



# Monitoring the implementation of art. 7/8 EED in Croatia

Roundtable: Policy monitoring under Article 7/8 EED

16<sup>th</sup> November 2024, Energy Community Secretariat, Vienna

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Law on EE  
(amended April 21)

- Art 7. targets are defined in Law, NEEAP and NECP
- AM defined in NEEAP and NECP
- EEOS for energy suppliers (electricity, gas, heat, oil products) – gradual introduction (300-100-50 GWh threshold)
- 50-50 AM-EEOS for 2014-2020; **30-70 AM-EEOS for 2021-2030**
- **Annual reporting**
- **M&V prescribed by by-law**



Regulation on M&V  
(Revised version adopted  
Sept 2021; March 2022)

- Obligatory use of **MVP (SMIV)** for subsidy providers, obligated parties, public sector and ESCOs
- BU methods for calculation of energy savings for **33 measures**

- Monitoring
  - Process of data and information collection about implemented EE measures: type of measure; input data for energy saving calculation; cost of implementation, received subsidies
- Measurement
  - Calculation of new annual energy savings achieved by EE measures using prescribed methods -> **always using project specific data rather than reference data prescribed in methodology**
  - For measures for which methods are not prescribed, energy savings should be calculated by the **authorized design engineers or energy auditors**
- Reporting
  - Annually by 15<sup>th</sup> March
  - Savings from EEOS and AM
  - All other data and information required by Regulation (EU) 2018/1999
  - Reported savings to be based on data from SMiV
  - Report to be published on national web site for EE
- Verification
  - Process of confirming energy savings by the authorized body – National EE Coordination Authority within Ministry of Economy

- Developed through regional cooperation project implemented by GIZ – ORF EE
- Used since 2015
  - transfer of savings
  - stimulation of energy poverty related measures –10 to 30% higher savings are accounted
  - primary energy savings
- Obligatory tool for subsidy providers, public sector, obligated parties and ESCOs
  - Dominant user is EE Fund – subsidy provider (cca 90% of all entries)
- Data base of implemented EE measures in Croatia
  - > 36,000 EE projects
- Tool for calculation of energy savings and CO<sub>2</sub> emission reductions
  - Calculates new and cumulative annual savings from a measure

## Sustav za praćenje, mjerenje i verifikaciju ušteda energije

**Prijava**

Korisničko ime:

Zaporka:

→ Prijavi se **User name / Password**

→ Promjena zaporke

Planovi i provedba

Novi plan

Pregled planiranih mjera

Pregled provedenih mjera

Pregled provedenih mjera Novi

Nova provedena mjera

Pregled podrštvavanja

- Godišnji plan energetske učinkovitosti
- Godišnji plan energetske učinkovitosti EUH 2018. - D
- Godišnji plan energetske učinkovitosti EUH 2019. - D
- Godišnji plan energetske učinkovitosti EUH 2020. - D
- Godišnji plan energetske učinkovitosti Grada Rijeke za 2018. godinu
- Godišnji plan energetske učinkovitosti Grada Rijeke za 2019. godinu
- Godišnji plan energetske učinkovitosti Sisačko-moslavačke županije za GP EUH za 2019. godinu
- Godišnji plan energetske učinkovitosti Grada Velike Gorice za 2020. godinu
- Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu
- GODIŠNJI PLAN ENERGETSKE UČINKOVITOSTI ZAGREBAČKE ŽUPANIJE za 2019. godinu
- Godišnji plan EUH 2019. - Međimurska županija
- Godišnji plan EUH 2020. - Međimurska županija
- Akcijski plan energetske učinkovitosti Grada Zadra za razdoblje od 2020. do 2022. godine
- GODIŠNJI PLAN ENERGETSKE UČINKOVITOSTI BRODSKO-POSAVSKE ŽUPANIJE za 2019. godinu
- Godišnji plan energetske učinkovitosti Grada Zadra za 2020. godinu
- Godišnji plan EUH za 2020. godinu

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Opis plana	Vrsta plana	Lokacija	Kreirano	Kreirao
test	Županijski plan	Istarska	9.8.2018	Anita Milardović
Godišnji plan energetske učinkovitosti Međimurske županije za 2019. godinu	Županijski plan	Međimurska	21.8.2018	Alen Vlahnić
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Gradaški plan	Slavonski Brod	4.9.2018	Irena Kozina
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Županijski plan	Brodsko-posavska	5.9.2018	Katica Bošnjaković
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Županijski plan	Dubrovačko-neretvanska	29.10.2018	Jurica Perko
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Županijski plan	Krapinsko-zagorska	11.9.2019	Valerija Vrhžak
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Gradaški plan	Slavonski Brod	7.11.2019	Irena Kozina
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Gradaški plan	Rijeka	7.11.2019	Tajana Nežnanović
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Gradaški plan	Rijeka	8.11.2019	Tajana Nežnanović
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Županijski plan	Sisačko-moslavačka	11.11.2019	Davor Matic
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Gradaški plan	Pula	9.12.2019	Karmen Štanić
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Gradaški plan	Velika Gorica	23.12.2019	Jošip Filipović
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Županijski plan	Istarska	7.1.2020	Nikola Petrić
GODIŠNJI PLAN ENERGETSKE UČINKOVITOSTI ZAGREBAČKE ŽUPANIJE ZA 2019. GODINU	Županijski plan	Zagrebška	9.1.2020	Minaela Mehadžić
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Županijski plan	Međimurska	15.1.2020	Iva Vrankić
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Županijski plan	Međimurska	16.1.2020	Iva Vrankić
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Gradaški plan	Zadar	20.3.2020	Ana Bajo
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Županijski plan	Brodsko-posavska	13.5.2020	Katica Bošnjaković
Godišnji plan energetske učinkovitosti Istarske županije za 2019. godinu	Gradaški plan	Zadar	28.5.2020	Ana Bajo
Godišnji plan EUH za 2020. godinu	Gradaški plan	Pula	10.6.2020	Karmen Štanić

### Mjera - Integralna obnova postojećih zgrada (M1)

**Opći podaci**

Naslov mjere

Opis mjere

Vrsta mjere: Integralna obnova postojećih zgrada (M1)

Lokacija

Sektor: ZGRADARSTVO

Grupa

Vrsta goriva (stari)

Vrsta goriva (novi)

Datum provedbe

Vrijedi do

MIS kod

Lokacija mjere

Ulica i broj

Nositelj uštede

Odgovorna osoba (ime)

Odgovorna osoba (email)

Odgovorna osoba (tel)

Komentar

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Sufinanciranje

Dokumenti

**Uštede i troškovi**

Uštede primarne energije [kWh/god]: 0,00

Ušteda energije [kWh/god]: 0,00

CO2 ušteda [t]: 0,00

Trošak mjere [kn]

Prijenos uštede

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**Podaci za izračun**

Formula: 
$$FES = \left( \frac{SHD_{init}}{\eta_{init}} - \frac{SHD_{new}}{\eta_{new}} \right) \cdot A_{heated}$$

Specifična potreba za grijanjem - Stara [kWh/m2]

Specifična potreba za grijanjem - Nova [kWh/m2]

Ploština korisne površine zgrade [m2]

Učinkovitost sustava grijanja - Stara (ukupno)

Učinkovitost sustava grijanja - Nova (ukupno)

Ili

Učinkovitost sustava grijanja - Stara (kotao)

Učinkovitost sustava grijanja - Nova (kotao)

Učinkovitost sustava grijanja - Stara (emisija)

Učinkovitost sustava grijanja - Nova (emisija)

Učinkovitost sustava grijanja - Stara (distribucija)

Učinkovitost sustava grijanja - Nova (distribucija)

Faktor normalizacije: 1,00

**Calculate**

Unesi | Izračunaj

## Energy renovation of existing buildings (M1)

Title, description, type of measure

Location (HDD)

Lifetime of measure

Owner of savings

Calculation results  
 Energy savings (kWh/a)  
 CO2 emissions (t)  
 Investment cost (kn)

Input data for calculation of savings

Reference values

CONSTRUCTION_PI	BUILDING_TYPE	VALUE
prije 1940	Stambene	180,000000
prije 1940	Uslužne	180,000000
1940-1970	Stambene	250,000000
1940-1970	Uslužne	250,000000
1970-1987	Stambene	200,000000
1970-1987	Uslužne	200,000000
1987-2006	Stambene	150,000000

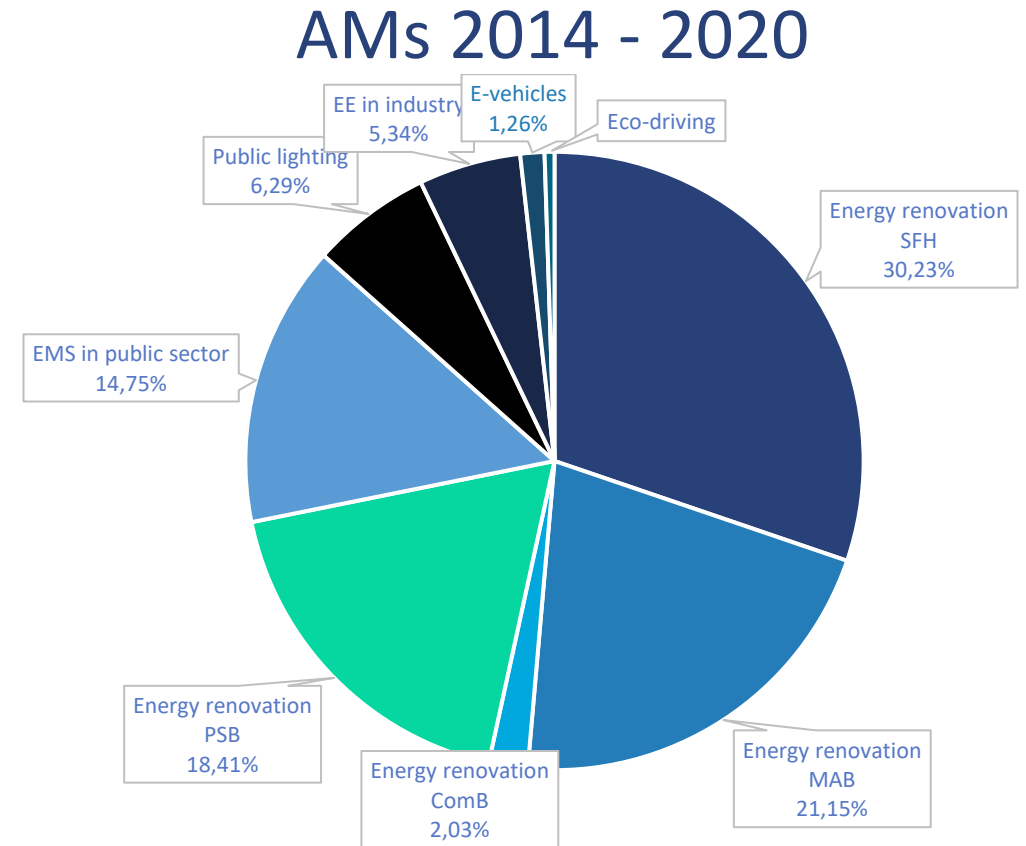
# ENSMOV PLUS Lessons learned from implementation of art. 7

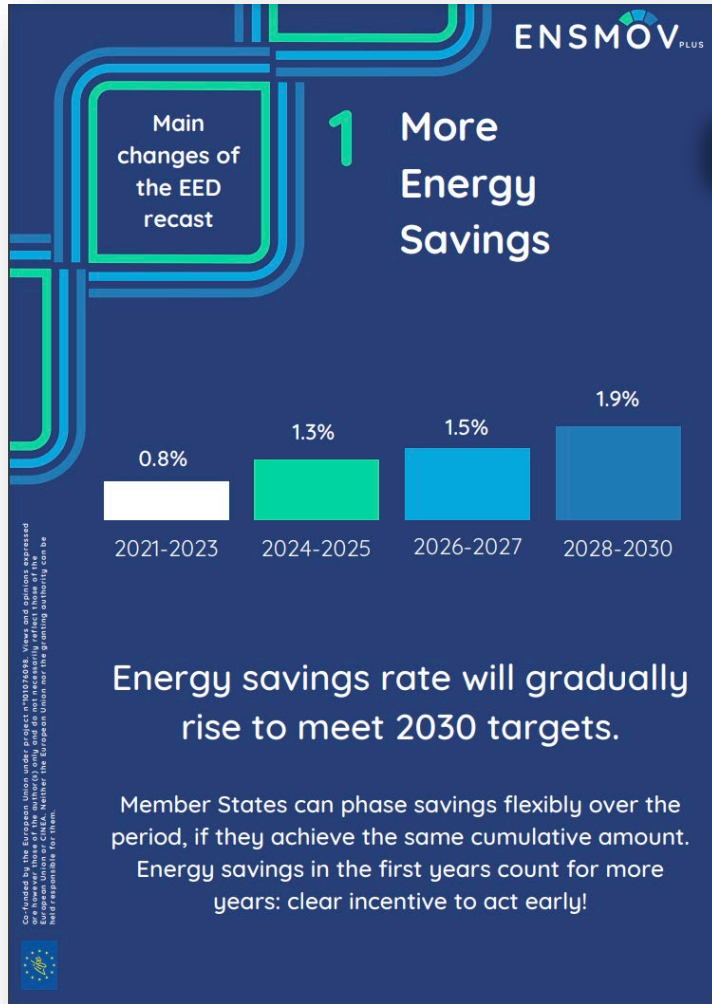
- Art.7 targets are very tough to achieve -> but **art.7 has become the single most important driver for energy savings**
- M&V system is critical for evaluating the progress
  - IT platform is a practical and comprehensive way of collecting all the data
  - Subsidy providers (EE Fund) qualified and experienced for entries
  - Obligated parties – struggle, especially smaller -> clearer guidelines needed
  - In Croatian case, upgrade should be directed towards enabling analytical functions -> easier reporting
  - Data security
- Verification based on documentation (evidence)
  - Huge amount of paperwork to be delivered (often not possible to upload in the system)
  - Regulation introduces **Report of energy savings** – systematic representation of saving calculation and accompanying evidence – prepared by **authorised experts** (design engineers, energy auditors) -> facilitates the verification process

# Lessons learned from implementation of art. 7

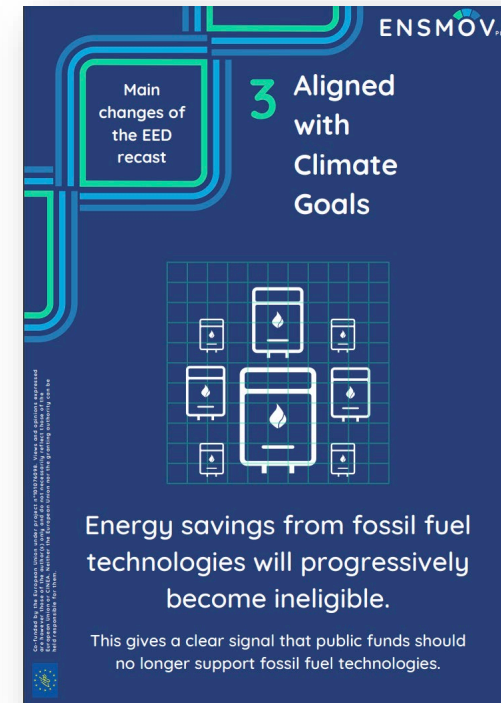
## Savings achieved

<b>Cumulative target 2014-2020 [PJ]</b>	<b>54,2500</b>
<b>AM target [PJ]</b>	27,1793
<b>EEOS target [PJ]</b>	27,0708
<b>AM achieved [PJ]</b>	14,0626
<b>EEOS achieved [PJ]</b>	24,9342
<b>Cumulative savings achieved [PJ]</b>	38,9368
<b>Share of the target [%]</b>	73,62 %





	NECP	Updated NECP
<b>Cumulative saving target 2021-2030</b>	125,3 PJ	<b>180,6 PJ</b>





# ENSMOV Partners



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# Thank you for your attention!

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ENSMOV Plus



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<https://ieecp.org/projects/ensmov-plus/>



Our Platform: [energysavingpolicies.eu](http://energysavingpolicies.eu)



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