Ministry of the Environment
of the Czech Republic

Czech Republic: Concrete measures to utilize Energy Efficiency and Renewable Energy potential

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Ministerstvo životního prostředí
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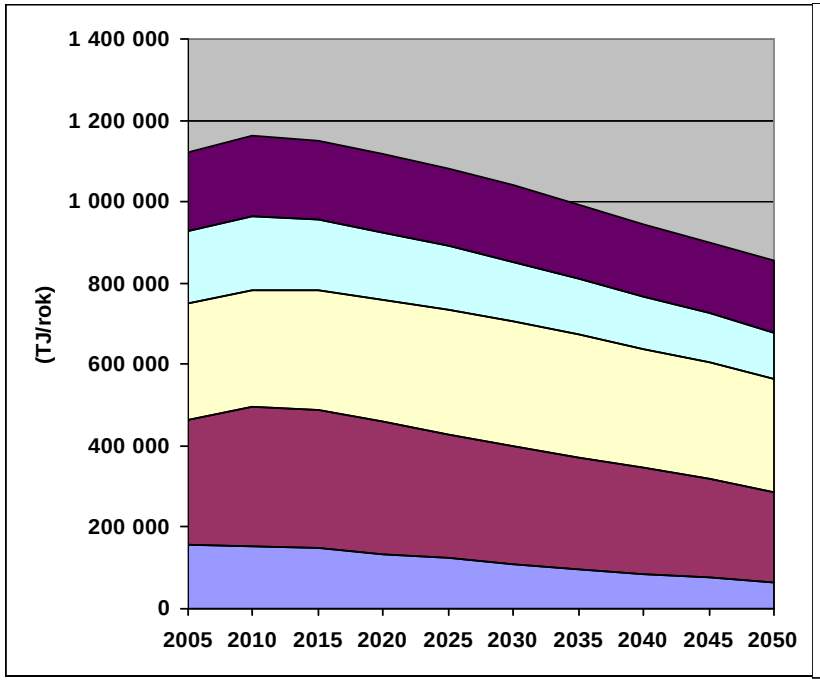
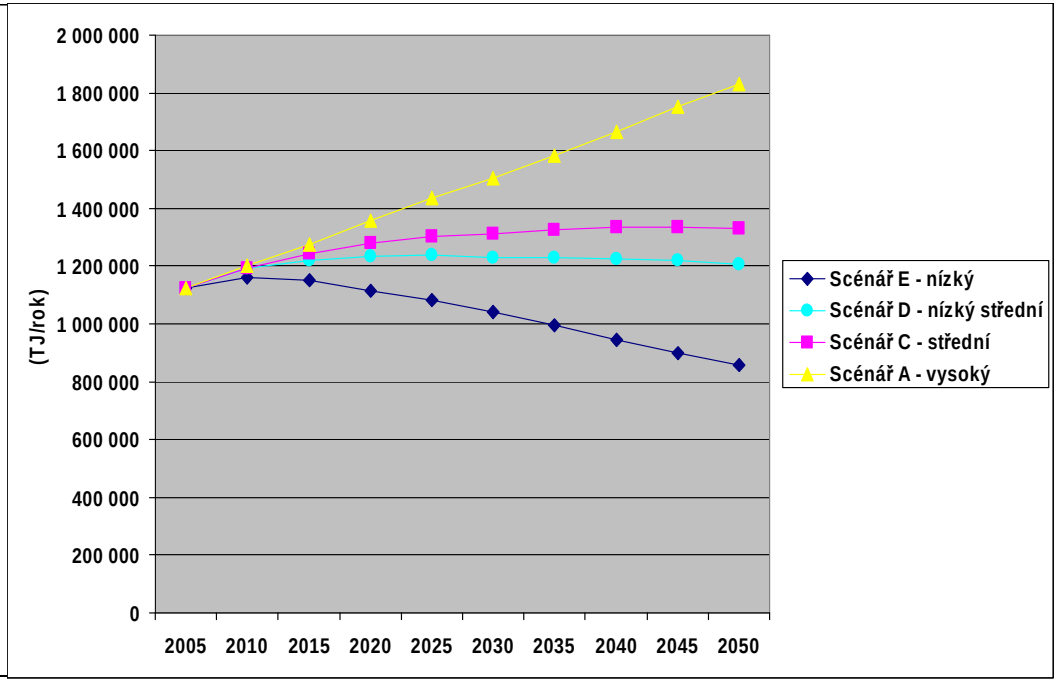
Potential of EE in Czech Republic: which way do we choose





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Potential of EE by sectors

- total end-use energy consumption: 1120 PJ
- potential in residential buildings: 142 PJ (60% of current consumption, space heating is a significant part)
- investment of 800 mil. euro annually for next 30 years is needed to utilize one half of the potential
- tertiary sector buildings: 33 PJ (45%)
- industry: 94 PJ (23 %)

Energy Efficiency funded from EU Structural Funds (1)

- Operational Programme Environment, 2007-2013, administered by State Environmental Fund (managed by MoE)
- Priority Axis 3.2: allocation of appr. 420 mil. euro for energy efficiency in schools, hospitals, city halls, other public buildings
- more than 1500 objects to be modernised
- the most successful support area of the Programme

Energy Efficiency funded by EU Structural Funds (2)

- acceptability criteria: reconstruction leading to low energy standard (certain average U-value of the building‘s shell)
- 1st call in 2007: applicants did ask for 8-times more funds than were allocated => no worry that criteria are too strict
- subsidies don‘t solve the entire problem but give an important signal to the market

Green Investment Scheme (1)

- EU doesn‘t fund efficiency in households (no support to so called housing)
- July 2008: Parliament says that revenues from AAU trading is an income of State Environmental Fund (managed by MoE)
- Czech Republic can sell >100 mil. AAUs (=100 mil. tons CO2 of Kyoto credits)
- so far 68.5 mil. AAUs sold, in its majority to Japanese buyers

Green Investment Scheme (2)

- three areas of support to residential (family and apartment) buildings:

A. Thermal modernisation to a defined (low energy) standard – complete (A.1) and partial (A.2) insulation

B. Construction of new passive buildings

C.1 Replacement of coal, oil or electricity heaters for new efficient biomass sources or heat pumps

C.2 Installation of these technologies to new residential buildings

C.3 Installation of thermal-solar panels

Green Investment Scheme (3)

- semi-mandatory and continuous support from 2009 to 2012 (or until funds finish)
- 150,000 to 200,000 projects expected
- bonus (D.) for combination of measures
- in August 2009 GIS modified and opened to a wider spectrum of applicants
  - lower investment costs needed for A.2
  - concrete-slab blocs and heat pumps to apartment buildings included
  - project documentation and energy performance assessment supported

Green Investment Scheme (4)

- initial barriers overcome (high-level of investment and proper documentation requirement + communication)
- appr. 1500 projects applied to the date
- benefits of GIS and OP Environment:
  - 1.2-1.5 mil. tons CO2 as expected annual emission reduction (~1 % of Czech emissions)
  - up to 30,000 jobs to be sustained or created
  - 140 mil. euro annually expected to be saved by households and municipalities on energy bills

Green Investment Scheme
A. Complete and partial insulation

- 20, or 30 % savings required in A.2, achieved by quality measures (defined by certain U-value or reconstructed parts)
- 40 % savings and 70 kWh/m2 (family houses) or 55 kWh/m2 (apartment buildings) required for higher subsidy in A.1
- subsidy as fixed amount per m2 of floor area – avoids risk of overpricing of projects
- easy to calculate, easy to understand

Green Investment Scheme
B. New passive residential houses

- 20 kWh/m2 (family houses) or 15 kWh/m2 (apartment buildings) required
- subsidy as fixed amount per family house or flat – avoids construction of large mansions
- subsidy in a level to promote higher energy standard of planned buildings, not to incentivise new construction

Green Investment Scheme
C. Renewables in buildings

- biomass heaters (boilers, stoves) with low local-pollutant emission and high efficiency standards
- heat pumps of certain Coefficient of Performance – to ensure sufficient greening
- solar collectors of certain solar gains
- subsidy as fixed (diversified) amount per installation of renewable energy source

Potential of RE in Czech Republic: how do we utilize it

- 448 PJ on primary energy input by 2050
- biomass (solid, biogas and biofuels) being the largest opportunity
- but wind, solar (PV and thermal), small hydro and geothermal being important
- subsidies (OP Environment, 3.1) and GIS help renewables on building and municipal level, and mainly for heat production

Feed-in tariffs for RES-E

- Act No. 180/2005 Coll. gives preferential and diversified by technology feed-in tariffs to renewables for electricity production
- 15+ years guarantee creates investors' confidence in the market
- permission process being difficult but measures for its streamlining have been identified and partly adopted (by MoE)
- information campaign for civil servants follows

What do EE and RE bring

- higher energy security through lower import dependence and decentralisation
- local and regional financial flows serving to a community development
- lower energy bills, higher living comfort
- new jobs, new opportunity to small and medium enterprises (incl. agriculture)
- reduction of local pollution
- and mitigation of climate change

Thank you for your attention

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