

RES and energy efficiency

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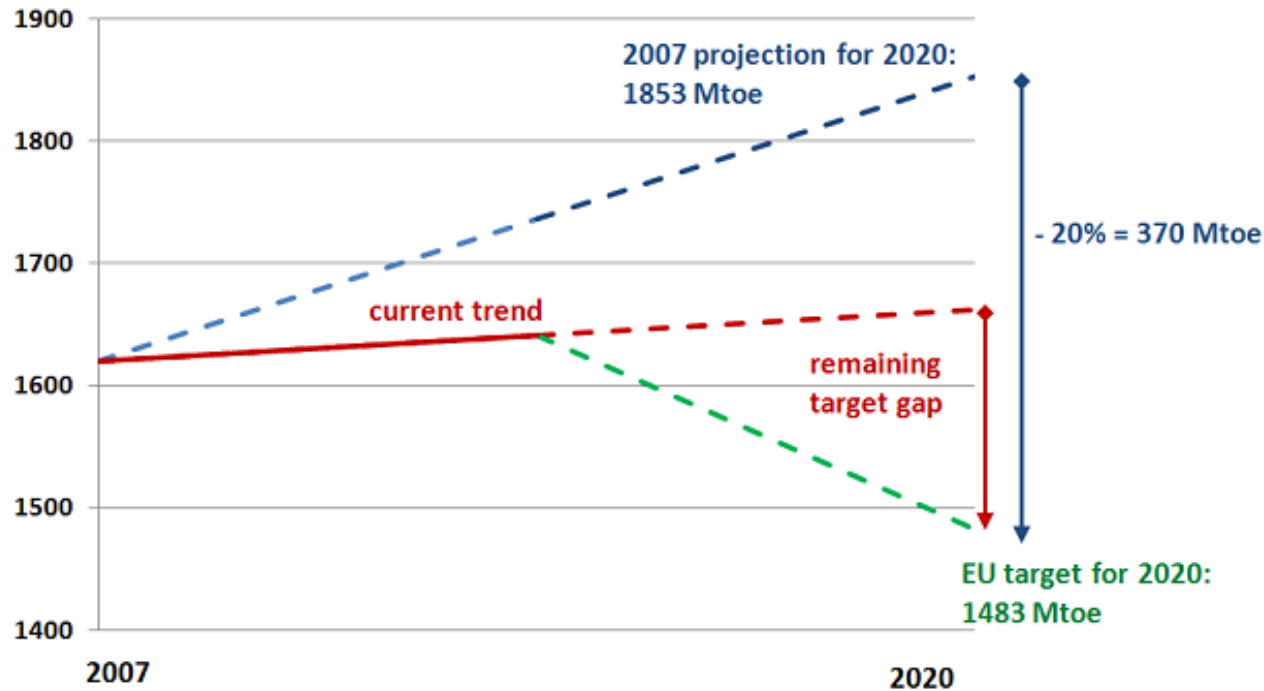
Environmental (climate) dimension of EEP

- Climate change – EU aims to develop a low-carbon economy.
- Measures primarily to reduce GHG emissions
 - EU ETS – covers 40% of EU emissions.
 - individual targets of MS for the non-EU ETS sectors (housing, agriculture, transport, waste) – cover 60% of EU emissions.
 - CCS.
- Measures to transform the energy sectors
 - RES
 - Energy Efficiency
 - Research and development, new technologies.

Energy efficiency

EU 20% energy savings target: the target gap

EU 27 primary energy consumption (Mtoe)



Energy efficiency

Energy and climate package 2009 (2020 targets): an energy consumption is to be cut by 20% by 2020 relative to the BAU scenario, (only) non-binding target (cap of 1483 Mtoe in 2020).

- Restriction on consumption of energy + increased energy efficiency.
- The only one that the EU is struggling to meet (18-19% by 2020).

Energy efficiency

- Energy efficiency.
- Energy savings.

- Why to invest in EE?
- How to measure the achievements? „Normal“ technological development, impact of other factors, modeling of the scenarios...?

- Vs. the goal of common market to deliver a cheap energy.
- Vs. the goal of energy security.

Energy efficiency instruments

- EU instruments:
 - Products (energy labeling, eco-design).
 - Transport (measures to cut vehicle and air transportation emissions).
 - Buildings (40% of all energy in the EU is consumed in building. Energy performance standards on new- esp. public - building).
 - Public procurement (energy efficiency a criteria when govts buy goods and services).
- National instruments:
 - National indicative energy efficiency targets
 - National plans with national measures. (NEEAPs)

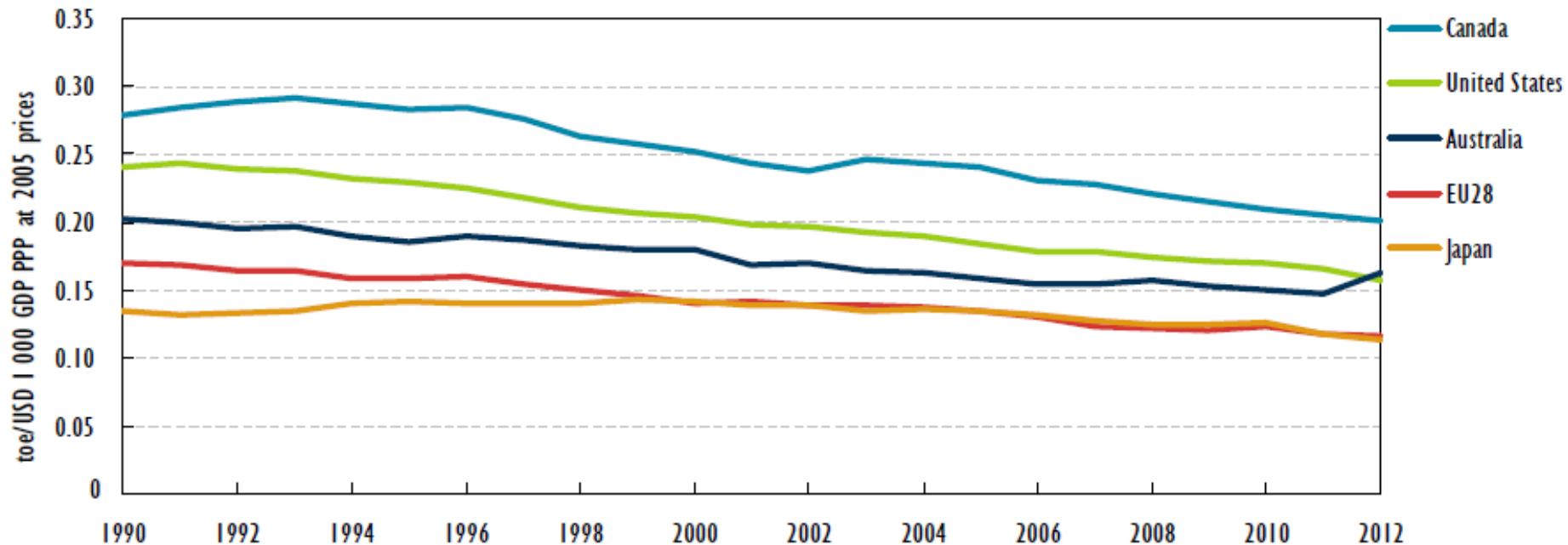
Energy Efficiency Directive 2012/27/EC

- Developed to reach 20% target savings.
- Binding measures, not binding targets.
- MS are required to:
 - Set national targets in line with the overall EU target of 20%.
 - Evaluate the situation in national heating and cooling systems, suggest some cost-effective measures to improve them (every 5 years).
 - The same for gas and electricity infrastructure.
 - Oblige energy providers to achieve cumulative end-use energy savings by 2020 equivalent to 1,5% of annual energy sales over the period of 2014-2020, against scenario.

Energy Efficiency Directive 2012/27/EC

- Introduce the metering and billing of actual energy consumption in all sectors – to provide consumers with data. v
- Prepare public procurement rules ensuring that central governments purchase only high-efficiency products.
- Large industry enterprises to carry out an energy audits at least every four years. Audits for SME must be promoted by governments.
- Increasing attention given to appliances.
- Buildings – new buildings and buildings under renovation to be „nearly zero energy“ by the end of 2020. To improve the energy performance of 3% of the total floor area of heated and/or cooled buildings owned and occupied by the central government every year.

Energy intensity in the EU and in selected IEA MS



Sources: IEA (2014a), *Energy Balances of OECD Countries*, OECD/IEA, Paris; IEA (2014b), *Energy Statistics of Non-OECD Countries*, OECD/IEA, Paris.

2018 revision of EED

- 2018 – revision of Energy Efficiency Directive – collective EU binding target of 32.5% by 2030 (possible revision in 2023). (Part of the Clean energy for all Europeans package).
- Each MS obliged to prepare a 10-year integrated National energy and climate plan (NECP) for 2021 – 2030.
 - Emphasis on metering and billing to give consumers signals to save
 - Transparent rules on the allocation of the costs of heating, cooling and hot water in multiapartment buildings.
 - Increased efficiency of electricity production.
 - And others, in line with previous versions.

Sources

- IEA (2014): Energy Policies of IEA Countries – The European Union
- Yeo, S.(2017): EU energy package: What it means for coal, renewables and efficiency
- The Coalition for Energy Savings: (n.d.): EU Energy Efficiency: Online Guide for Strong Implementation.