

UNECE, Ad Hoc Group of Experts on Energy Efficiency 21, 10th Session

RENEWABLE ENERGY SOURCES IN CROATIA - Latest Achievements -

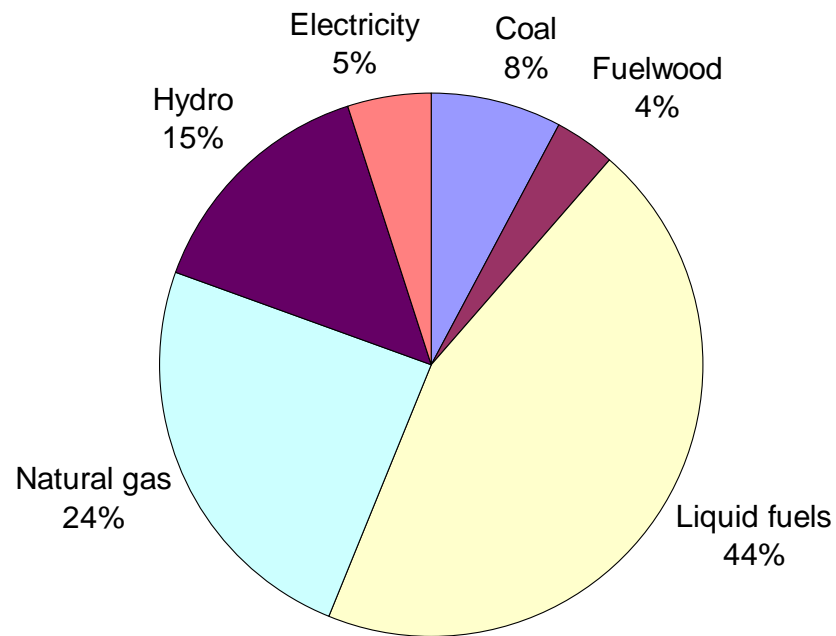


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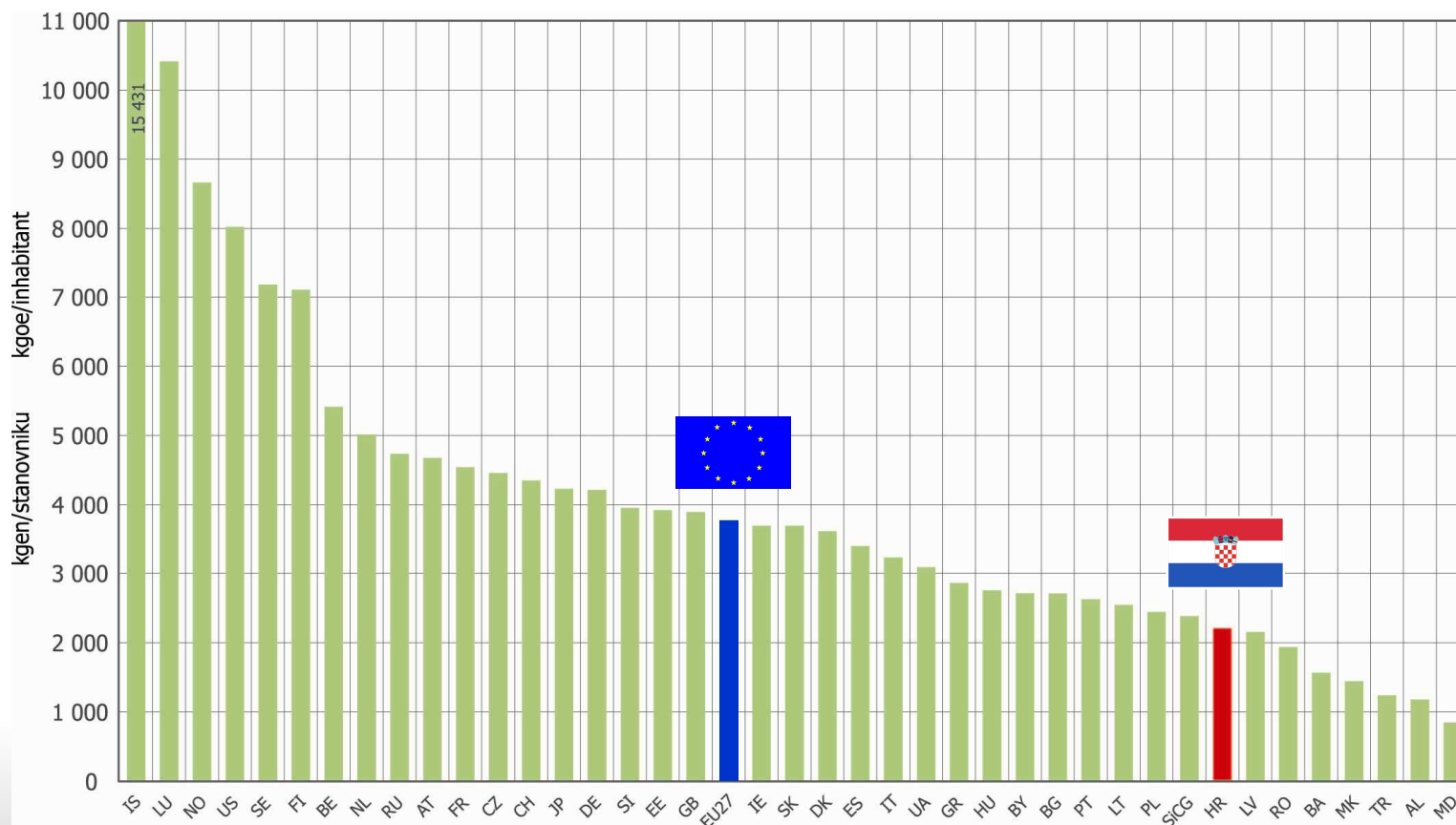
TOTAL PRIMARY ENERGY SUPPLY IN CROATIA (2006)



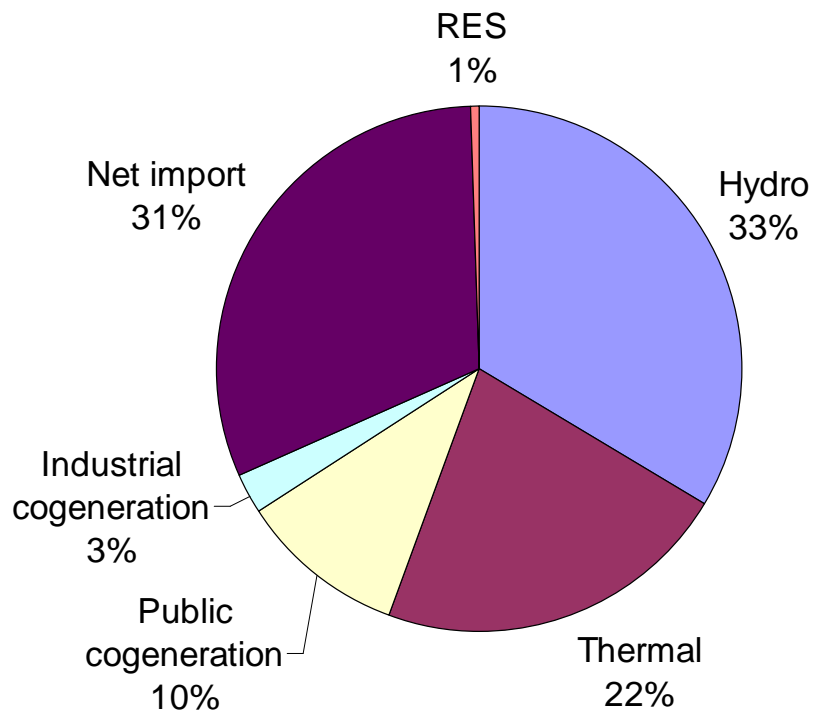
- Total Primary Energy Supply: 409.08 PJ (2006)
 - In 2005: 411.66 PJ
- RES other than fuelwood and hydro power: 0.06%

TOTAL PRIMARY ENERGY SUPPLY PER CAPITA (2006)

kgoe/capita



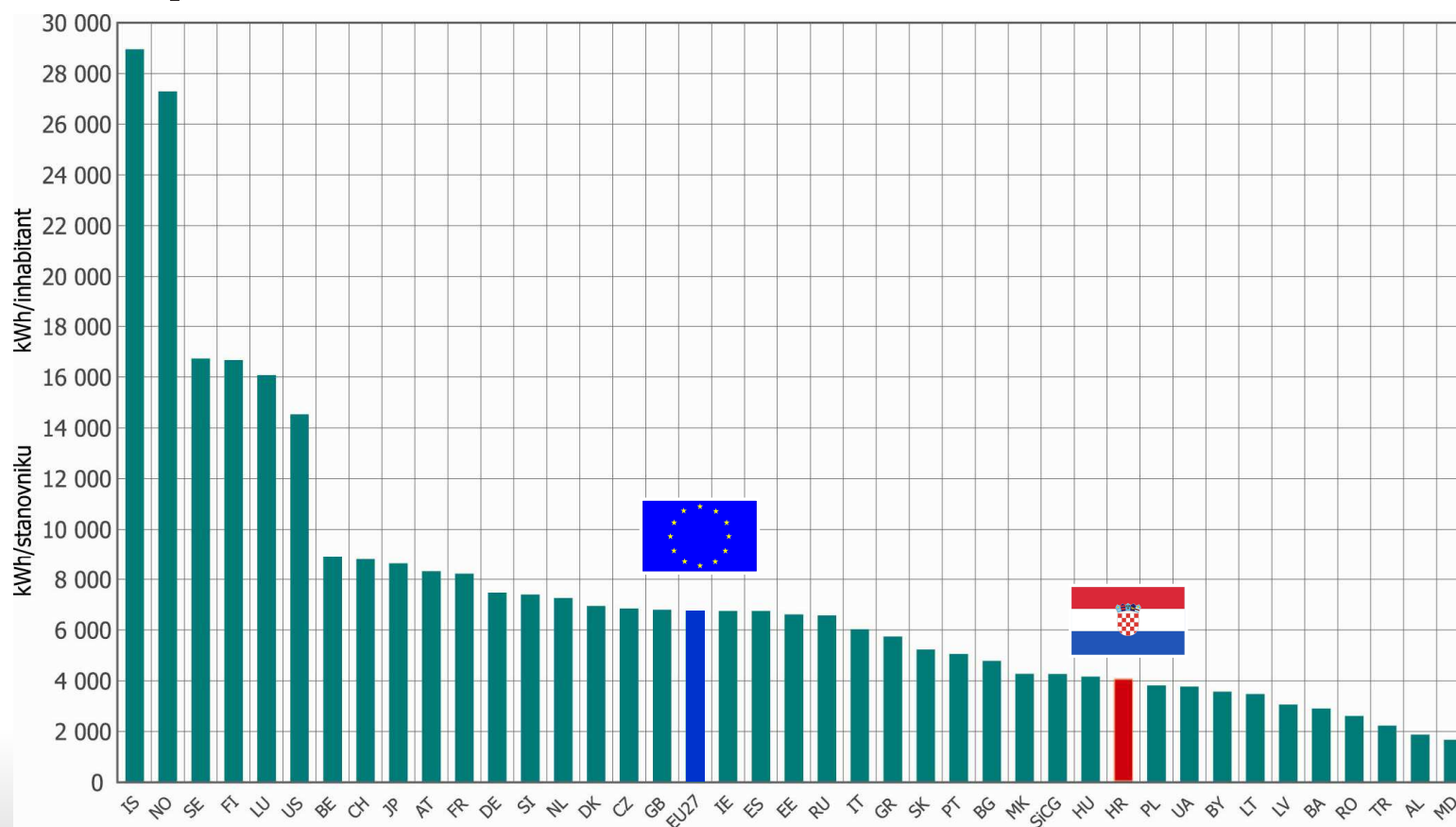
TOTAL ELECTRICITY CONSUMPTION (2006)



- Total electricity consumption: 18 TWh (2006)
 - In 2005: 17.6 TWh
- RES (without large hydro) : 0.68%
 - 0.54% small hydro
 - 0.11% wind
 - 0.03% landfill gas

GROSS ELECTRICITY CONSUMPTION PER CAPITA (2006)

kWh/capita



RENEWABLE ENERGY SOURCES, 2006

	Installed thermal capacity	Thermal energy production	Installed electrical capacity	Electricity production
SOLAR	N/A	N/A	49.96 kW	49.1 MWh
WIND	0	0	17.15 MW	19.0 GWh
BIOMASS	512.0 MW*	14.77 PJ**	2.0 MW	6.0 GWh
SMALL HIDRO	0	0	32.76 MW	109.6 GWh
GEOTHERMAL	113.9 MW	0.56 PJ	0	0
TOTAL	625.9 MW	15.33 PJ	51.96 MW	134.6 GWh

* Only industrial heating plants

** Total, includes fuelwood for households heating

RENEWABLE ENERGY PROJECTS, 2006&2007

- **Wind PP:** Trtar Krtolin (11.2 MW)
- **Landfill gas:** Jakuševac (2 MW)
- **Biodiesel:**
 - MODIBIT in Ozalj (capacity 20 000 t/y, production in 2006: 7 000 t – for export)
 - VITREX in Virovitica (capacity 6 000 t/y, production started in Dec. 2006)

RES-E REGULATIONS - ELECTRICITY -

- **March and July 2007:** Package of five sub-laws on RES electricity and cogeneration
 - Regulation on the minimum share of RES&C in electricity supply (National Gazette, 33/07)
 - Regulation on compensation for RES&C electricity incentives (National Gazette, 33/07)
 - Tariff system for electricity production from RES&C (National Gazette, 33/07)
 - Rulebook on RES&C utilisation (National Gazette, 67/07)
 - Rulebook defining the status of eligible electricity producers (National Gazette, 67/07)

RES-H REGULATION - HEATING & COOLING -

- April 2005: Law on production, distribution and supply of heat - three sub-laws on RES-H are in preparation phase:
 - Rulebook defining the status of subsidized heat&cool producer
 - Regulation on the minimum share of RES heat&cool
 - Regulation on financial incentives for subsidized heat&cool producer
- Work on concept development started in November 2007, should be finished in March/April 2008
- Sub-laws should be in place by the end of 2008 (?)

BIOFUELS REGULATION

- Regulation of quality standards for biofuels (November 2005):
 - defines quality standards and requirements;
 - defines national indicative target of 5.75% by end of 2010
- Missing: - incentives (tax exemption) regulation
- Plan for putting biofuels on the national market for 2008 (MINGORP)
- Preparation of a new Biofuels Law, in place by the end of 2008 (?)

ENVIRONMENTAL PROTECTION AND ENERGY EFFICIENCY FUND

- Fund was established in 2003
- For 2008, Fund allocated:
 - **168.3 million EUR** for environmental protection and special waste management system (packaging, old vehicles, electronic equipment, batteries, accumulators, waste oils, etc.)
 - **13.7 million EUR** for projects and programs of energy efficiency, renewable energy sources, sustainable building, cleaner transport and education, research and development

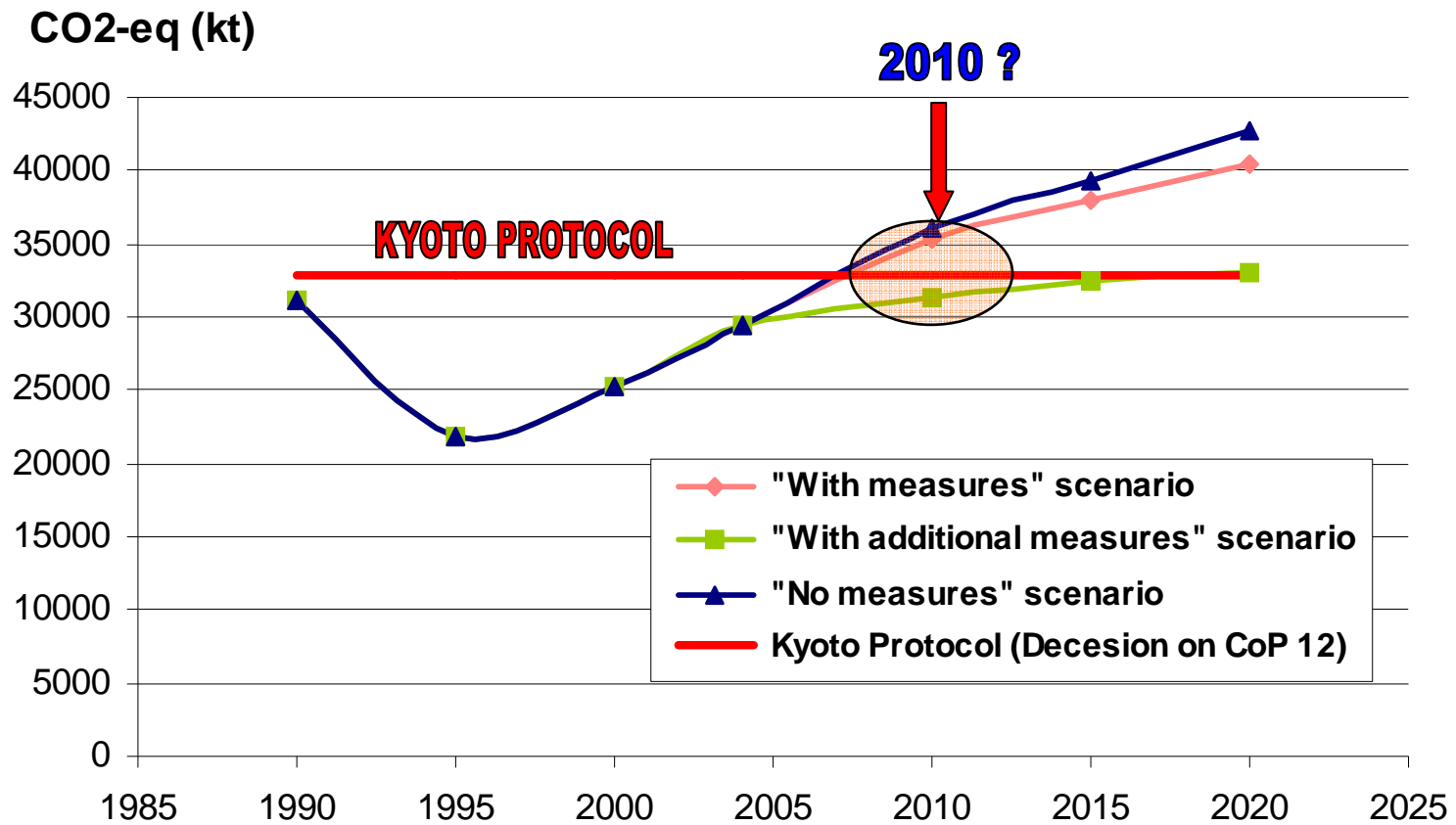
ENVIRONMENTAL PROTECTION AND ENERGY EFFICIENCY FUND

- Financial instruments:
 - **Soft Loans:** up to 40% of eligible costs, max 230 000 EUR, zero interest rate, repayment (grace period 2 years, payback 5 years),
 - **Interest Subsidy:** 2% decrease of interest rate
 - **Grant:** for units of local/regional self-government 40% / 60% / 80% of eligible costs depending on the region
 - **Donation:** up to 27 000 EUR, for promotion, research and development etc.
- No subsidies were given to natural persons
 - the scheme for financing of natural persons is being developed at the moment

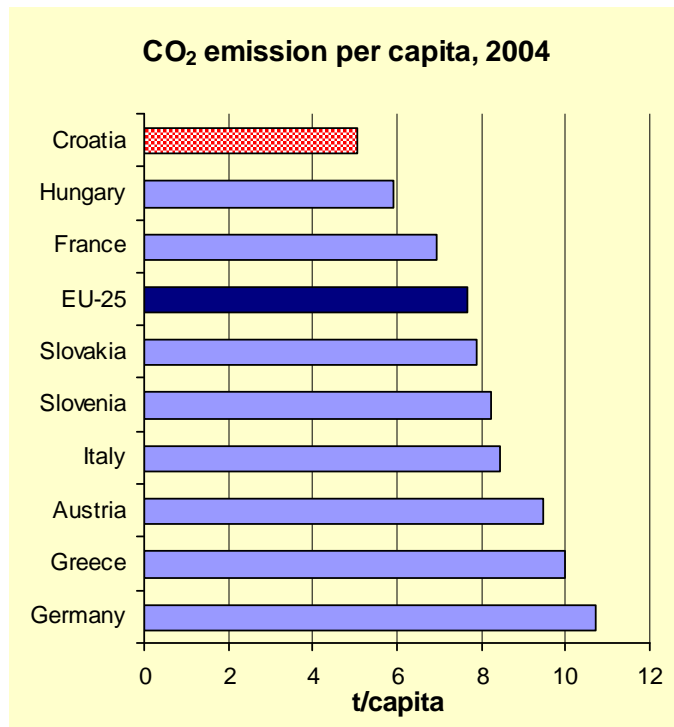
REGIONAL ENERGY AGENCIES

- Before 2007: none
- 2 approved within previous Intelligent Energy call (October 2006):
 - Regional Energy Agency for North-western Croatia (Zagreb)
 - Local Energy Agency for Međimurje County (Čakovec)
- 4 energy agencies in different phase of establishment (Istria, Varaždin, Osijek and Split)

GHG EMISSION PROJECTION



KYOTO PROTOCOL AND EMISSION TRADING SCHEME

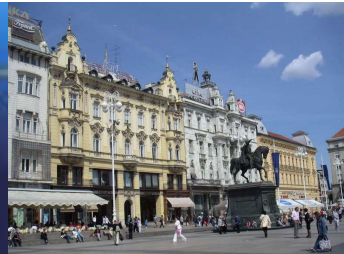


- Croatia ratified Kyoto protocol in May 2007
- GHG inventory system is established
- Regulation on GHG emission allowance trading is drafted (should be adopted in 2008)
- National Allocation Plan (in preparation) will be drafted in May/June 2008
- GHG Register should be in place in 2009
- Inclusion in the EU-ETS should be in 2010

FURTHER ACTIVITIES

- Future work to be done:
 - Legislative framework
 - RES-H
 - Biofuels
 - Targets for 2020 (no attention so far from the Government!)
 - Remove administrative barriers
 - For RES-E 10 different permits from 5 institutions (!)
 - Improved cooperation between various ministries
 - Example - biofuels: Ministry of Environment defined targets, Ministry of Economy defined plan, Ministry of Agriculture defined measures, Ministry of Finance should define incentives (e.g. tax exemptions)

Thank You for Your Attention!



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