



Energy Efficiency Communication

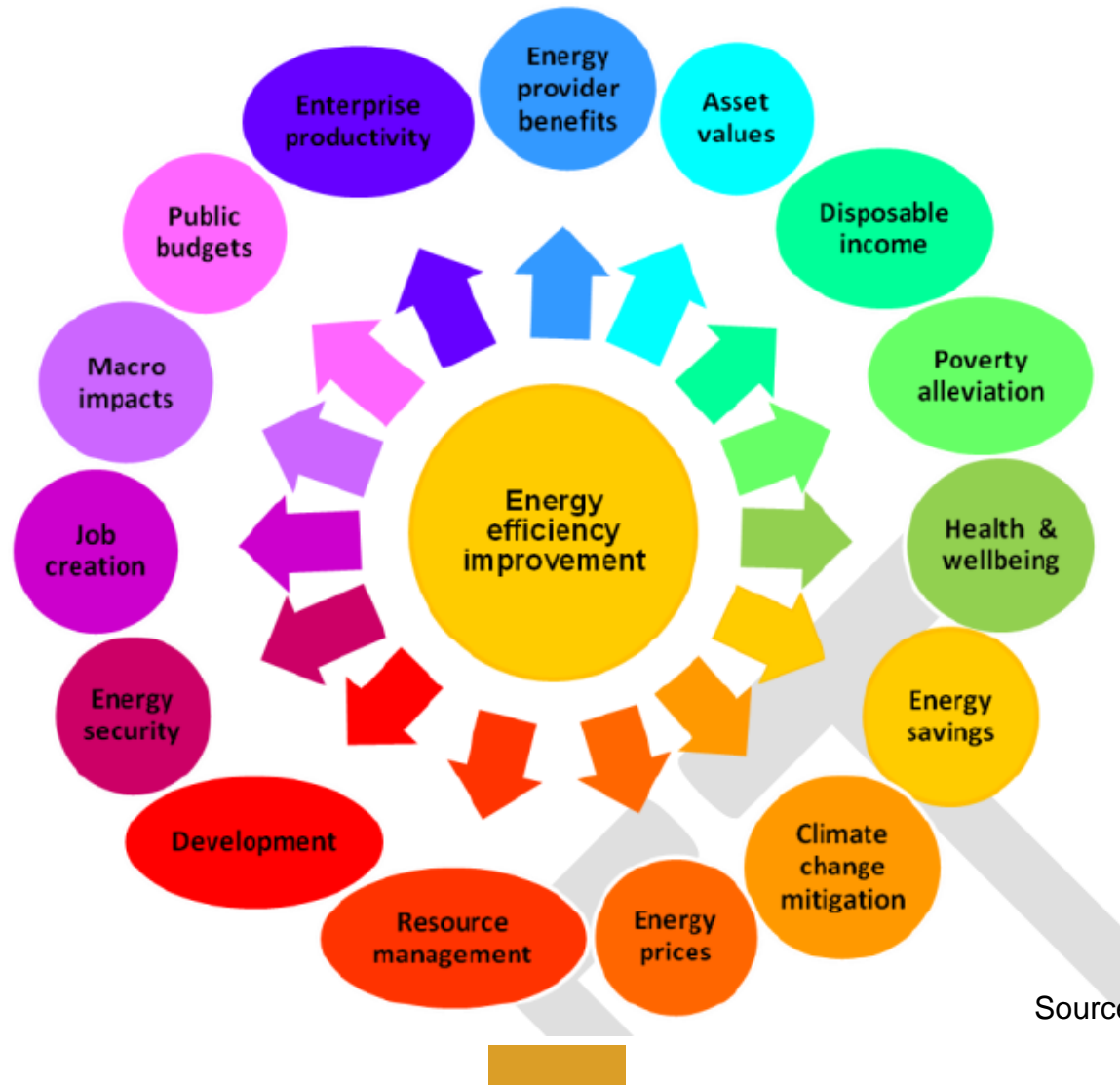
**Seminar on: "Target for energy
efficiency – Step in the right
direction?"**

Prague, 2 October 2014

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Energy Efficiency



Source: IEA



Energy Efficiency Communication

Communication on energy efficiency and its contribution to energy security and the 2030 framework for climate and energy policies, 23 July 2014

Agenda

1. Background and Structure of the Communication
2. Outlook and lessons learned for 2020
3. Level of ambition for energy efficiency in 2030
4. Next steps

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2020 (EED)

"By June 2014, the Commission shall assess progress achieved and whether the Union is likely to achieve energy consumption of no more than 1474 Mtoe [...] in 2020".

"The Commission shall submit the assessment [...] to the EP and the Council, accompanied, if necessary, by proposals for further measures".

2030 Communication

The mid-2014 review shall also: "[...] establish the exact ambition of future energy savings policy and the measures necessary to deliver it [...]"

"[...] consider whether energy intensity improvements of the economy and economic sectors, or absolute energy savings or a hybrid of the two represents a better benchmark upon which to frame a 2030 objective."

Questions to answer

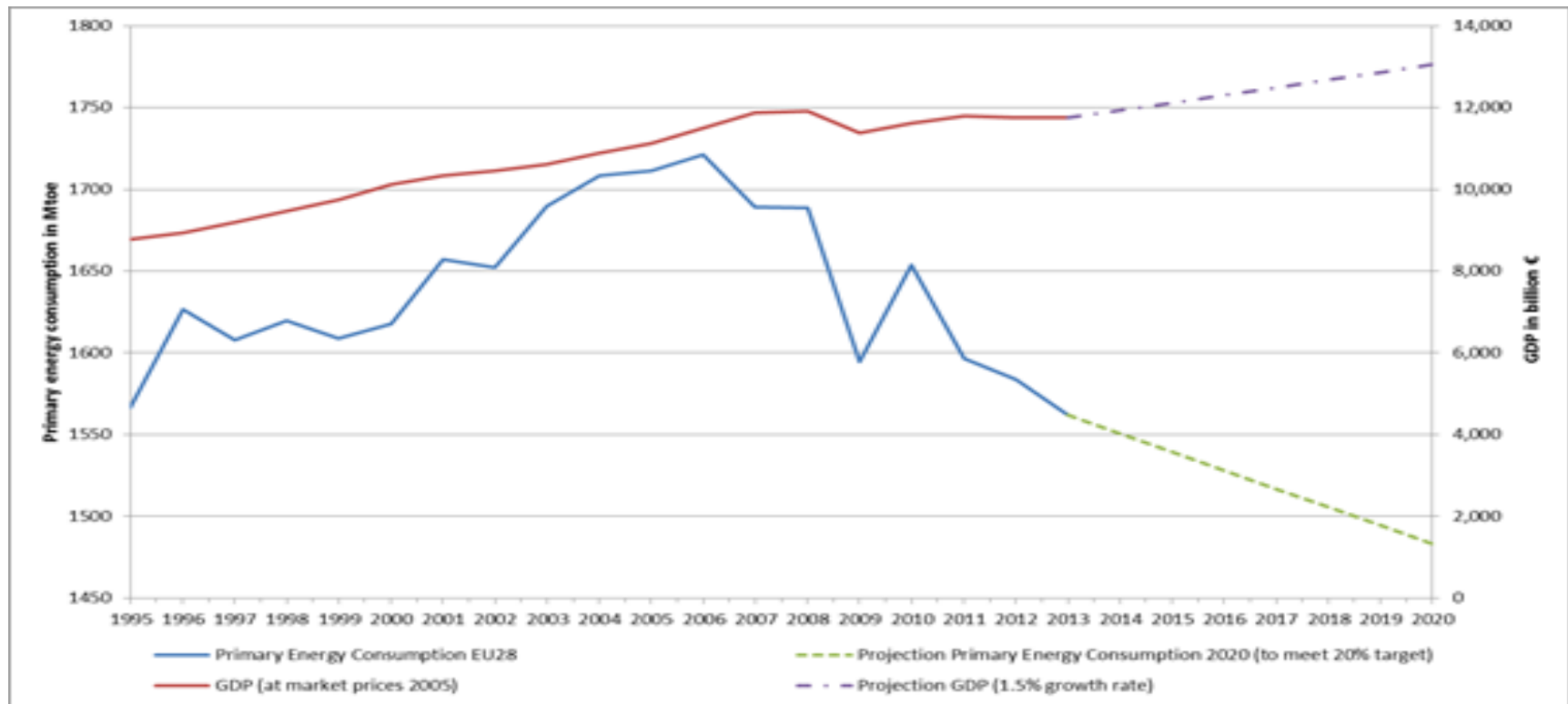
- a) Are we on track for 2020?
- b) If not, what should we do about it?
- c) What is the optimal level of ambition for energy efficiency in 2030?
- d) What should be the approach to achieve it?

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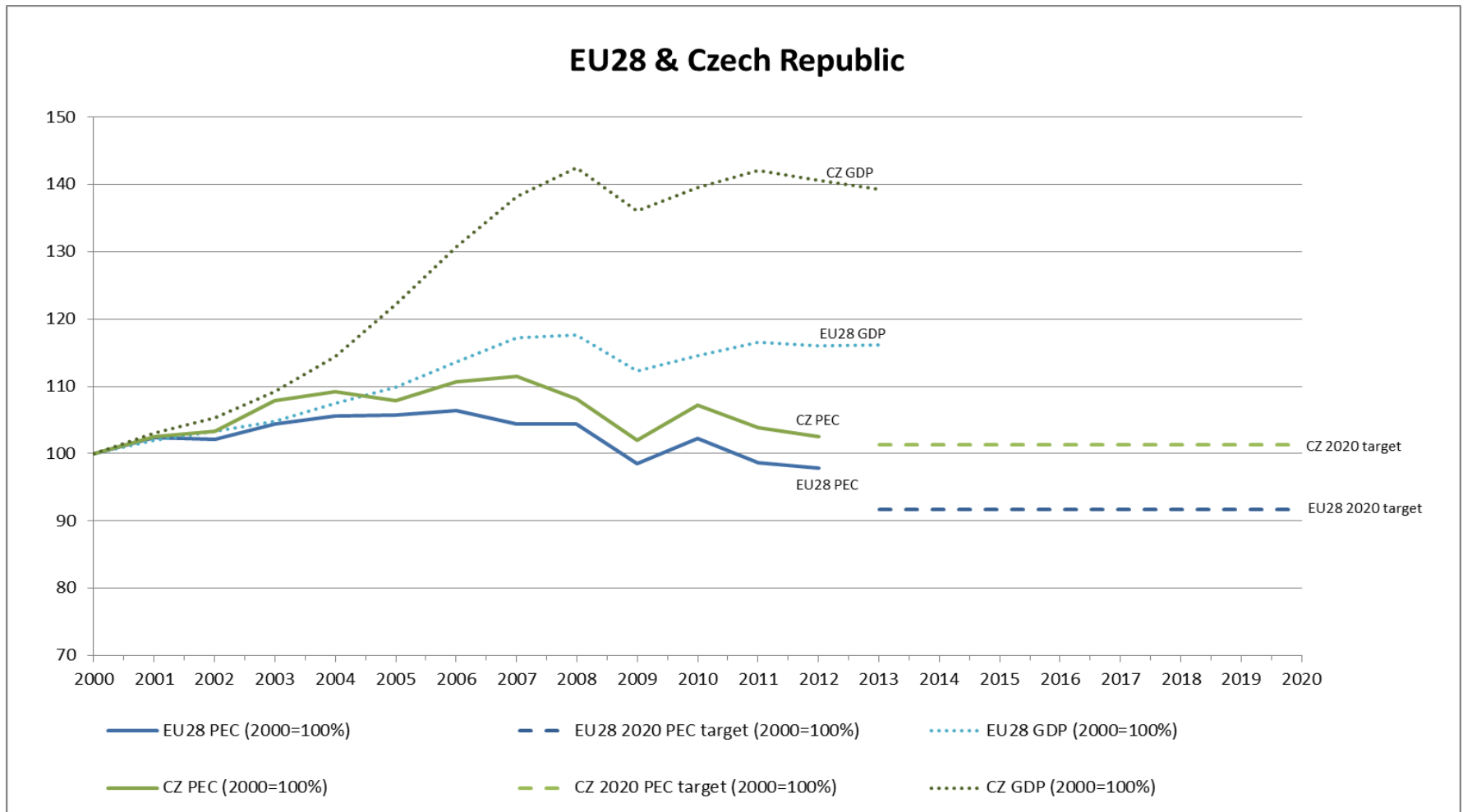
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Trends

Energy efficiency of the EU economy is steadily increasing; and economic growth is being decoupled from energy consumption



Trends – Czech Republic



Energy efficiency progress can be observed across all sectors



Between 1995 and 2010 the average consumption of new cars in the EU decreased by 27%.



New dwellings built today consume on average 40% less than dwellings built 20 years ago.



The share of refrigerators meeting the highest energy efficiency labelling classes (A and above) increased from less than 5% in 1995 to more than 90% 15 years later.



EU industry improved its energy intensity by almost 19% between 2001 and 2011, compared with 9% in the US.

There is progress in setting the right legislative framework

- NEEAPs point to a **strengthening of current Member States policies and the setting in place of new ones.**
- The number of Member States applying **energy efficiency obligation schemes** for utilities is expected to rise from five to sixteen.
- **Financing mechanisms** under the European Structural and Investment Funds are being diversified, with greater use of financial instruments.

At the same time in several cases the transposition and enforcement of relevant rules is delayed:

- Only six Member States have so far notified full **transposition of the EED**.
- At the moment, there are nine Member States that still have not completed the **transposition process of the EPBD** (deadline July 2012).
- Only a handful of Member States are conducting a proper **market surveillance** of products covered by efficiency requirements.

Based on an analysis of Member State actions and additional forecasts, the Commission now estimates that **the EU will achieve energy savings of around 18-19% in 2020.**

In order to bridge the gap to the target efforts should be concentrated on the following elements:

1. **Strengthening** local and regional verification of **national building codes** and accurately informing consumers of the energy performance of buildings for sale or rent;
2. Fully implicating **utilities** in working with their customers to obtain energy savings;
3. Strengthening **market surveillance** of the energy efficiency of products;
4. Make full use of available financing, in particular ESIF.

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2030 target

- 30% savings by 2030 (vs. 2007 reference) ensures broadly that the **current level of energy efficiency policy ambition is continued** (reducing consumption at a little over 17 Mtoe per year).
- While leading – on the same assumptions as the "2030" modelling – to **higher energy system costs** than savings below 30%, it results in **significant benefits** in terms of:
 1. Security of supply;
 2. Macro-economic (GDP, employment);
 3. Health and environment.

Impact Assessment – Methodology

Framework conditions

- PRIMES 2013 Reference.
- GHG 40%; split ETS/non-ETS maintained.
- RES 27%.

Policy options (scenarios analysed)

- Stepwise increase of EE policy ambition: 27%, 28%, 29%, 30%, 35% and 40% savings in 2030 (vs 2007 PRIMES).
- No changes in policy mix (based on current); just intensity.

Impacts assessed

- Energy system and security of supply.
- Economic impacts (system costs, investment expenditure, energy prices, GDP, employment).
- Competitiveness and affordability.
- Environmental impacts (CO₂ pollutants, health).

Energy system and security of supply impacts

- Fuel mix – Share of solids and nuclear fairly stable; oil declines with higher ambition; reductions in gas consumption are most pronounced.
- Security of supply – Every additional 1% in energy savings leads to a further reduction of about 2.6% in gas imports.

Indicator (2030/2050)	Ref	GHG40	Decarbonisation Scenarios					
			EE27	EE28	EE29	EE30	EE35	EE40
Net Energy Imports Volume (2010=100)	96 / 101	89 / 56	86 / 59	85 / 57	83 / 56	82 / 54	78 / 51	74 / 49
- Solid	77 / 49	68 / 42	61 / 40	65 / 38	61 / 38	62 / 34	70 / 30	59 / 29
- Oil	93 / 96	90 / 41	86 / 44	85 / 43	85 / 43	84 / 43	82 / 41	81 / 41
- Gas	105 / 122	91 / 74	88 / 82	84 / 78	81 / 74	78 / 69	67 / 65	60 / 59
- Renewable Energy	492 / 601	505 / 1043	509 / 1002	500 / 972	493 / 947	482 / 924	458 / 875	433 / 852
Fossil Fuels Import Bill Savings	n.a	-190 / - 3404	-285 / - 3349	-311 / - 3490	-346 / - 3637	-395 / - 3798	-503 / -4145	-549 / -4360

Energy system costs and investments

- Energy system costs - average annual costs (expressed as % of GDP) for the period 2011-2030 across all scenarios range between 0.01 and 0.79 percentage points of GDP **higher compared to the Reference** with a **shift from energy purchases to direct efficiency investments and capital costs**.
- Investments (av. annual 2011-2030) range between €851 bn and €1147 bn whereas in the Reference scenario they amount to €816 bn.
- Highest investment increase in the building sector.
- Capital investment leads to **increased amenity value** that could correspond to some 40% of the cost of investments in energy efficiency in the residential sector (according to a separate study).

Economic impacts (I)

- Electricity price changes compared to Reference are very small in 2030 ranging from +0.85% to +3.34% in the year 2030.
- ETS prices vary significantly (in the long term to a lesser extent).
- International fuel prices decrease up to about 8% in the case of gas and up to about 3% in the case of oil (to be further analysed).

Economic impacts (II)

- **GDP** decreases from -0,07% to -1.2% in 2030 if crowding-out is assumed (GEM-E3); increases from 0,49 to 4,45% if spare capacity in the economy is assumed (E3ME).
- **Employment** both models used show increases in employment from 0,5% to 2,96% (GEM-E3) and from 0,23% to 1,5% (E3ME) in 2030. Shift of labour from such sectors as Power and Oil to Construction, Metals and Transport Equipment.

Proposed 2030 target

- **EU target: flexibility for Member States.**
- The target should continue to be based on **absolute primary energy** consumption.
- COM will also look at **additional indicators** (e.g. energy intensity). Progress will be reviewed in 2017.
- The **governance system** proposed by the 2030 Climate and Energy Framework Communication will provide the framework for evaluating the effectiveness of national and EU energy efficiency policies.

Main challenges

Putting in place the right policy framework

- Effective implementation of current framework.
- Revision in the short and mid-term of certain elements of the framework (e.g. Energy Labelling; Article 7 and other elements under the EED).

Mobilising investments

- Effective use of European Structural and Investment Funds and other funding (EIC, H2020, etc.).
- Work with the financial sector to create the right framework conditions for investment (e.g. development of the right standards).
- Stimulate demand (through a robust implementation of existing and future rules, e.g. on EPCs).

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Next steps: 2030 Framework

European Council Conclusions	23-24 October 2014
Review of the products framework	Early 2015
Review of certain other elements of the framework	2015-2016
Work on implementation	Continuous
Work on financing (ESIF, EIB financial sector)	Continuous

Next steps: EED implementation

- Six Member States declared full transposition: Cyprus, Denmark, Italy, Malta, Romania, Sweden.
- Infringement procedures
 1. "Non-communication" of measures transposing a Directive:
 - Letter of formal notice sent to other Member States on 22 July 2014 (not public).
 - Member States had until 22 September 2014 to reply.
 - Next step: Reasoned Opinion (public).
 - Referral to the Court of Justice & financial penalty.
 2. "Non-conformity/bad application" cases:
 - The Commission has started to check conformity of national legislation with the EED.

Thank you!



For further information on energy efficiency
please consult our website :

<http://ec.europa.eu/energy/efficiency/>

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