

SMiV – System for monitoring and verification of energy savings

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CEI – Center for Monitoring Business Activities in the Energy Sector and Investments



CEI

Centar za praćenje poslovanja
energetskog sektora i investicija

CEI - role of National Energy Efficiency Agency

The main activities and tasks:

- Systematic planning: making of National Energy Efficiency Action Plans
- Coordinating activities with all institutions included in energy efficiency policy
- Measuring: systematic monitoring of implementation through System for monitoring and verification of energy savings (SMiV)
- Reporting to Ministry, Government of the Republic of Croatia and European Commission on achieved results
- Cooperation with national and international institutions, especially the EU institutions
- Promotion of energy efficiency on a national level, informing the public about plans, achieved measures and their effects





SMiV? - web application that allows users to monitor and verify implemented energy efficiency measures

smiv.cei.hr



Purpose

Main purpose of Monitoring and verification platform is to monitor and verify activities defined in **National Energy Efficiency Action Plan**.

MVP registry database:

- ❖ Energy savings (kWh)
- ❖ Reduction of CO₂ Emissions (tCO₂)
- ❖ Cost of every EE measure (kn)

Through MVP database there is also registry on all EE plans delivered by cities, county's....



Sectors and users

- ❖ Households
- ❖ Industry
- ❖ Service sector
- ❖ Transport



Web application is based on the Bottom-up methodology which is defined in National ordinance „System for Monitoring, Measuring and Verification of Energy Savings“.

Main users of SMIV:

- ❖ *Public sector*
- ❖ *ESCOs*
- ❖ *Subsidy providers*



EE measures

Calculations of EE savings

- Measures defined in BU methodology
19 measures in three sectors
- Measures with measured savings
EMIS and similar systems
- Measures not defined in BU methodology – Industry, specific measures, soft measures....by project



EE planning with SMiV

EE plan is a systematic approach for planning of EE measures in accordance to National EE act and several bylaws and ordinances.

EE act defines two types of plans:

- EE action plan (three year)
- EE annual plan (one year)

SMiV modul for planning helps users in process of calculating planned energy savings and costs



EE plans for 2016.

- 37 obligated parties (20 counties/17 cities)
- CEI received 28 annual plans (76%)
- 3 voluntary EE plan
- 228 planned EE measures
- 734 mil.kn planned for EE measures
- 237 mil.kn planned subsidies from FZOEU



EED annual report

2016. annual report to the EC about EE measures in 2015.

- Article 5. - 3 % refurbishment of central government buildings - ACHIVED!

0,061 PJ / goal 0,0049 PJ

- Article 7. Total energy savings verified in SMIV

0,617 PJ / goal 1,6 PJ Alternative measures



SMIV verified saving for year 2015.

Measure	Number of projects*	Saving [PJ]	Saving [tCO2]	Total investment amount [HRK]	Total funding paid from the Fund [HRK]
RESIDENTIAL BUILDINGS					
Programme of energy renovation of family houses, 2014-2016 – Total	4 215	0.26943	14 280.63	297 743 374.04	183 428 273.77
Programme of energy renovation of apartment buildings	136	0.07053	5 867.93	67 678 383.13	27 429 914.56
Introduction of individual thermal energy consumption metering	236	0.16486	12 511	60 241 581.94	24 079 495.42
PUBLIC SECTOR BUILDINGS					
Programme of Energy Renovation of Public Buildings (2014-2015)	1	0.03580	2 683.77	78 060 108.19	27 572 529.77
Programme of Energy Renovation of Public Buildings (2016-2020)					
COMMERCIAL NON-RESIDENTIAL BUILDINGS					
Programme of energy renovation of commercial non-residential buildings	49	0.02716	2 024.78	31 492 371.77	12 156 286.77
PUBLIC LIGHTING					
'Energy Efficient Public Lighting' programme	38	0.01985	1 819.2253	39 621 955.26	20 957 680.13
TRANSPORT					
Financial incentives for energy-efficient vehicles	5	0.01214	831.88	67 298 231.92	16 133 781.91
Promoting environmentally-friendly driving	13	0.017513	1 298.88	1 225 949.35	420 988.24
Introduction of a special motor vehicle tax based on CO2 emissions					
TOTAL	4 693	0.617	41 318.09	635 889 421.9	308 603 902.7



multEE and SMiV

Energy institute Hrvoje Požar – Croatian partner on project
CEI – administrator of SMiV – beneficiary

- Through multEE SMiV was updated with new upgrades
- Aprox. 20 upgrades to system for better user control and data analysis
- User experience simplified and improved for better reporting



Thank you for attention!



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