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Project: "Financing Energy Efficiency Investments for Climate Change Mitigation"
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CROATIAN PROGRESS IN IMPLEMENTATION OF GRANT



Prepared by:
Željko Jurić MSc

Energy Institute Hrvoje Požar
www.eihp.hr

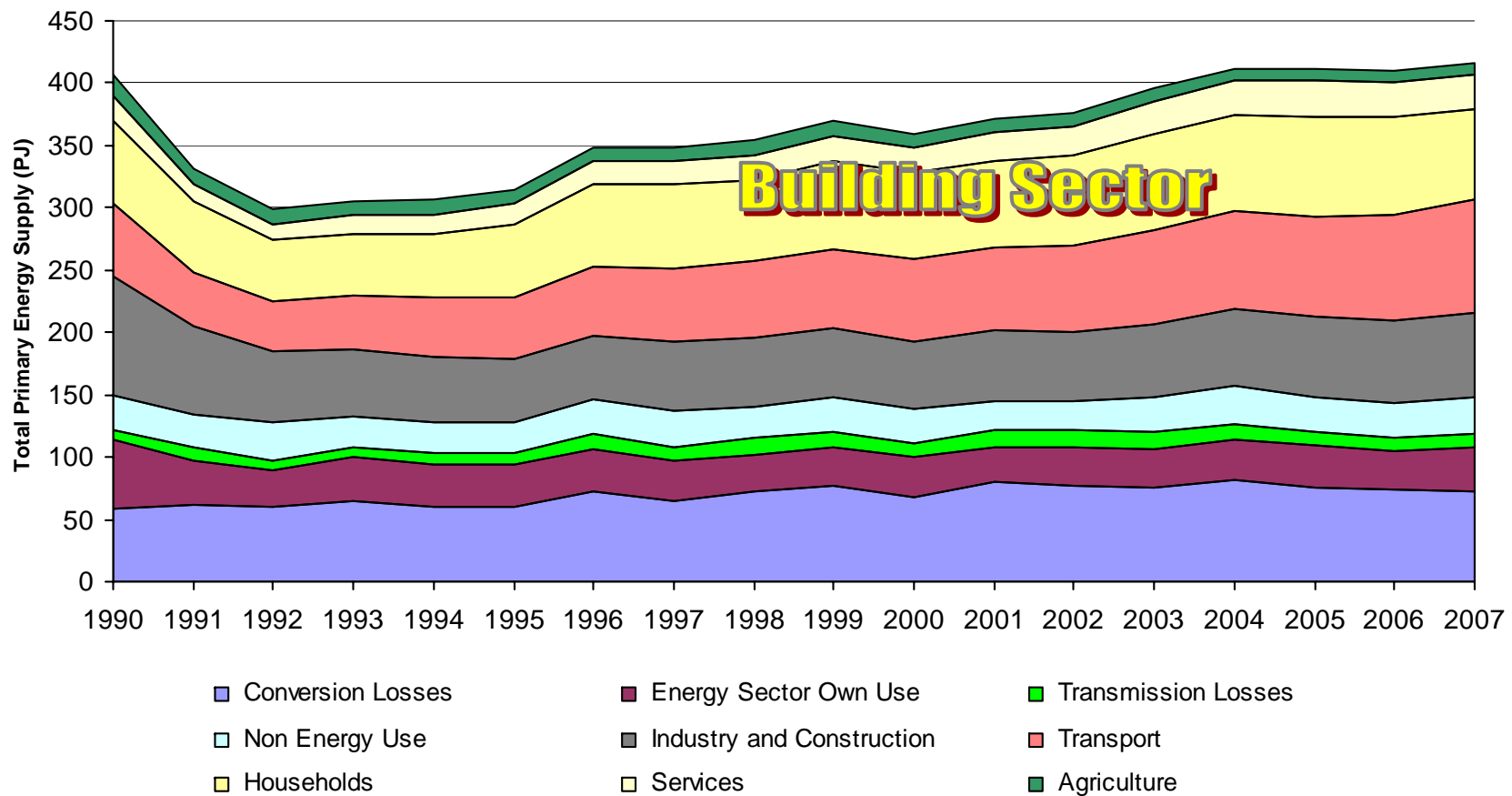
CONTENT

- National Case Study
- National Project Website
- National Energy Policy Information for Regional Analysis
- Further Activities

NATIONAL CASE STUDY

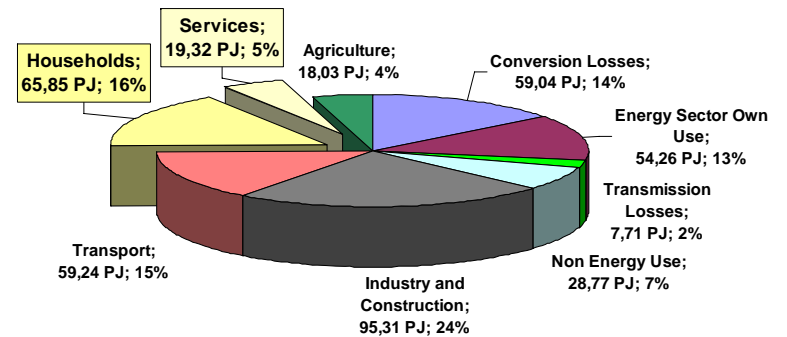
- Task: National Case Study of policy reforms to promote EE&RES investments
- Close cooperation with the Regional Analysis contractor (Pöyry)
- Case Study should contain information on:
 - Chosen energy sector: Building sector (Residential and Service sectors)
 - Current relevant policies in place (before the reforms)
 - Energy savings and GHG emission reduction by EE&RES projects implementation in Building sector
 - Description of used methodology
 - Impact of the expected policy measures in Building sector on energy, economy and environment
 - Conclusions and recommendations (possible implications in neighbouring countries)

TOTAL PRIMARY ENERGY SUPPLY (TPES)

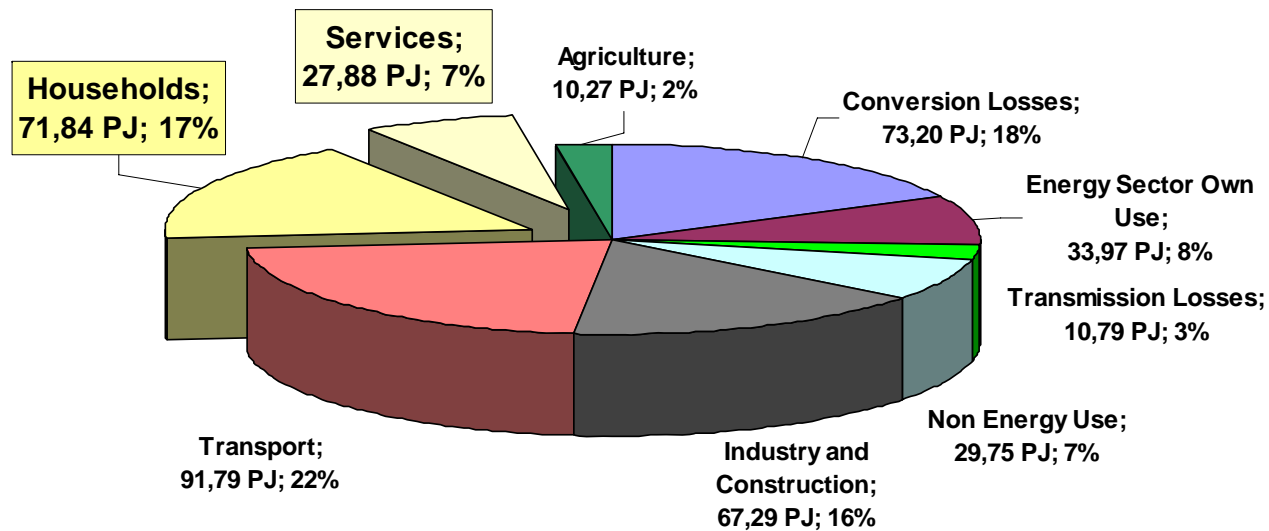


CONTRIBUTION OF ENERGY SECTORS IN TPES

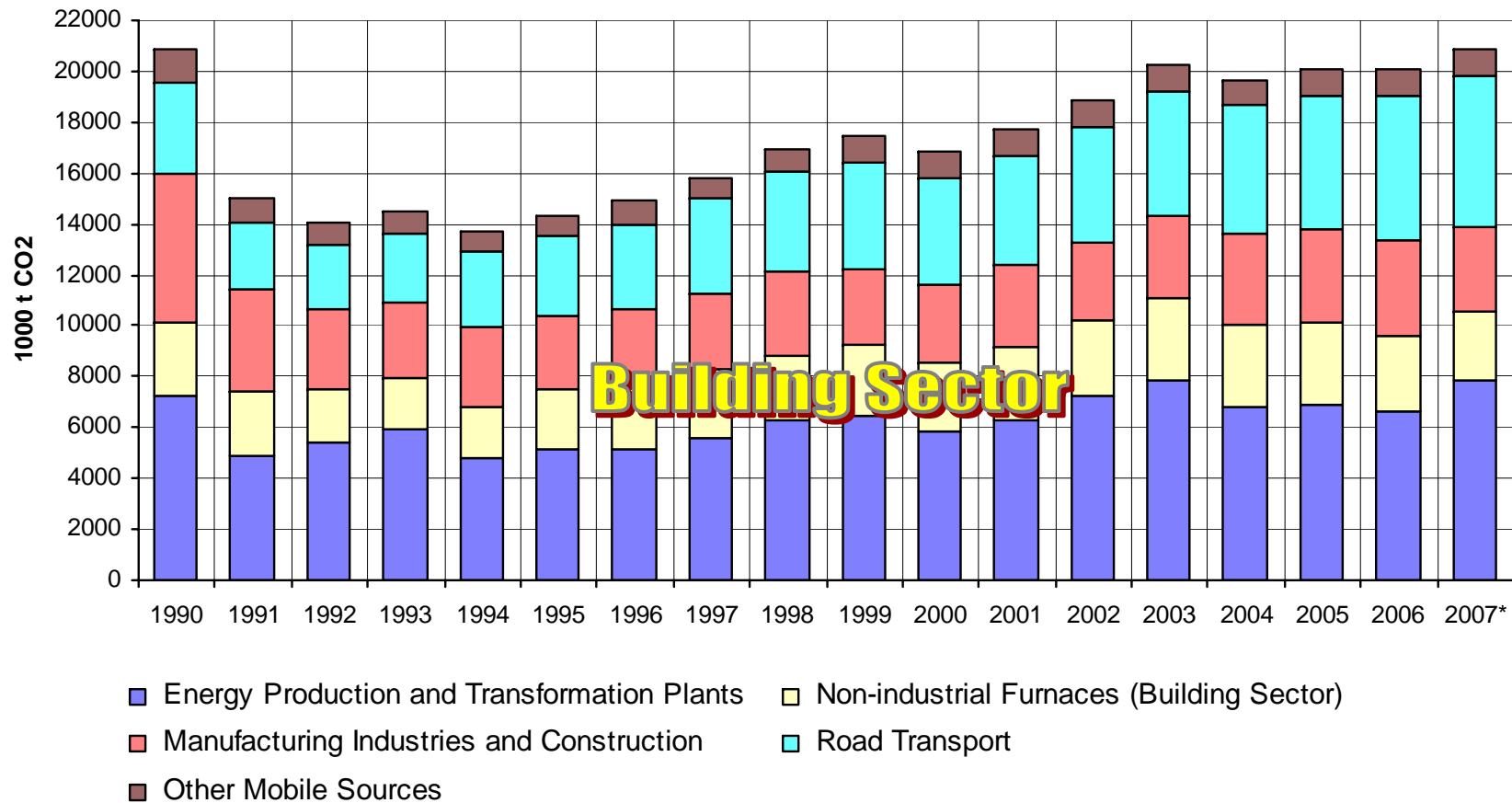
Total Primary Energy Supply (1990)



Total Primary Energy Supply (2007)

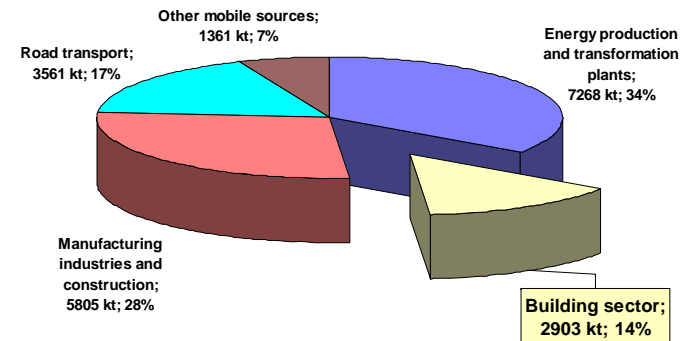


CO₂ EMISSION FROM STATIONARY AND MOBILE ENERGY SOURCES

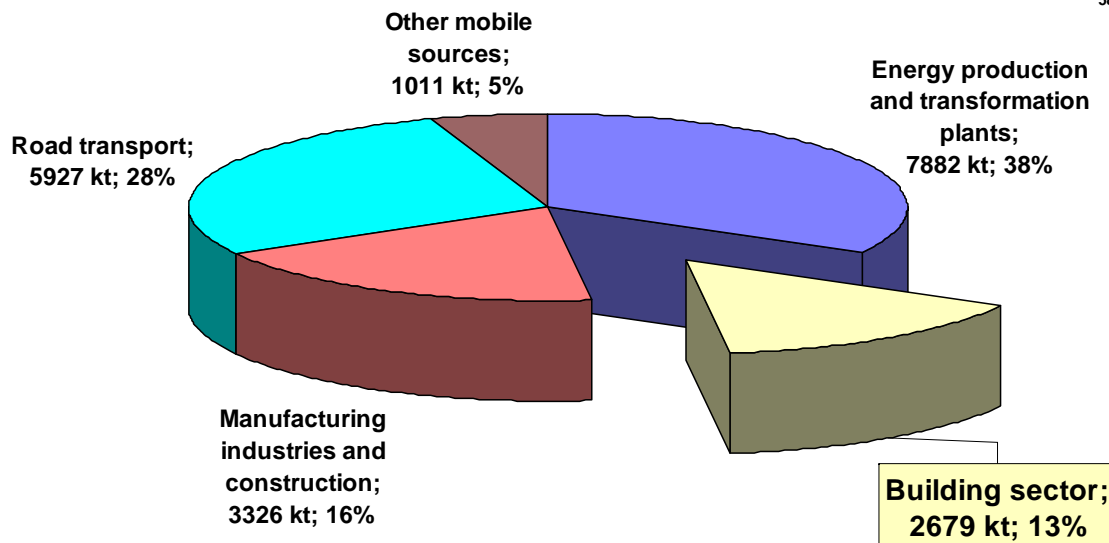


SHARE OF BUILDING SECTOR IN CO₂ EMISSION FROM ENERGY SOURCES

CO₂ emission (1990)



CO₂ emission (2007*)



NATIONAL PRIORITY AREA FOR EE AND RES

- Establishment of clearly defined national strategy and policy towards EE and RES, based on the implementation of stable and well harmonized legislative framework
 - Some secondary legislation for EE and heating/cooling from RES is still missing and it should be prepared and adopted in 2009.
 - National strategy and legislative framework should define binding national targets.
- Preparation of action plans for EE and RES
 - Action plans should present measures in order to achieve national targets.
 - Level of the set targets in areas for EE and RES should be based on the realistic assessment of national potentials, both technical and economic, based on cost-benefit analysis.

RES POLICY MEASURES

- Impact of RES-H sub-laws on RES investments in Building sector:
 - Rulebook on acquiring the status of subsidized RES heat&cool producer - should define eligible RES heat&cool technology (biomass, solar, geothermal) and technical criteria for each technology
 - Regulation on the minimum share of subsidized RES heat&cool production and financial incentives - should define the minimum share of subsidized RES heat&cool production in total primary energy supply and final energy consumption for 2010 and 2020, as well as the amount of financial incentives for different RES heat&cool technologies
 - RES-H sub-laws should be in place in 2009

EE POLICY MEASURES

- Impact of new EE law and set of sub-laws on EE investments in Building sector:
 - Energy efficiency law (OG 152/08)
 - Technical regulation on rational energy use and thermal protection in buildings (OG 110/08)
 - Technical regulation on heating and cooling systems of buildings (OG 110/08)
 - Rulebook on energy certification of buildings (OG 113/08)
 - Rulebook on conditions and criteria for energy auditors and energy certifiers of buildings (OG 113/08)

EE/RES PROJECTS IN BUILDING SECTOR

- EE measures/projects:
 - Thermal insulation improvement (external envelop, ceiling and floor below/above unheated space) and windows replacement
 - Construction of passive (thermal demand $< 15 \text{ kWh/m}^2$) and low energy buildings ($< 40 \text{ kWh/m}^2$)
 - Higher share of efficient district heating and small cogeneration (or increase of individual boiler efficiency)
 - Demand side management in non-heat electricity use (low-energy bulbs, air-conditioning, refrigerators and other appliances)
- RES measures/projects:
 - Solar thermal collectors
 - Boilers on biomass (e.g. pellets)
 - Heat pumps (e.g. geothermal)

IMPACT ON ENERGY, ECONOMY AND ENVIRONMENT

- Basic information for all analysed measures/projects will be given:
 - description of measure,
 - energy savings potential,
 - CO₂ emission reduction potential and
 - cost of measure implementation.
- Consequence of new EE and expected RES legislation will be wider implementation of EE and RES measures/projects.
- Aggregated potential of analysed measures will be estimated, as well as the impact of the new and expected EE/RES policy on energy (energy savings potential), economy (costs of implementation) and environment (CO₂ emission reduction), on national level.

METHODOLOGY

- Used methodology:
 - Estimation of energy savings could be determined, based on International Performance Measurement & Verification Protocol (IPMVP)
 - CO₂ emission reduction will be calculated using IPCC methodology
 - Costs of RES/EE projects implementation should be estimated by Equivalent Annual Costs (EAC) or Net Present Value (NPV) approach
- Analysis of possible implications of similar approach in neighbouring countries will be provided.
- Finally, conclusions and recommendations will be presented.

NATIONAL PROJECT WEBSITE

- Centre for Energy Efficiency EnEFFect from Bulgaria was selected to develop a website and international communications network of EE managers in Eastern Europe.
- Preparation of national project website (or dedicated pages to the project on existing website) will be organized in accordance with instructions given by the EnEFFect.
- The national project website should cover:
 - calendar of project activities, library, project software, hot-link connection to project participants, web-casting capacity and investment project database

NATIONAL ENERGY POLICY INFORMATION FOR REGIONAL ANALYSIS

- Pöyry Energy Consulting AG from Switzerland was selected for regional analysis of policy reforms to promote EE&RES investments.
- EIHP has already provided useful information on national energy policy through fulfilled questionnaire on regulatory, institutional and administrative framework in Croatia.
- Activities of this task are to collect and prepare relevant energy policy data and information on:
 - key energy sector developments
 - progress of reforms to introduce market based energy system
 - specific policy, regulatory, administrative and institutional “bottlenecks” of EE&RES market formation
 - policy, regulatory, administrative and institutional reforms in Croatia in order to overcome barriers and/or promoted EE&RES market formation

FURTHER ACTIVITIES

- National Case Study:
 - for preparation of the Case Study will be necessary: additional data collection, research, analysis and computer modelling/simulations to assess the potential of EE&RES measures implementation in Building sector, as well as assessment of energy savings, GHG emission reductions and costs
- National Project Website:
 - preparation of the National Project Website will be after construction of the regional website and international communications network, in accordance with the instructions prepared by EnEffect
- National Energy Policy Information for Regional Analysis:
 - necessary information for preparation of Regional Analysis of policy reforms to promote EE&RES investments will be prepared and sent to the Regional Analysis contractor (Pöyry), upon request

Thank You for Your Attention!

