



Renovation strategies for buildings

Opportunity for construction sector that
impacts future energy demand?

28 May 2013, Vienna, EHP Congress

Zakládající partneři



Významný partner



Partner

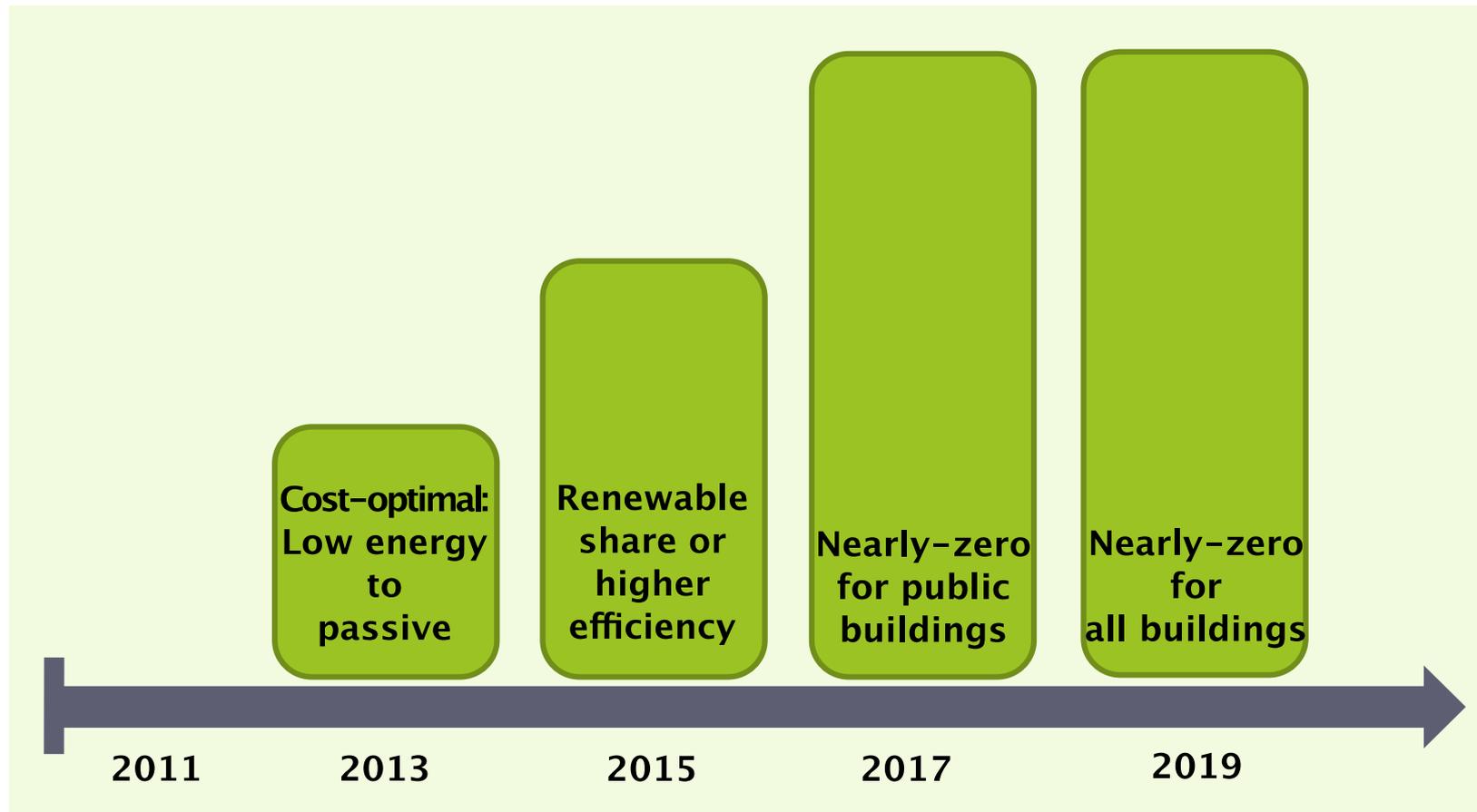




Chance for Buildings

- An alliance by leading trade associations that support energy efficient construction. It brings together the **Czech Green Building Council, Passive House Center, Mineral Insulation Manufacturer's Association** and the **EPS Association**.
- It represents over **200 companies** across the entire value chain of building construction and renovation. Chance for Buildings aspires to reap the crucial societal benefits of energy efficient buildings. We advocate for favourable policy and economic incentives, including proper implementation of relevant EU directives in the Czech Republic.

EPBD2: Roadmap to high performing buildings



EED: Renovation strategies for existing buildings

- Art 4 of EED complemented by Art 5 (public buildings) should bring a key strategy for the sector
- That should give a view what building stock may look like in the coming decades and allow long term planning needed for investments in the infrastructure
- Exploiting potential of reducing energy consumption by 60/70/80% ?? by 2050
- Increasing deep renovation rate to 3% each year
- Financial instruments needed: EU Structural Funds, EU ETS revenues, tax incentives, Energy Performance Contracting (EPC), Energy Efficiency Obligations under Art 7

Economic opportunity or disaster ?

- World Energy Outlook 2012 – Efficient World Scenario
 - additional capex 3.2 trillion USD, reduced opex 5.9 trillion USD (by 2035, only buildings, only OECD)
 - Europe and USA wins, Russia and OPEC loses
- Czech studies by leading economists Zamecnik and Lhotak
 - energy efficient buildings do insure owners against raising energy prices, NPV almost exponentially depends on energy price increase
 - financial instruments to support deep renovation of buildings have positive macroeconomic benefits (for tax collection, for economic growth)
- No doubt of the trend, no doubt of its economic benefits, question mark on how fast we go and how deeply we renovate our buildings

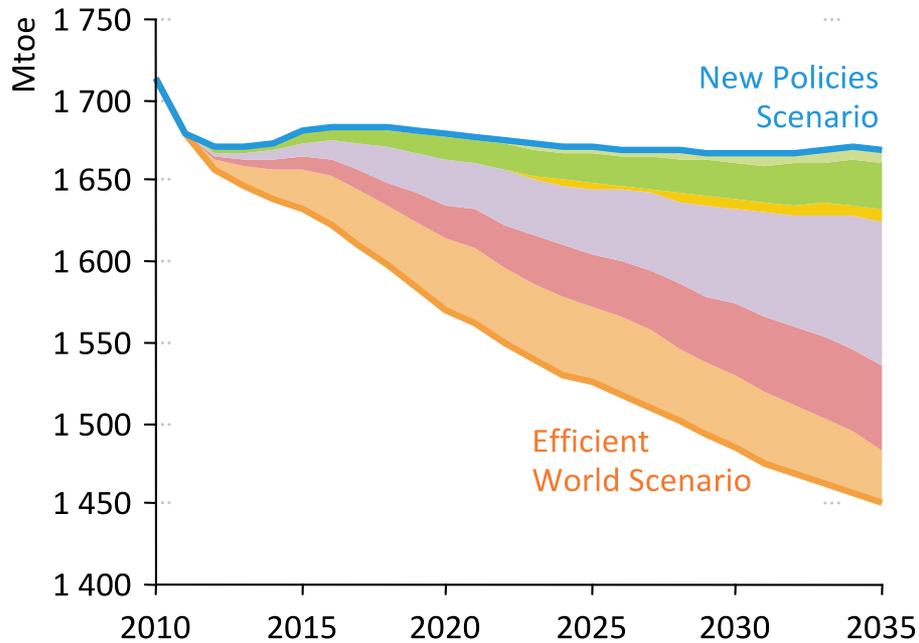
Efficient buildings and District Heating: A tale of final energy vs. primary energy savings

- Final energy savings in buildings last longer
- Construction and HVAC (+) sectors benefits
- Necessary for structural savings on primary energy
- But.. may also sometimes have a reduced effect on primary energy
- Non-renewable primary energy savings mean lower environmental impact
- Reduced fuel costs, embedded interest of DH and CHP sectors
- May lead to no savings on final energy

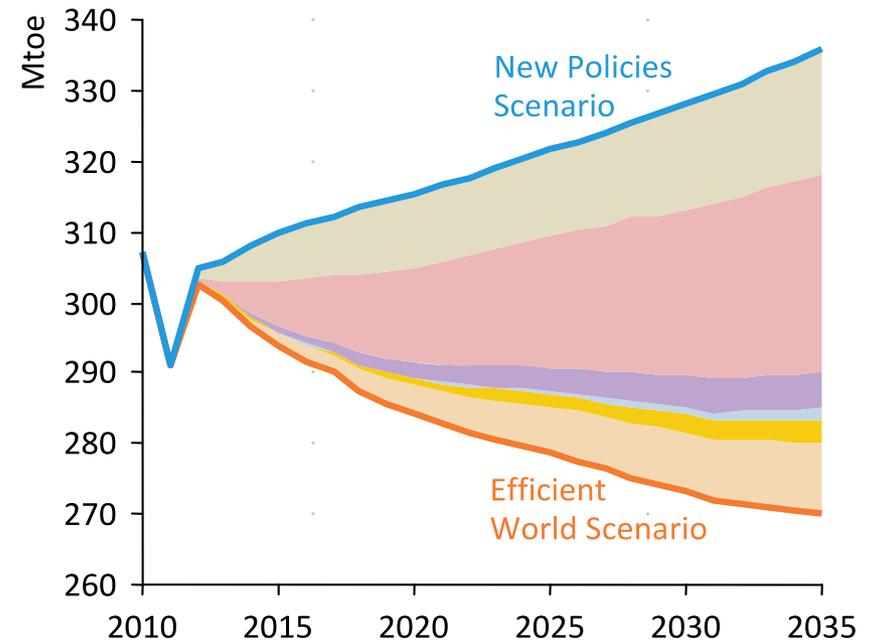
We need to reduce both final and primary energy consumption

WEO 2012 once more..

European Union primary energy demand



EU energy demand and savings in the residential sector



Efficient vs. inefficient District Heating

- Lack of compliance with emission limits under LCPD
- Out of proportion plants and grids (steam pipes)
- 30%+ losses from the distribution grid
- Summer electricity production with 20% efficiency
- Split incentives of municipal reps in boards
- Highly efficient CHP well-sized for the urban units
- Running mostly on renewable energy sources
- Minor heat losses from insulated pipes
- Regulating power for the electricity grid
- Selling energy services instead of energy volumes

District Heating in Efficient Buildings World

- Renovation strategy as an opportunity for long-term planning
- Roadmap for fitting DH into Efficient Buildings World needed
 - sometimes it means increasing share of DH in a country
 - sometimes it means swift modernization of plants and grids and coming to proportion with urban needs
- Can energy supplier make money out of energy savings?
- Joint debate on EEOs (implementation of Art 7, EED) highly welcome and coming up this year in all EU member states
- 2013 (and 2014) will shape our industries to a major extent, let's cooperate and look for a robust consensus



Thank you for your attention

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