cooperate in checking possibilities for resolving problems within the EU and to develop various support environments at home and abroad.

Defining all stakeholders of energy renovation and therewith related entities is key for this measures in order to examine the setting-up of the system for stimulating public investors towards comprehensive sustainable consideration of existing building stock which means providing features such as safety, health and quality of technical realisation (firmness), usability and aesthetics (source: Architectural Policy of Slovenia: Architecture for the Public, adopted by the Government of the Republic of Slovenia on 31 August 2017 and the OECD's Report on the implementation of the recommendation of the council concerning guidelines on earthquake safety in schools /C(2005)24/, 7 January 2015).

One of more important elements of sustainable renovation that must be addressed within this measure and which must be given special attention are areas with increased radon concentration (source: Programme on systematic inspection of working and living environments and public awareness on measures for reducing exposure due to natural occurring radiation sources) which can have a very important influence on suitability of energy renovation.

Table 2: Summary of LSSERB directions for renovation of public sector buildings

Instrument/measure	Reference Document	Direction
8 Green public procurement	AP EF 2020, AP ZEB	The existing measure must be upgraded in the area of investment building maintenance by setting up criteria for public procurement that include efficient use of energy and the use of renewable energy sources.
9 Financial incentives for energy efficient renovation and sustainable construction of buildings in the public sector (financing with emphasis on central government buildings, providing quality projects, stimulating the optimisation the operation of energy systems, demonstration projects)	AP EF 2020, AP ZEB	Existing measures must be upgraded. The priority task is creating financial instruments which efficiently eliminate barriers on the energy performance contracting market and stimulate the financing of comprehensive energy renovation of public buildings.
	OP GHG 2020	The implementation of the demonstration project on energy renovation of a public building with energy performance contracting within the scope of which the use of one of the financial instruments will be assessed.
	OP ECP 2014-2020	
10 Introducing a system for energy management in the public sector	AP EF 2020, AP ZEB	Continuing the implementation of the measure is planned. In accordance with a regulation, a system for energy management must be set up by those responsible by end of 2017. Those responsible must enter their energy bookkeeping information in a computerised database at least one per year.
11 Project office for energy renovation of public buildings	AP EF 2020, AP ZEB	The Ministry of Infrastructure must provide staff and technical conditions for carrying out all development tasks of the office as these are laid down in the LSSERB and have not yet been implemented. A registration for obtaining ELENA technical assistance from the EIB or EBRD is being prepared for stepping-up the preparation of

Re 8 Green public procurement

Regulations on green public procurement changed recently and new regulations were developed that take into account advancement and practices in Slovenia and follow examples of other EU Member States.

The revised Decree on green public procurement (Official Gazette of the RS No 51/17; hereinafter: Green Public Procurement Decree), which entered into effect on 1 January 2018, is created in the manner that green public procurement is always mandatory but the Decree no longer sets out mandatory environmental requirements which removed restrictions on the development of environmentally less burdensome products, services and construction and it allows for necessary diversity of public procurement subjects and methods of conducting public procurement.

The Green Public Procurement Decree specifies which subjects must be procured by green public procurement (until now 12, now 20), which environmental aspects must be considered by contracting authorities in awarding public procurement and which goals must be achieved by a contracting authority in every public procurement procedure for the subject that falls under the Green Public Procurement Decree.

For easier realisation of goals defined under the revised Decree, examples of environmental requirements and criteria were prepared to help contracting authorities in realising the prescribed goals of the Decree; these are published on the internet. In their design, these cases of environmental requirements are similar to annexes to the Decree on green public procurement (Official Gazette of the RS No 102/11, 18/12, 24/12, 64/12, 2/13, 89/14 in 91/15 – ZJN-3 and 51/17) but there is no longer a distinction between basic and additional requirements. The content of environmental requirement examples is updated and supplemented with examples on environmental requirements for the new group of public procurement subjects.

In the field of public procurement of energy renovation of buildings (administrative and business), the criteria for selecting economically most favourable offer based on the calculation of costs during a live cycle should be determined by evaluating offers based on lowest costs during the life cycle and on the best relationship between the price and the environmental effect. The criteria should include energy savings, use of renewable sources and reduction of CO₂ emissions. In terms of reduction of CO₂ emissions, this means stimulating the use of products from wood since their production requires significantly less energy for producing construction products than for other materials which means significantly less emissions into environment and therefore a lower carbon footprint. Products from wood store CO₂ during their life cycle of use and are carbon neutral.

Re 9 Financial incentives for energy efficient renovation and sustainable construction of public sector buildings

Financial incentives for financing investments into comprehensive energy renovation of public sector buildings are planned within resources of the European Union, the Republic of Slovenia and the EIB. It is planned that part of investments are financed by public resources. A certain part of financial resources for energy renovation of public sector buildings is given by the ECO Fund as well.

In the OP ECP 2014-2020, as part of priority investments into sustainable energy, grants in the value of 115 million EUR are earmarked and 50 million EUR is earmarked for financial instruments, in total 165 million EUR. ECO Fund launched grants of 2.5 million EUR in 2014 for financing investments into energy renovation of municipal buildings. The grants were provided by the Climate Fund. ECO Fund continued the financing of energy renovation of buildings owned by the Ministry of Defence in 2017. Since 2015, a possible source of financing are also resources of the European Fund for Strategic Investments. The entry point to these assets is the SID Bank.

To increase the effect of public resources, an accelerated start-up of the energy performance contracting mechanism is planned which should draw private capital into renovation of public sector buildings. The LSSERB anticipated an improvement to financial leverage. On average, 60 % of investments into energy renovation of public buildings should be financed from public resources. Current tenders show that the private sector is showing a moderate interest to participate in such projects (currently, the interest of the private sector to participate in comprehensive energy renovation of public building projects is somewhat lower than planned by the LSSERB but it is growing and slowly following the objective set).

In the OP ECP 2014-2020, as part of priority investments into sustainable energy, grants in the value of 50 million EUR is earmarked for financial instruments that have not yet been created. The priority task is creating financial instruments which efficiently eliminate barriers on the energy performance contracting market and on financing for carrying out projects on comprehensive energy renovation of public buildings and which will step-up the development of the energy performance contracting market.

Re 9.1 Providing greater extent of public building renovation through to the energy performance contracting model

By increasing the effect of public resources, the LSSERB planned for an accelerated start-up of the energy performance contracting mechanism which should draw private capital into renovation of public sector buildings. The advantages, weaknesses and practical aspects of financing energy renovation of buildings through the energy performance contracting are being checked on four demonstration project (the fifth demonstration project is still being prepared).

The project office published four calls for submitting applications in 2016 and 2017, namely 'Invitation to submit offers of proposal for operations on energy renovation of buildings owned and used by the central public sector' and 'Invitation to submit offers of proposal for operations on energy renovation of buildings owned and used by the broader public sector'.

Two public calls for co-financing of energy renovation of buildings owned and used by municipalities were published in 2016 and 2017.

Offers received show that partners in public-private partnership ESCO projects were successfully selected in all cases. For some projects, private partnership interest was not demonstrated in the preliminary procedure, most likely due to extensive amount of calls by promoters at the same time.

Currently registered projects show that more than 40 % of projects on comprehensive energy renovation of buildings (in terms of projects value) will be implemented by the private-public partnership model. The Ministry of Infrastructure is expecting that the total percent of renovation through PPP will increase to more than 50 % by 2018.

In order to renovate more public buildings through the energy performance contracting model, active support for the development of this market is needed through targeted action:

- continuing the merging of projects of energy renovation of public buildings to reach an investment value that would attract more companies involved in energy performance contracting, and to boost the effects of energy renovation of buildings;*
- creating financial instruments which efficiently eliminate obstacles on the energy performance contracting market, facilitate the financing of the implementation of projects of comprehensive energy renovation of public buildings and step up the development of the energy performance contracting market.*

Re 9.2 Carrying out demonstration projects

The LSSERB and the OP ECP set out the foundations for carrying out five demonstration projects on energy renovation of various characteristics of public sector buildings. Financial resource for the realisation are planned in the OP ECP. The project office is responsible for selecting demonstration projects.

The purpose of demonstration projects is to introduce new knowledge and procedures on carrying out energy renovation and to develop energy performance contracting. A

demonstration project must comply with all necessary conditions for approaching comprehensive energy renovation (regulated ownership, management, the building must be appropriate for energy renovation and it must realise specific goals of the OP). The proposals for demonstration projects are assessed according to the readiness and feasibility of a project, and the suitability for private-public partnership through the energy performance contracting model. The selection priority is given to renovation into almost zero-energy buildings and to projects that include a greater number or section of buildings or a number of administrators in one building in State ownership and to a cultural heritage building.

On these basis, the invitation for submitting a proposal for a demonstration project the support was given for carrying out demonstration projects on comprehensive energy renovation of three public sector buildings with various content characteristic.

The selection and confirmation procedure for the demonstration projects took place in 2016. According to above presumptions and criteria, proposals for demonstration projects were evaluated on the basis of a set of assessment criteria.⁹

From proposals for the demonstration projects received, three were selected as suitable at the start of 2016, namely:

1. **Demonstration/pilot project for CŠOD Dom Bohinj** - the project was selected because it was appropriate for renovation according to the prescribed criteria and it contained elements of **almost zero-energy building**. The objective for carrying out energy renovation of the building Dom Bohinj was improving the situation on the use of energy, reducing the use of energy and reducing current operating costs for operating the building.
Solutions were sought out in the implementation of demonstration projects that would allow for carrying out comprehensive renovation of buildings through the participation of a public-private partnership.
2. **Demonstration/pilot project: Comprehensive energy renovation of buildings with many administrators (Šmarje pri Jelšah) according to the PPP principle**. In accordance with the inter-ministerial agreement between the Ministry of Public Administration and the Ministry of the Interior, the applicant for this operation is the Ministry of Justice, performing the tasks of a beneficiary. The project was selected because it was assessed as suitable for renovation according to the prescribed criteria and it contained elements of a **building with many administrations**.
The objective to obtain experience on carrying out comprehensive energy renovation of public sector buildings by including public-procurement partnerships in buildings with many administrations was pursued during the project realisation.
3. **Demonstration/pilot project: Comprehensive energy renovation of three courts (Celje, Maribor, Slovenj Gradec) according the PPP principle**.¹⁰ The renovation project of three courts was selected because it was assessed as suitable for renovation according to the prescribed criteria and contained the

⁹ Instructions for work by intermediary body and beneficiaries of energy renovations within the measure of public sector energy renovation, p. 18;
http://www.energetika-portal.si/fileadmin/dokumenti/podrocja/energetika/javne_stavbe/ndpoepeps_september_2016.pdf.

¹⁰ Prešernova ulica 22, 3000 Celje, building numbers 1672 and 2997; Slomškova 19, Slomškova 21, Slomškova 23, 9000 Murska Sobota, building numbers 3935, 3930 and 3929; Kidričeva 1, 2380 Slovenj Gradec, building number 458' (Three Courts project).

elements of **many related buildings with a common administrator**. The objective to gain experience on carrying out comprehensive energy renovation of public sector buildings by including public-procurement partnerships within a selection of many related buildings with a common administrator was pursued in the project implementation.

The fourth demonstration project selected was a section of buildings with an element of cultural heritage.

The element of the fifth demonstration project is not yet defined. It would be reasonable to support a demonstration project for energy renovations of a public sector building where the implementation of project according to the energy performance contracting model would be checked as well as the use of one of the financial instruments be tested.

Re 10 Introducing a system for energy management in the public sector

Decree on energy management in the public sector (Official Gazette of the RS No 52/16) was adopted in 2016. The energy management system is mandatory for buildings with the useful floor area greater than 250 m², used by the State, self-governing local communities or public authorities whose funder is the Republic of Slovenia or a local community. The Decree also lays down minimum requirements on energy efficiency of buildings which are acquired by purchase or lease for use by State administration bodies.

In 2017, the Ministry of Infrastructure set up a computerised database system for public sector buildings for reporting by those obligated to report. These entities can enter information about buildings, use and measures. This is the starting point and it establishes comprehensive energy management in the public sector which will be upgraded according to different processes, stakeholders and needs.

Setting-up a system for implementing the Decree on energy management in the public sector, in particular, a comprehensive system on managing energy in the public sector, is carried by providing a continuous process on monitoring energy use and implementation of measures in the public sectors in accordance with the requirements under the EZ-1 as well as appropriate organisation, including the appointment of energy managers, training and the set-up of permanent improvement processes. To establish energy management in the public sector it is necessary to train stakeholders and provide them with supporting instructions and expert assistance for adequate reporting on energy use, on implementing measures on increasing energy efficiency and therewith related costs by those obligated to report.

Re 11 Project office for energy renovation of public buildings

For efficient realisation of investment volume into comprehensive energy renovation of public sector buildings, the LSSERB planned for the establishment of a project office as

a priority task¹¹. The project office was established and it operates within the Ministry of Infrastructure. In accordance with the LSSERB, legal and technical basis for establishing energy renovation of central and broader public sector buildings were prepared and published in February 2016. The project office issued written instructions for work in intermediary and implementing bodies which include guidelines and instructions for preparing an operation and the documentation, as well as instructions for carrying out all the required operation procedures¹². Many lectures for ministries, institutes, municipalities and providers of energy renovation were held.

All the documents which would offer all the required information to entities that are or will be participating in energy renovation of public buildings were prepared. Aside from this, a support environment was set up for offering help and expert support for intermediary and implementation bodies, public sector entities, energy service providers, applicants, public-private partnership providers and beneficiaries of operations, during and throughout the implementation of operations. Many presentations, training sessions, workshops and seminars for interested applicants and beneficiaries were held in 2016.

An energy performance contracting model was established and an opportunity given to carry out energy renovation of buildings in accordance with restrictions and goals on reducing public sector borrowing.

The project of energy renovation of buildings is based on a model which requires that suitable buildings are identified and that project files (and project applications for co-financing from the European cohesion policy resources are well prepared (i.e. that they take into account the age of the buildings, the measures to be applied and energy savings to be made), in order to ensure successful energy renovation.

The condition for successful implementation of projects on comprehensive energy renovation of public sector building is project documentation that is prepared professionally and in accordance with valid legal basis. During the evaluation of all proposals for projects received so far, the project office identified **deficiently prepared project and application documentation as being the main problem**. It was found that certain projects and applications were deficiently prepared¹³ where most of the project documentation was confirmed by the applicant/contracting authority was suitable. It was shown that the contracting authority's knowledge on energy renovation of buildings was deficient.

An additional barrier emphasised was **lack of knowledge and experience in implementing public-private partnership**. Contracting authorities avoid carrying out energy renovation through public-private partnership for lack of knowledge and due to longer public-private partnership selection procedure and prefer to carry out the energy renovation project through public procurement without awareness of its effect on the

¹¹ [Http://www.energetika-portal.si/podrocja/energetika/energetska-prenova-javnih-stavb/projektna-pisarna/](http://www.energetika-portal.si/podrocja/energetika/energetska-prenova-javnih-stavb/projektna-pisarna/).

¹² Instructions for work with intermediate bodies and beneficiaries for energy renovation of public sector building measures; Detailed directions to public partners for the energy renovation of public sector building measure; Manual on eligible costs for energy renovation of public sector buildings. Instructions and technical directions for energy renovations of public buildings and Guidelines for energy renovations of cultural heritage buildings. Record of buildings owned and used by the central public sector was set up on the cut-off date 1 January 2016.

¹³ The most frequent error: non-compliance of information on anticipated measures in project and application documentation; wrong calculation of eligible costs and costs of a financial gap; wrong modelling of existing building situation (incorrect calculation of base energy use, savings and project economy).

budget situation.

Activities in the field of training of applicants of comprehensive energy renovation of public sector building applicants must be strengthened. Training of staff responsible for energy renovation would be reasonable at all levels of preparing and carrying out a project, such as legislative area, project management, preparing tender documentation, knowing technical requirements, public-private partnership, implementing supervision over those preparing project documentation, etc.

The development tasks of the project office for which additional staff and financial conditions must be provided:

- cooperation in setting-up a quality system for project energy rehabilitation of public buildings;
- preparation of quality analysis of already implemented projects;
- preparation of projects on economy analysis (of those implemented and those that applied in public calls);
- set-up of a system for project monitoring to improve preparations and project selection, and for granting resources and ensuring benchmarking;
- speeding-up project preparations for a comprehensive energy renovation of central public sector building; provision of systemic and project financial resources for preparing State projects (e.g. ELANA technical assistance projects); obtain technical assistance to allow for efficient and quality preparation of projects on energy renovation of buildings owned by the State;
- preparation of additional standard documentation and upgrade of protocols for all implementation phases of energy performance contracting which will provide additional project quality in the technical, organisational and legal field.

3.2 Directions and proposal for upgrading existing measures for renovation of residential sector buildings

Table 3: Summary of the LSSERB directions for residential buildings

Instrument/measure	Reference Document	Direction
12 Financial incentives for energy efficient renovation and sustainable construction of residential buildings (subsidies and grants, demonstration projects)	AP EF 2020, AP ZEB	Demonstration projects on comprehensive renovation of multi-apartment buildings according to the almost zero-energy renovation criteria, as planned in the OP ECP, with emphasis on the use of new technologies and by employing energy performance contracting, are placed on the list of priority tasks of the Ministry of Infrastructure. The basis is the revised interest of municipalities to implement demonstration projects on energy renovation of multi-apartment buildings (in accordance with sustainable town planning strategies of city municipalities).
	OP GHG 2020	
	OP ECP 2014-2020	
13 Assistance scheme for energy renovation for vulnerable population groups	AP EF 2020, AP ZEB	It is proposed to upgrade the financing model and additional measures for energy renovation of buildings for socially weak residents. It is reasonable to assess the implementation of an additional model for differentiation of owners according to their household social and financial situation, and to assess the reasonableness of introducing an appropriate partial adjustment on the amount of co-financing. This measure is to remedy barriers of difficulties with renovation financing by those households that live on the poverty threshold but do not have the status as
	OP GHG 2020	
	OP ECP 2014-2020	
	OP GHG 2020	
14 Advisory energy network for residents	AP EF 2020, AP ZEB	It is reasonable to upgrade the operation of the ENSVET. <ul style="list-style-type: none"> – The ENSVET is to expand its activities towards better information accessibility of residents (one of the activities is to establish mobile information points to operate in larger shopping centres). – Within existing offices, the ENSVET is to expand its activities and upgrade its consultation services by offering new services (for example field inspection, communication with supervisors and project designers, etc.).
	OP GHG 2020	
15 Financing instruments for renovation of buildings of many owners	AP EF 2020	<p>Instruments: Business banks currently do not utilize the potential of projects on energy renovation of residential building because most are not aware of the opportunities of such projects. Considering the foreign market, a gap in the field of new products and financing solutions is noticeable. It is reasonable to include business banks in the process of creating together the financial products in accordance with the identified market needs. It is also necessary to provide adequate awareness and training.</p> <p>Current legal basis for decision-making process in multi-apartment buildings: The Action Plan for the Resolution on national housing programme plans measures for providing legal basis for decision-making process in multi-apartment buildings. The ministries responsible for justice, finance and</p>
	OP GHG 2020	

Instrument/measure	Reference Document	Direction
		for carrying out projects on renovation of multi-apartment building.
16 Allocation of incentives between owners and renters in multi-apartment buildings	AP EF 2020, AP ZEB	The problem of having an appropriate approach to determine non-profit rent is also stated in the Resolution on national apartment programme (2015) which plans for changing the rent model in the future.
17 Setting-up a guarantee scheme	AP EF 2020, AP ZEB	The proposal is to establish a scheme (Chapter 3.1.1).

Re 12 Financial incentives for energy efficient renovation and sustainable construction of residential buildings

Demonstration projects for comprehensive energy renovation of multi-apartment buildings according to the criteria of almost zero-energy renovation and through the use of energy performance contracting (singles homes, apartment fund, etc.)

The implementation of demonstration projects on comprehensive renovation of multi-apartment buildings according energy performance contracting model and the criteria for almost zero-energy renovation criteria, with emphasis on the use of new technologies, are planned in the LSSERB and the OP ECP. The projects were not realised at the start of carrying out the OP ECP. The basic question which implementing bodies are to take over the responsibilities and tasks for carrying out demonstration projects was not resolved.

According to the information available, demonstration projects were not carried out between 2015 and the end of 2016. In 2017, the Housing Fund of the Republic of Slovenia and GI ZRMK d.o.o. were successful in obtaining the European project 'Solution sets for the Cost reduction of new Nearly Zero-Energy Buildings – CoNZEB, within the call H2020- EE-2016–2017 (Energy Efficiency Call 2016–2017), the objective of which was to check and evaluate various technological solutions that allow for significant reduction of costs in new almost zero-energy apartment buildings. In this EU project, the Housing Fund will cooperate with the project Novo Brdo - 500 public rental apartments in Brdo, Ljubljana.

The Resolution on national housing programme 2015-2025 (Official Gazette of the RS No 92/15) emphasises the importance of energy performance contracting for energy renovation of buildings. Energy performance contracting models are in practice mostly directed to non-residential buildings as a model for financing comprehensive energy renovation of buildings. Because comprehensive renovation of multi-apartment buildings most often include other elements of functional renovation in addition to energy renovation, it is usually not possible to finance these mostly through the energy performance contracting model; instead, other sources of financing are also needed. For energy performance contracting, participation in individual elements of renovation that are connected to relatively large savings (e.g. renovation of heating system by replacing the energy product) are usually more interesting.

In multi-apartment buildings, with dispersed ownership, the use of energy performance contracting is inhibited by existing housing laws, containing demanding decision-making process in multi-apartment buildings and with limited possibility for supervision over the use of energy source by a contractor after implementing measures (change in user behaviour).

At the same time, comprehensive energy renovation according to the energy performance contracting model by housing funds are inhibited by existing renting policy which, in a case of a non-profit rent (this is the majority of the apartment stock of housing funds), does not allow for raising rent after energy renovation and therefore hinders more intensive energy renovation of building stock owned by housing funds. For housing funds, a payment solution from energy saved is not appropriate because energy costs are paid by tenants according to actual costs.

Hindering factors for greater growth of energy performance contracting for renovation of multi-apartment buildings (renting policy, decision-making problems in multi-apartment buildings) are identified already in the LSSERB and in the Resolution for national housing programme (2015) but no measures for remedying or alleviating them have been implemented until today.

Demonstration projects on comprehensive renovations of multi-apartment buildings according to the almost zero-energy renovation criteria, as planned in the OP ECP, with emphasis on the use of new technologies and by employing energy performance contracting, are placed on the list of priority tasks of the Ministry of Infrastructure. It is necessary to revise the interest of municipalities for carrying out demonstration projects on energy renovations of multi-apartment buildings (in accordance with sustainable town planning strategies of city municipalities).

Directing subsidies for comprehensive renovation of multi-apartment buildings and for renovation of neighbourhoods

A significant part of subsidies for energy renovation of multi-apartment buildings in Slovenia is linked to incentives of the ECO fund. For stimulating comprehensive energy renovation of multi-apartment buildings, ECO Fund changed its policy on awarding grants in the period discussed by implementing greater share of grants where many measures on increasing energy efficiency were being implemented or for comprehensive energy renovation which remedied weakness identified in the LSSERB.

To support the comprehensive renovation of neighbourhoods, the mechanism of comprehensive territorial investments into cities (ITI) are also being implemented within the framework of which Slovenian cities will be eligible under the new financial perspective to grants up to 117 million EUR from European funds that are earmarked for carrying out comprehensive development projects, including renovation of residential neighbourhoods. On the basis of adopted sustainable town planning strategies (in 2016, all 11 city municipalities adopted sustainable urban strategies by which they satisfied the main condition for accessing European cohesion funds), cities will select projects intended for resolving problems in a particular urban area (e.g. residential neighbourhood).

As part of the ITI mechanism, comprehensive energy renovation of multi-apartment buildings in 75 % or higher public sector ownership (apartments owned by city municipalities, public housing funds in 100 % municipal ownership and non-profit housing organisations in 100 % municipal ownership) there are 11.8 million EUR available.¹⁴ The prospects for drawing resources are relatively small due the selected

¹⁴ Association of city municipalities of Slovenia has published a public invitation (11.76 million EUR) for obtaining grant resources for co-financing projects on comprehensive energy renovations of multi-apartment

model of privatising apartments employed in the past by public housing funds and there are very few older real estate that meet the criteria of 75 % or more ownership (for newer construction, where the condition of ownership is more frequently permitted, it is possible to realise lower savings).

The prospects of drawing grants from the existing ITI call are very poor and for this reason it would be reasonable for the Ministry of Infrastructure to revise the interest of city municipalities for projects on carrying out energy renovations of multi-apartment buildings and neighbourhoods.

It is necessary to revise the interest of municipalities to carry out demonstration projects for energy renovations of neighbourhoods (that would include comprehensive renovations of multi-apartment buildings). Renovation of neighbourhoods includes all challenges identified in the LSSERB at the multi-apartment building level (difficulty in reaching an agreement, the required threshold of consent, lack of trust, poor awareness, problem of poor owners, obtaining financial sources, etc.) as well as an additional aspect of connecting multi-apartment buildings between each other and the participation of a local community in the agreement and implementation process. For carrying out pilot projects on energy renovations of multi-apartment buildings, a technical team is to be set up that would be responsible for preparing and carrying out projects, quality coordination and cooperation between local communities and other participants.

Re 13 Vulnerable population groups

Vulnerable population groups are faced with energy poverty on one hand and the inability to participate in energy renovation of multi-apartment buildings on the other hand that would reduce their spending on energy costs. Upgrading assistance for vulnerable population groups is planned in the adopted strategic documents and special emphasis is given in the Resolution on national housing programme (2015) which defines comprehensive measures for energy renovation in households faced by energy poverty problem. Measures will be intended for investments as well as to providing advice and carry out measures to change habits. Consultation and other assistance provided will be for dealing with barriers faced by this target group (access to information, awareness for implementing measures, etc.), based on experience gained in providing assistance to such target group in other areas. EF measures for vulnerable population group are also addressed in the AP EF 2014-2020.

In the Operative Programme for implementing European Cohesion Policy in the period 2014–2020, a measure in the total value of 5 million EUR of subsidising measures on efficient use of energy for approximately 500 households with lower income is included for solving energy poverty. 100 % grant for financing incentives from the European cohesion fund will be awarded for carrying out investment measures on efficient use of energy of households with low income in apartments in a single and two-apartment buildings, as well as for providing consultation, implementation assistance, informing target groups, energy review, preparation of documentation and supervision. Priority will be given to households faced with inability to pay energy bills, living in cold and moist conditions, occurrence of medical problems due to poor conditions, illnesses,

households with low energy efficiency. Borzen d.o.o. was appointed by the Ministry of Infrastructure within its tasks of performing public service in the field of stimulating efficient use of energy and renewable energy sources, as the beneficiary for carrying out the programme of measures for efficient use of energy in households in order to abolishing energy poverty.

In calls for granting subsidies for energy renovation of multi-apartment buildings, ECO Fund also allows for granting financial incentives to socially weak residents up to 100 % of eligible investment costs, in terms of the corresponding share of investment financing. According to the definition in ECO Fund calls, a socially weak resident is any owner, co-owner or a common hold owner of an apartment in a multi-apartment building who, at the time of submitting an application for the public call is eligible to monetary social assistance which is not special monetary social assistance.

Within the framework of multi-apartment renovations, it is necessary to upgrade the financing model for socially weak residents. It is reasonable to assess the implementation of an additional model to differentiate owners according to their household social and financial situation, and to assess the reasonableness of introducing an appropriate partial adjustment on the amount of co-financing. This measure would remedy barriers for difficulties with renovation financing of those households that live on the poverty threshold but do not have the status as socially weak residents. It is necessary to also adopt information channels for vulnerable groups.

The OP ECP 2014–2020 plans for the implementation of a measure in the total value of 5 million EUR for subsidising EF measures in approximately 500 households with low income in order to solving energy poverty.

Re 14 Energy consultation network for residents

A programme for free energy consultation (ENSVET network) has been in place for many years in Slovenia which provides residents with individual, free, independent energy consultation, informative education and awareness activities on promoting measures on efficient use of energy and on renewable energy sources in their local environment. Offices are dispersed throughout Slovenia and operate as qualified, independent energy consultants who assist in selecting, planning and realising investment measures on efficient use of energy and on the use of renewable sources in apartment buildings.

The Resolution on the national housing programme confirms the importance of the ENSVET network for residents' awareness and plans for housing organisations (the Engineering Chamber of Slovenia, the Chamber of Architecture and Spatial Planning of Slovenia, the Chamber of Commerce and Industry of Slovenia, the Chamber of Craft of Slovenia) to cooperate more closely with the ENSVET network in providing comprehensive consultation to apartment owners. These organisations, together with expert organisations and the Housing Fund of the Republic of Slovenia, bring together trustworthy and independent selection of experts who give professionally sound and impartial information and guidance. Directing customers to the ENSVET network, offering quality education for energy consultants within the ENSVET network and accessibility to quality and up-to-date information in their field of works, allows these

organisations, together with the ENSVET network, to give residents a rounded comprehensive information.

It is reasonable to upgrade and expand the ENSVET activities. It is recommended:

To strengthen the promotion of the ENSVET net to the public for its greater recognition.

The ENSVET is to expand its activities towards greater accessibility of information by residents (creating an interactive internet information portal for residents).

The ENSVET should, within its existing officers, continue with activity of providing basic information to residents on energy renovation of buildings. The existing free access to energy consultation contributes to easier access of households to information and thereby to greater energy awareness of residents. These services remain free.

The ENSVET is to expand its activities within the existing offices and upgrade its consultation by offering new services (for example field inspection, communication with supervisors and project designers, etc.). The service would be intended for more demanding residents who wish quality services and carry out energy renovation of their buildings. This is particularly true in cases of multi-apartment building renovation and therefore, aside from expanding activities in these area, it is recommended to provide additional training of advisers who will know how to professionally respond to requirements of common hold owners. The activities of the ENSVET are to expand to organising training for administrators of multi-apartment buildings.

It would be reasonable to continue with regular training of energy advisers.

Re 15 Financing instruments for renovation of buildings with many owners

A **reserve fund** is most often used to finance renovation in multi-apartment buildings from the funds of multi-apartment building owners. This is an instrument prescribed by law and is mandatory for buildings with more than eight individual units or more than two owners. The objective of its use and the method of determining the minimum amount of contribution are also prescribed. A reserve fund is an effective instrument of collecting funds in case of dispersed ownership which works relatively well and usually resources in a reserve fund provide a significant part of resources required for energy renovation of a building. Risks for an efficient operation of reserve funds include cases of their abuse by administrators which requires the laws of otherwise well-functioning instrument to be amended.

The resources in a reserve fund of owners are most often joined with grants from the ECO Fund for projects on energy renovation of buildings.

Due to high investment value for energy renovation of multi-apartment buildings, external resources of financing are often required in addition to using these resources and grants in order to carry out the renovation. In the past two years, loans were most frequently used:

- **Loans by local communities** - for example a call of the Public Housing Fund of Ljubljana Municipality which gives loans for energy renovation of run-down single family and multi-apartment buildings. Loans are granted to individual common hold owners.
- **Bank loans** (through the SID Bank scheme) - SIB Bank created financing for energy efficiency in residential areas in 2015 which is implemented by giving loans to business banks for individuals, to building administrators and owners of common hold communities as a supplement to existing financial incentives of the ECO Fund. A loan can reach up to 75 % of project financing costs.

Almost all loans are loans which an individual common hold owners can take out in accordance with their credit rating or are loans charged against the reserve fund. Taking out loans by individual common hold owners can be difficult because of credit inability, credit incapacity or age of individual owners while for loans charged against a reserve fund a 100 % consent is necessary as laid down by the Rules on management of multiple dwellings.

For loans for financing energy efficient renovation, the European Mortgage Federation, the European Covered Bond Council, decided on a special incentive for stimulating energy renovation of buildings in 2016 which was supposed to standardise 'energy efficiency mortgage loan' which would have a favourable interest rate due to its properties (implementing measures reduce operating costs of investors and therefore increase their repayment ability). The final goal of the incentive is to develop a financial mechanism for financing by banks that is based on a standardised product and market benchmark.

In energy renovation practice during the period discussed, other forms of external financing models that try to circumvent obstacles in obtaining loans appeared:

- **Financing by providers**
For financing by a provider of an investment (usually up to two years) it is not necessary for multi-apartment building owners to decide on the financing but only on adopting a plan for maintaining the identified type of investment and a decision on financing from the reserve fund's resources. For confirming an investment only a majority or three-quarter consent is required and not a 100 % consent. Providers offer loans to owners which are paid from a lump-sum contribution into the reserve fund. Increased contribution can be voted on by a majority, just like the measure that is financed (majority or 75 % consent). The weakness of this instrument is often limited and poor selection of credit-able providers.
- **Factoring**
This is an upgrade of the financing model by a provider by which a bank or a factor finances the implementation of investment works into energy efficient

renovation and purchases the claim from the provider. The provider obtains full payment for the investment even though the resources in the reserve fund are not sufficient for the whole repayment (Berlič, 2014). Instead of a loan being taken out by a provider of works for subsequent instalment repayment by common hold owners, this financing models allows for the claim to be sold to a bank (factor).

- **On-bill financing**

A special model for comprehensive energy renovation of multi-apartment buildings, as introduced by some companies, has appeared on the Slovenian market. The financial gap of an investment, or the difference between the amount of investment, the available resources in a reserve fund and the amount of grant obtained, is covered from energy savings and is paid off as an increased contribution into a reserve fund through bills issued up to 10 years (100% consent is not required). A company organising renovation finances the whole or part of the investment.

Business banks currently do not sufficiently utilize the potential of projects on energy renovations of residential building. Many banks are not aware of all the opportunities of such projects. Considering the foreign market, a gap in financial products offered and solutions for financing residents is noticeable. It is reasonable to include business banks in the process of creating financial products together, according to the identified market needs.

Business banks must be given support in recognising the field of energy renovations of buildings, as well as given appropriate education and support for creating products (e.g. presentation of most successful foreign practices and financial models).

Current legal basis for decision-making process in multi-apartment buildings for carrying out energy renovation of buildings

Significant financial resources are necessary to carry out measures for energy renovation of buildings. Usually collected resources in a reserve found and grants obtained are not sufficient for carrying out such measures in a multi-apartment building. Obtaining 100 % consent required for borrowing against a reserve fund that could serve as a security for a loan is practically not possible to obtain in multi-apartment buildings. There are exceptions which are usually limited to buildings with smaller number of common hold owners.

In the Resolution on national housing programme, the requirement for a consent of apartment owners for taking out a loan for carrying out energy renovation of multi-apartment buildings is recognised as one of the greatest hurdles in carrying out projects on energy renovation of multi-apartment buildings.

The Action Plan for the Resolution on national apartment programme plans measures for providing legal basis for decision-making process in multi-apartment buildings. The ministries responsible for justice, finance and housing will actively seek to find solutions for borrowing problem for carrying out projects on renovation of multi-apartment buildings which will not constitute a direct risks to owners of losing apartment ownership while offering each individual the most suitable method of financing works related to renovation.

Re 16 Allocation of incentives between owners and renters in multi-apartment buildings

In the field of market-level rent relationships, owners of rented apartments in multi-apartment buildings are stimulated to renovation through tax benefits on their income from rent and advantages enjoyed for energy renovation of buildings: increased investment value and potential greater occupancy, or future possible increase of rent due to lower energy costs associated with living in an apartment in an energy efficient multi-apartment building. An owner of a rented apartment does not report only 10 % lump-sum costs from rent received in his income return for rent but can also claim actual maintenance costs and resources of the reserve fund used for maintaining a multi-apartment building. In case of instalment repayment for renovation from a reserve fund, an owner of an apartment can claim actual costs for many years.

Distinctly unstimulating for carrying out comprehensive energy renovation are the existing laws on non-profit rents which do not take into account any energy renovation measures carrying in the method of evaluating non-profit apartments as a result of which it is not possible to increase rent for any measures carried out. The problem of the inappropriate approach on determining non-profit rent is also stated in the Resolution on national housing programme which plans for changing the rent model in the future.

Re 17 Setting-up a guarantee scheme

In the period discussed, a guarantee scheme for the residential sector has not been set up. Setting up a guarantee scheme for individuals would make it easier to obtain financial resources for energy renovation of multi-apartment buildings.

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