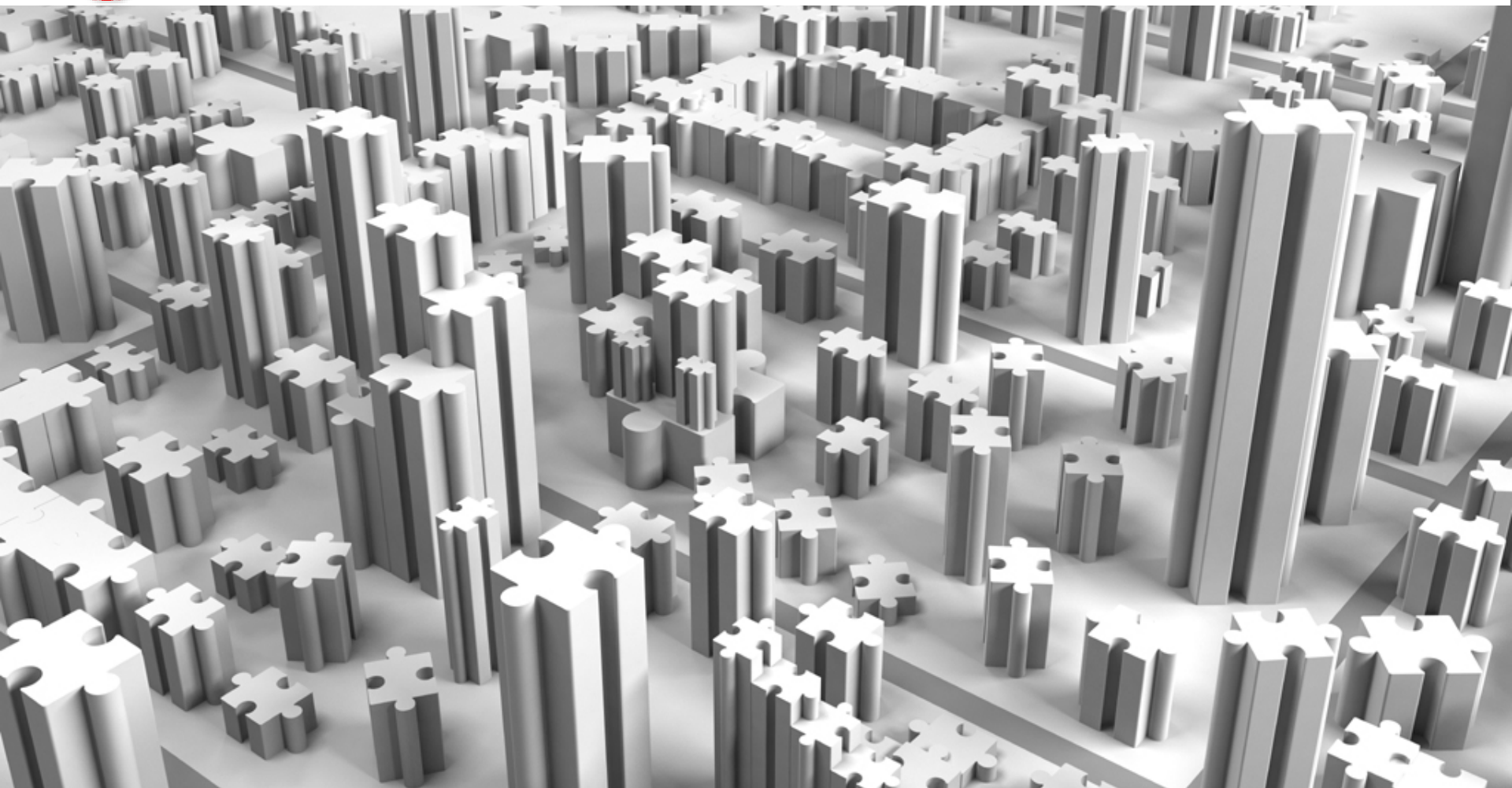




Republic of Croatia

MINISTRY OF CONSTRUCTION AND PHYSICAL PLANNING



Energy renovation of buildings in Croatia

Irena Križ Šelendić

Head of Sector for energy efficiency in buildings

Beograd, 6 June 2018



About us

Republic of Croatia Ministry of Construction and Physical Planning

- Performs administrative and other tasks related to construction, physical planning and housing
- Participates in the development and implementation of programmes from European Union funds and other forms of international assistance in these fields
- **Responsible for energy efficiency in the buildings sector**

Implementation of EU directives: EPBD

**Building
Act
OG153/13**

S u b o r d i n a t e a c t s

Ordinance on energy audits of buildings and energy certification

Ordinance on the control of energy certificates of buildings and of reports on energy audits of construction work

Ordinance on energy audits of construction works and energy certification of buildings

Ordinance on requirements and criteria for persons performing energy audits of construction works and energy certification of buildings

Ordinance on the requirements and manner of issuing certificates to Croatian citizens and legal persons

Technical regulation on energy economy and heat retention in buildings

Regulation on contracting and carrying out energy services in the public sector

The methodology of carrying out energy audits of construction works

Implementation of EU directives: EED

Energy Efficiency Act OG 127/14

Art. 33.

Ordinance on requirements and criteria for establishing a quality system for services and works for certification of installers of RES - **solar thermal systems**

Art. 33.

Ordinance on requirements and criteria for establishing a quality system for services and works for certification of installers of RES- **geothermal systems and heat pumps**

Art. 33.

Ordinance on requirements and criteria for establishing a quality system for services and works for certification of installers RES - **biomass-fueled boilers and heaters**

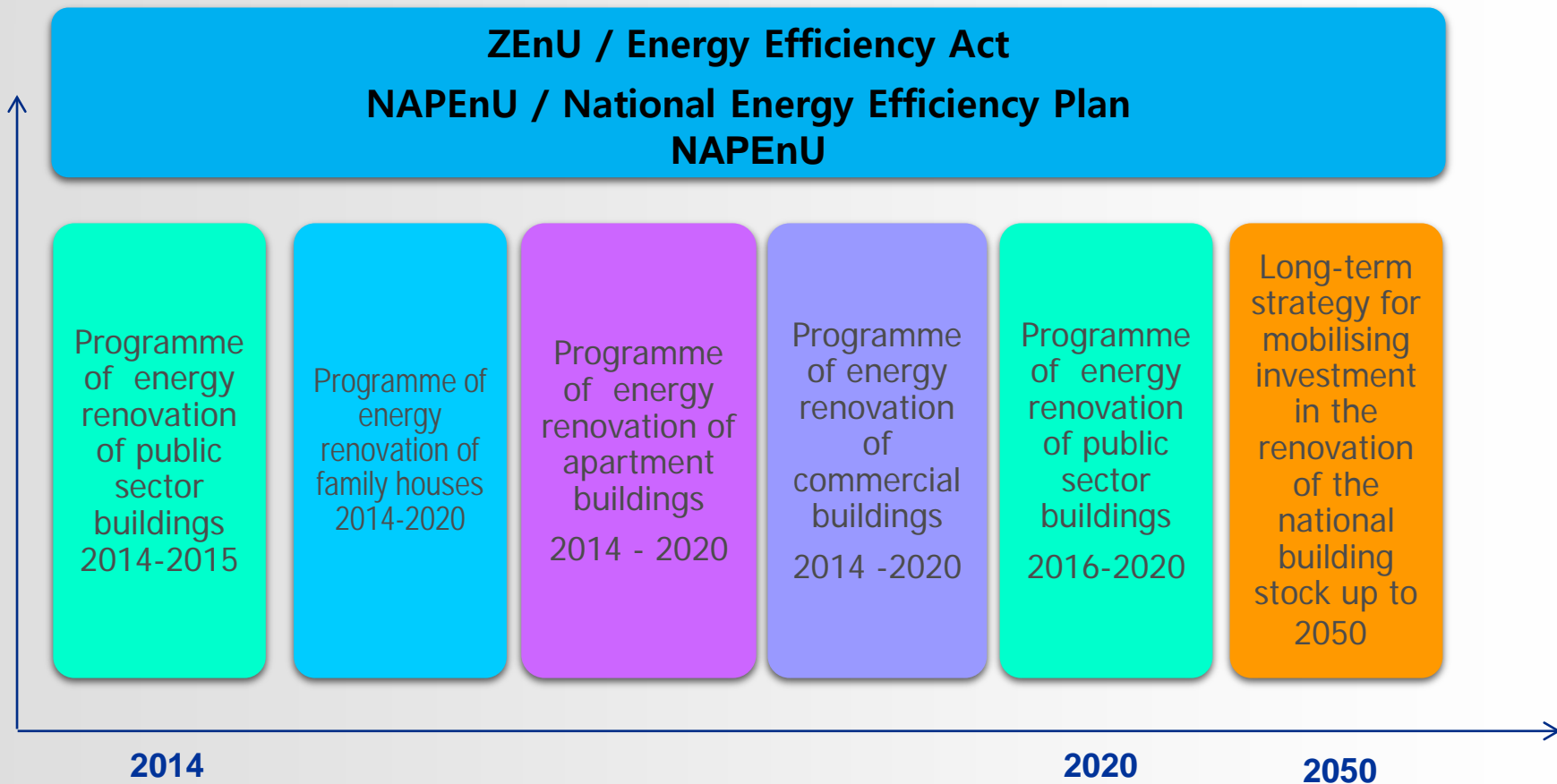
Art. 21.

Ordinance on the method of **energy consumption management**, energy consumption analysis and reporting method

Art. 27.

Regulation on the method for **contracting energy services** for the public sector, on obligations of energy service providers and customers, contract content and budgetary monitoring of energy services for public sector customers

National Programmes of energy renovation of buildings in the Republic of Croatia





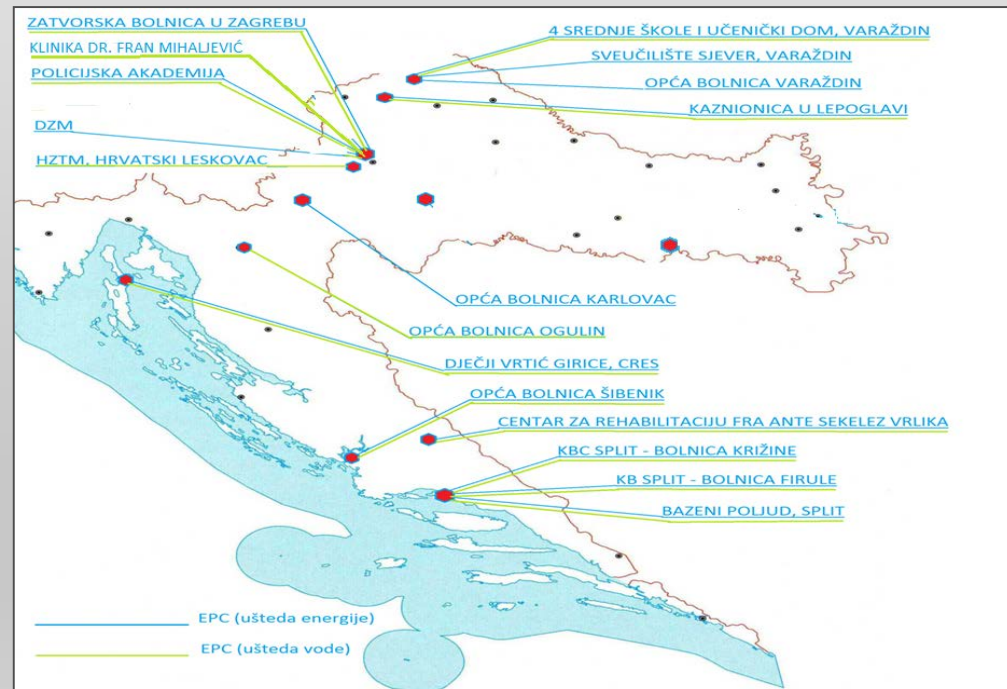
TARGETS

NEEAPs:

1. Energy renovation of existing multi-apartment buildings - 1% of the total surface area /year (500 000 m² / year)
2. Renovation of existing family houses - 2000 houses / year
3. Renovation of central government buildings- 3% of the fund / year
4. Renovation of public buildings 2014 -2015 – 200 000m²
5. Renovation of public buildings 2016-2020 –energy savings of 50 GWh /year
6. Renovation of commercial buildings – 3% of heated useful surfaces of commercial buildings / year (cca 480 000 m²/year)
7. nZEB – min 65 000 m² /year

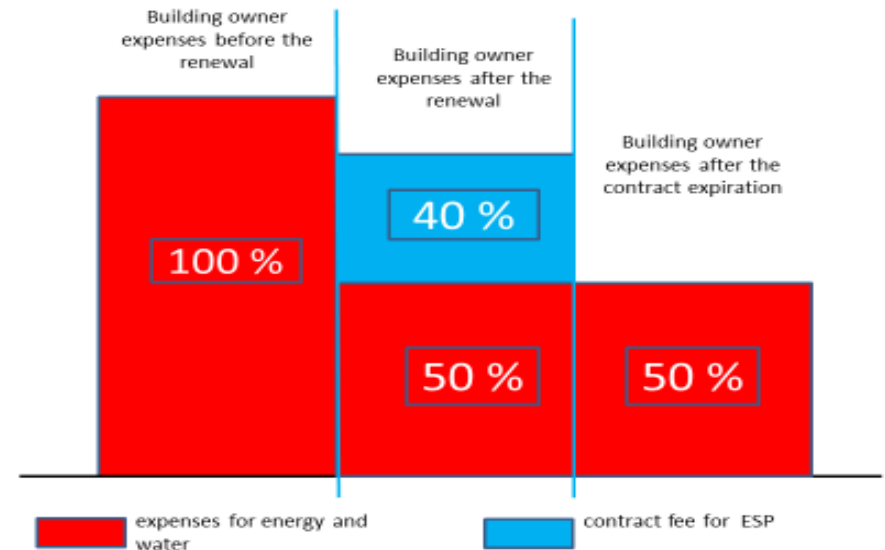
Programme of energy renovation of public sector buildings 2014-2015

- **Croatian Government Real Estate Agency** announced 57 public procurement procedures for the provision of energy services
- **Environmental Protection and Energy Efficiency Fund** - co-finance with grant (40% of eligible costs to the public sector)
- **69 buildings** covered by active contracts
- **Total surface area 257 000 m²**
- **Total contract value 604 mil kuna (82 M€)** (VAT excluded)
- By realisation of these contracts **annual savings shall amount to 70 GWh**



Basic settings and characteristics of the Programme

- Programme promotes **integrated renovation concept** that includes renovation of buildings envelope, upgrades to the heating /cooling system water heating system, ventilation, lighting water supply and use of RES
- Building construction **measures that address the building envelope are mandatory !**
- **ESCO invests and takes technical and economic risk** so public sector does not have any additional costs
- Payment of services is based on **verifiable savings**
- **The service fee shall not exceed the savings**
- Energy savings are **proven by the Design**
- **EPC lasts 14 years**



Results of the Programme of energy renovation of public sector buildings 2014-2015

Completed renovations :

- Clinical Hospital Centre Split - Križine
- Clinical Hospital Centre Split –Firule
- Building of Nursery school „Girice“, Cres
- General Hospital Karlovac
- State Institute for Metrology Zagreb
- Penitentiary Lepoglava
- University North, Varaždin

Σ 33 buildings
148 761 m²
Savings 43 %



Results of the Programme of energy renovation of public sector buildings 2014-2015

Renovations under way :

- General hospital Varaždin
- General hospital Šibenik
- Prison hospital in Zagreb
- Police academy, Zagreb
- Swimming complex Poljud



Σ 36 buildings
108 122 m²
Savings 55 %

Programme of energy renovation of public sector buildings 2016-2020



Programme objective:

- Integral renovation
- Energy consumption **reduction up to 70%**
- Annual energy savings about **50 GWh**

Financing:

- with funds from the **ERDF** under the **Operational programme Competitiveness and Cohesion 2014-2020**
- **211 810 805 EUR** have been allocated

3 implementation models for energy renovation of buildings



Implementation models for energy renovation 2016- 2020

MODEL 1

- **Targeting public educational buildings** owned by the Republic of Croatia or local (regional) government
- Buildings for preschool education, elementary and secondary school education and college/university education
- **Co-financing by allocation of grants** from ESI funds

MODEL 2

- By **contracting energy services** using **standardized EPC** public sector does not have to provide funds for the energy renovation
- **ESCO provides funds for the entire investment (60 % own funds + 40 % grant)**
- Grants from ESI funds are allocated to the ESCO company (ESCO is the beneficiary of the grant)

MODEL 3

Public sector receives grants from ERDF but shall provide an own share:

1. By contracting the energy service

→ The obligation of paying charges for the public sector upon completed energy renovation of the building

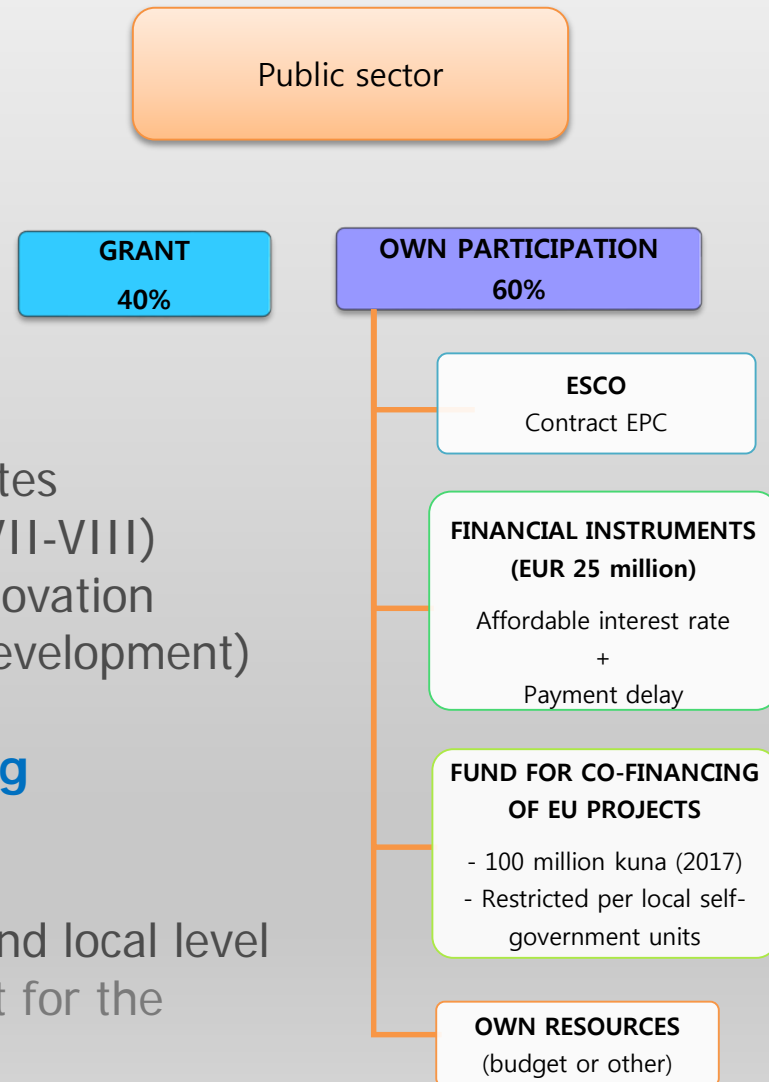
2. By a financial instrument

→ Specialised loan lines with favourable interest rates
0,1% (I-IV, islands) - **0,25%** (V-VI) - **0,5%** (VII-VIII)
and grace period until completion of energy renovation
(HBOR -Croatian Bank for Reconstruction and Development)

3. With funds from the Fund for co-financing implementation of EU projects

→ Funds provided by the MRDEUF for co-financing implementation of EU projects at the regional and local level
→ Very limited funds and limited maximum amount for the beneficiary

4. Own funds allocated in the budget



9.7.2015 -15.4.2016

19.6.2015 -28.4.2016

22.11.2016 - 20.2.2017

PILOT PROJECT

Preparation of project documentation for energy renovation and use of RES in public institutions performing educational activities

- 72 projects contracted
- Contracted grant amount: approx. 1M€
- Co-financing rate 100%
- Required minimum energy savings 20%
- Achieved energy savings in projects from 43% to 80%

PILOT PROJECT

Energy renovation and use of RES in public institutions performing educational activities

- 33 projects contracted
- Contracted grant amount: approx. 6,5M€
- Co-financing rate 70-95 %
- Required minimum energy savings 20%
- Achieved average energy savings 56%
- Highest achieved savings 80%
- Most often energy class upgrade from D to B

PUBLIC CALL

Energy renovation and use of RES in public institutions performing educational activities

- 216 projects contracted
- Contracted grant amount: approx. 45 M€
- Co-financing rate 85% for project preparation and 35% - 60% for implementation
- Required **minimum energy savings 50%**
- Average energy savings 66%

PUBLIC CALL UNDER PREPARATION MODEL 3

Launched on 16.11.2017 - Temporarily suspended on 5.2.2018 until 4.9.2018

PUBLIC CALL

Energy renovation and use of RES in public sector buildings

- Planned allocation 50 M€
- Co-financing rate 85% for project preparation, and 35% -60% for implementation
- Required **minimum energy savings 50%**
- Educational buildings, and buildings in which the following is performed: scientific, theatre, audio-visual, museum and gallery, health care, administrative, sports and other social activities



Photo by Marko Vrdojak. This photo is the property of The Zagreb Tourist Board.

Programme of energy renovation of multi-apartment buildings 2014-2020

- National co-financing (ECO fond) by grants 40-80% started in 2014
- In 3 years 27 mil € grants have been approved for 257 multi-apartment buildings
- 2016-2020 co-financing by grants from ERDF
- Jaspers Report „Outline of an energy efficiency and RES use scheme for public and residential buildings in Croatia“ 2015 as guidelines „Analysis of the recommended co-financing rate for energy renovation of residential buildings“ EIHP

PUBLISHED PUBLIC CALL

Energy renovation of
multiapartment buildings

Opened on 17.10.2016
Closed on 31.01.2017

- 649 project applications
- **578 projects contracted**
- **Contracted grant amount: approx. 72 M€**
- **Co-financing rate 85% for project preparation and 60% for implementation**
- Required minimum energy savings 50%
- **Average energy savings 66%**
- **16 110 households**
- Average age of buildings 80 years



Programme of energy renovation of single family buildings 2014-2020

Programme of energy renovation of family houses 2014-2020

- National co-financing (ECO fond) by grants 40-80% started in 2014.
- In 2 years 15 494 projects contracted
- 89 M€ approved for co-financing

2016-2020 co-financing by grants from ERDF

- Amendment to Regulation (EU) 1303/2013 is necessary in the part related to the eligibility of natural persons in the capacity of applicants
- Public call for **energy renovation of family houses** at the end of 2018
- Planned allocation 30 M€
- Individual measures will not be co-financing (required minimum energy savings 50%)

In brief

Founded in 1989, the CEI is a regional intergovernmental forum committed to supporting European integration through cooperation among its Member States. It combines multilateral diplomacy and project management, both as donor and recipient, while bridging European macro-regions.



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Republic of Croatia took over the Presidency of the Central European Initiative (CEI) from 1 January to 31 December 2018.

The Ministry of Construction and Physical Planning organizes a professional conference:

Energy Efficiency in Buildings - for Better Tomorrow

September 26 and 27, 2018

Save the date!



Thank you for your attention !

Irena Križ Šelendić M.C.E.

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