

Energy Sector Reform in the Czech Republic

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About the Institute for Social and Economic Analyses

- ISEA is a small, independent think-tank in Prague focusing on economic and social reforms (education, employment, health care, pensions, etc) and democratic governance. Established in 2002 with support of Open Society Fund.
- Main goal is to provide sound policy recommendations to state institutions and civic society, via expert analyses on key reform debates facing Czech society.
- Strong emphasis on advanced statistics, as well as deep cooperation with agencies implementing social surveys and other survey instruments.
- Unique among Czech NGOs in terms of its successful funding by the Czech Science Foundation, the leading Czech grant agency for science funding.
- Despite our small size (cca 10 economists and sociologists, plus support personnel), we are quite influential due to the prestige of our researchers and our evidence-based approach.

Energy sector reform in the Czech Republic: Outline

1. Milestones of the country's energy sector development;
2. Development of the national energy regulator;
3. Energy efficiency programs;
4. Lessons learned;
5. Recommendations for Ukraine.

Energy sector privatization

- Restructuring of state enterprises in early 1990s; minority stakes sold in voucher privatization process in mid-1990s; state control remains
- Debacle and alleged corruption in energy sector privatization:
 - **Mostecká uhelná (1999)**: low price, money laundering scheme by Appian Group
 - **Unipetrol (2003)**: strict conditions leading low bid to win (Agrofert, PKN Orlen)
 - **OKD (2004)**: insider trading leads to tunneling of company by Karbon Invest
 - **Sokolovská uhelná (2004)**: foreign bids rejected, leads to cheap managerial buyout
- Somewhat positive case:
 - **Transgas (2001)**: Open bid process leads to many bids by European gas distribution companies; bid won by RWE for a better than expected price of 4.9 billion EUR.

Case of ČEZ:

Failed privatization and its consequences

- Attempt at privatization in 2001, but with conditions for maintaining targets for production from nuclear and coal; disqualification of most bids.
- New approach (Zeman): make ČEZ a “national champion” by supporting its monopoly on domestic market (e.g. its later purchase of Severočeské doly in 2005; plans for expanding Temelín) and support its regional expansion.
- State maintains 69% stake; receives annual dividends cca 800 million EUR
- Problems:
 - **Dependency** of state budget on ČEZ dividends (ČEZ profits become state interest)
 - **Lack of oversight:** ČEZ budget is half the size of entire state budget, yet not audited by the Supreme Audit Office; other public interest laws do not apply to it
 - **Too big to fail:** push for Temelín expansion, despite low domestic consumption (the equivalent of entire Temelín production is exported); major security risks involved – both geopolitical as well as environmental

State deregulation

- **1992 – Energy Policy of the Czech Republic: enviromental protection**, direct payments or subsidies by the state to the energy companies were gradually replaced by investments and loans of the companies themselves,
- 1990s: full regulation of final electricity prices by Ministry of Finance
- 2000: **The Energy Act: called for** gradual price deregulation by new independent national regulator (Energy Regulatory Office), beginning in 2001
- 2005: opening of electricity market for small businesses
- 2006: opening of electricity market for all customers
- 2007: opening of natural gas market for all customers

Electricity tariff structure in deregulated environment (2006-present)

- ERO sets tariffs only on the components of electricity prices, not on final price, enabling product differentiation (but also consumer confusion).
- These components include:
 - A capacity charge tariff for the circuit breaker selected by the consumer (rates for 14 different circuit breakers are determined)
 - Single-tariff rates for low, medium and high consumption
 - Two-tariff rates in which a low consumption period can be selected
 - Different rates for each of the 5 different distributors of electricity
- The combination of these tariffs means that, despite price regulation of these components, consumers have a wide choice of electricity distribution options to meet their household needs. Similar tariff structures are also issued for heat pumps, public lighting, etc.

Energy infrastructure: ČEZ

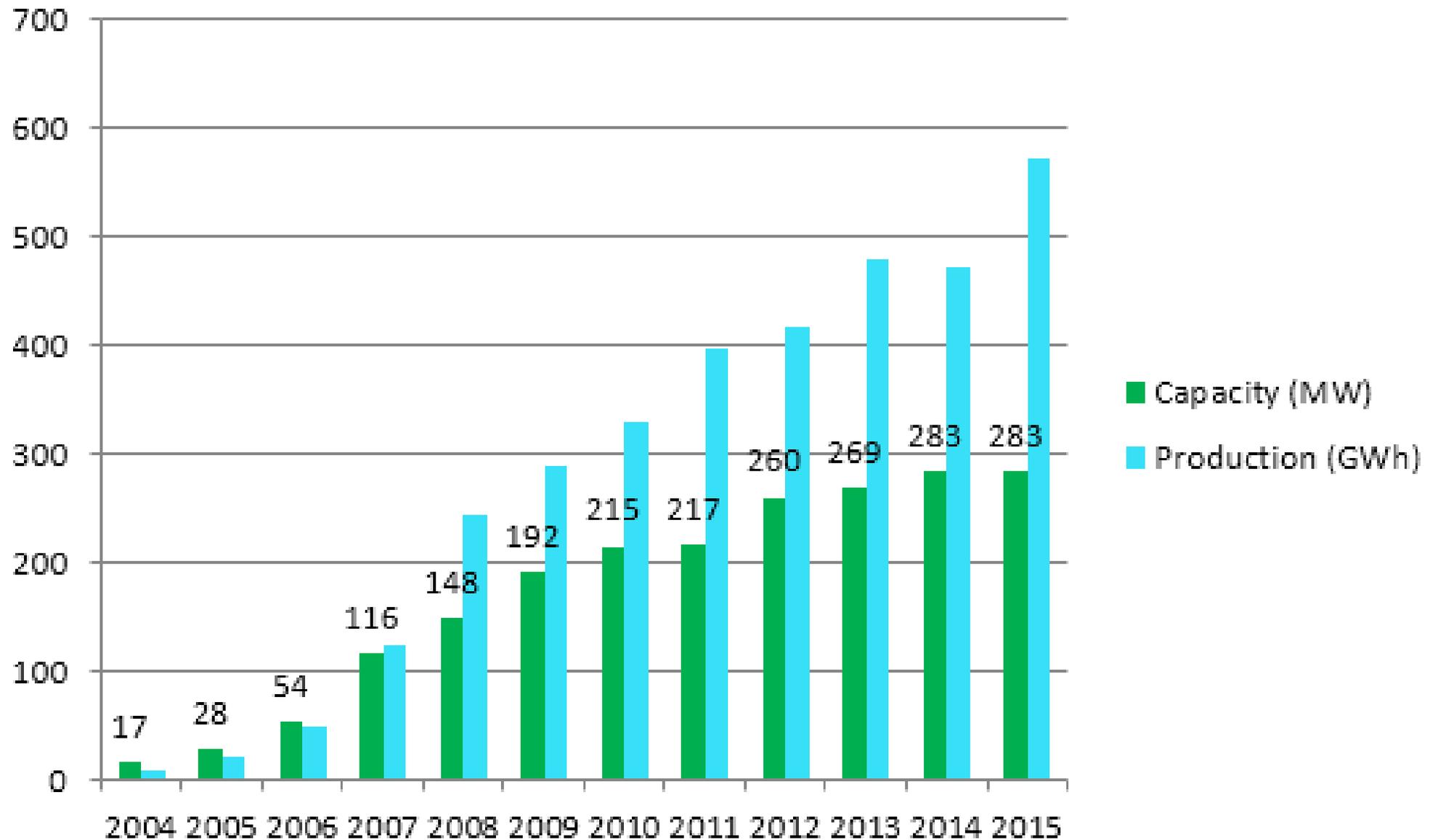
- 1985 - Dukovany Nuclear Power plant begins operations
 - Almost 2000 Mwe installed capacity in four smaller blocks
- 2000 –Temelín Nuclear Power Plant begins operations
 - 2000 MWe installed capacity in two identical blocks
 - Major protests by governments and NGOs and Austrian/German governments & NGOs
- 2009: Tender for Temelín expansion by two new blocks, bids received by Russia-led and US/Japan-led consortiums (Atomstroyexport vs. Westinghouse), highlighting political stakes;
 - Tender cancelled by ČEZ, citing market turbulence (depressed electricity prices)



Energy infrastructure: renewables

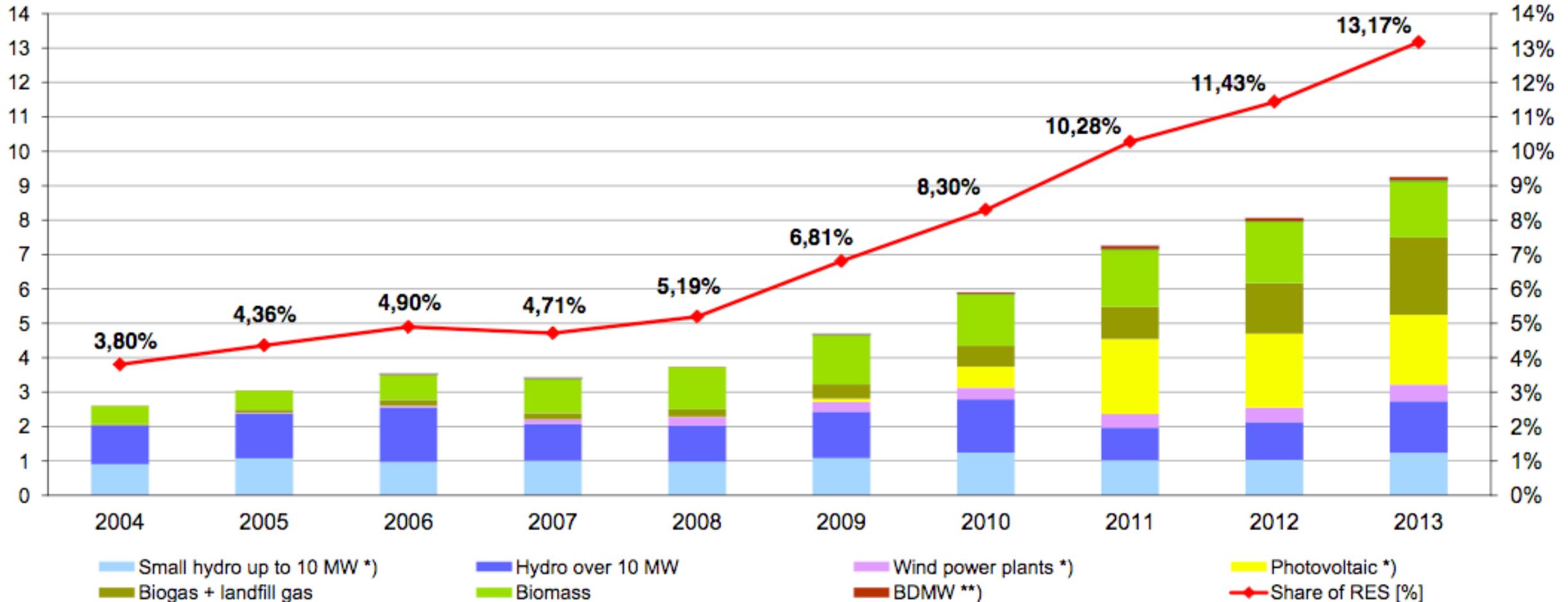
- **2005 Law on the support of electricity production from renewable sources**
 - Law guaranteed the level of the feed-in tariff, which is valid at the time of installation, over a period of 20 years for solar, wind and biomass plants, and 30 years for hydropower generators and 15 years for sewage gas-fired plants.
 - These tariffs ensured price transparency and stability for energy producers and a guaranteed minimum return on investment that can be calculated upfront.
 - Problem: allegations of political influence (as opposed to expert influence) in the setting of tariff levels, due to presence of Green Party in government; result is excessively high tariff levels, leading to huge profit margins for developers at the expense of Czech taxpayers
 - E.g. guaranteed tariffs of 526 Euros per MWh for installations commissioned in 2010, plus a 2% annual increase. Tariff system is abandon in 2014.

Czech wind turbines in operation

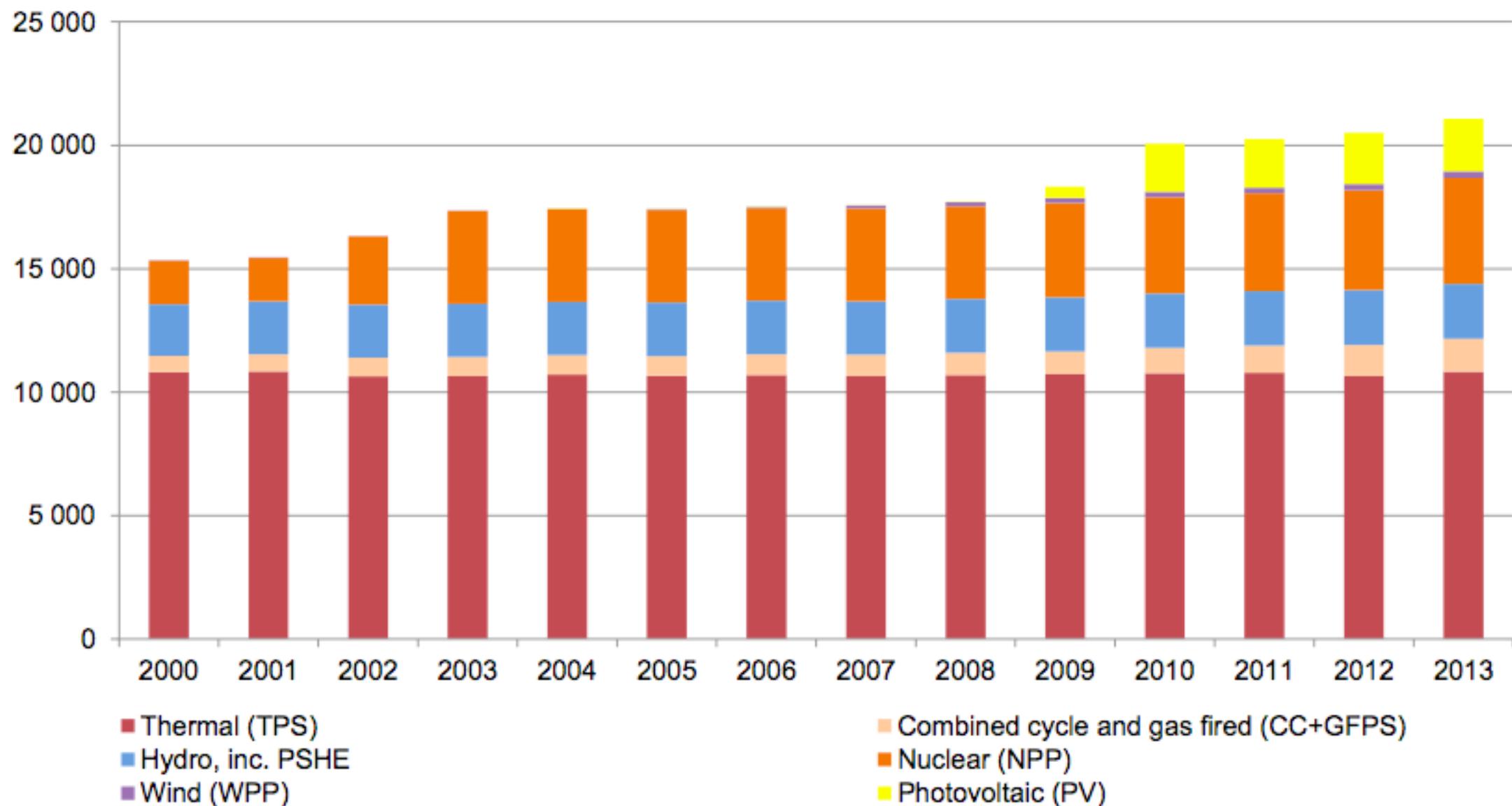


Development of Czech renewables

Electricity production from RES and its share of gross consumption in CR [TWh]



Installed capacity in the Czech electricity grid [MW]



Czech Energy Regulatory Bodies

- **1993** – Administration of State Material Reserves (e.g. oil, gas security)
- **1993** - State Office for Nuclear Safety
- **1997** – Radioactive Waste Repository Authority
- **1998** – Independence of ČEPS (operator of Czech electricity grid)
- **2001** - Energy Regulatory Office: tariff setting, oversight of energy market, competition, consumer protection – politically independent body
- **2001** – State Energy Inspection (part of Ministry of Industry and Trade)

Energy Regulatory Office (ERO)

- Based in Jihlava; established January 1, 2001
- Main activities as National Regulator (areas of electricity, gas, and heat, including renewables):
 - price controls
 - support for the use of renewable and secondary energy sources and combined heat and power generation
 - protection of customers' and consumers' interests
 - protection of license holders' interests
 - inquiries into conditions for competition
 - cooperation with the Office for the Protection of Competition (ÚOHS)
 - support for competition in the energy industries
 - supervision over markets in the energy industries

Three regulatory periods of the ERO

- **First regulatory period (2001-2004):** ERO was responsible for overseeing the liberalization of the electricity and gas markets, but also ensuring a proper balance between electricity and gas prices.
- **Second regulatory period (2005-2009):** Opening of electricity market for small businesses (2005), for all consumers (2006), and for natural gas (2007). ERO stops setting final prices, and only regulated the prices of components that contribute to the final electricity or gas price.
- **Third regulatory period (2010-2014):** Expansion of ERO oversight into renewables; in 2010, the ERO began issuing licenses for electricity production from renewable sources. In 2011, the ERO gained the authority to inspect energy suppliers and distributors, and also began to focus more on consumer protection and market integration with other EU countries. Cessation of feed-in tariffs for renewables in 2014.

Organizational structure

- Chairman: appointed by, and can be removed by, the government
 - The current chairwoman of the ERO is Ing. Alena Vitásková, who has served in that capacity since 2011.
- Main organizational sections of the ERO:
 - First Vice-Chairman Division
 - Internal Audit Unit
 - Security Director
 - Department of the Chairwoman's Bureau
 - Regulation Section
 - Legislation and Administration Section
 - Supported Energy Sources Department
 - Operations Section
 - Inspection Section
 - Section for European Affairs and Strategy

ERO: Controversies

- **Poor control** of licensing new solar installations, particularly in 2010; poor management of pricing of feed-in tariffs, due to ignoring trends in the costs of solar and wind technologies. “Boom-bust” cycle of RES due to ERO.
- **ERO oversight**: seen as wanting to crack down on solar and biogas expansion via investigations of possible fraud and criminal activity, rather than managing renewables expansion in a controlled manner
- **Chairwoman Alena Vitásková**
 - Elected by ODS, seen as ally of President Zeman; is currently running for Senate seat; not seen as politically independent
 - Controversial appointment of Renata Veselá (former Attorney General seen as strongly right-wing) as vice-chairwoman of ERO in 2014, even though Veselá lacked qualifications

Energy Efficiency Programs: Green Savings Program

- Program of Czech Ministry of Environment (administered by State Environmental Fund), with funds from selling EU Allowances
- Broadly seen as a successful program financially subsidizing investments in the the energy efficiency of residential and public buildings, as well as supporting the market in energy efficient construction
- Three phases
 - First Green Saving Program 1: 2009-2012
 - Second Green Saving Program 2: 2013
 - Third Green Saving Program: 2014-2020

Program objectives

- Three support areas: 1) reducing energy performance in existing family houses; 2) the construction of family houses with very low energy performance (“passive homes”); 3) efficient use of energy resources.
- The program aims to improve the environment by reducing emissions of pollutants and greenhouse gases (mainly CO₂), as well as saving energy in final consumption.
- Support is generally for subsidization of:
 - thermal insulation of existing facades, windows and doors;
 - the construction of new passive homes;
 - the replacement of energy inefficient sources of heat (old coal stoves) for environmentally-friendly sources (such as biomass boilers and heat pumps);
 - heat recovery from exhaust air;
 - and building photovoltaic systems on homes.

Who can apply for support

individual residents and entrepreneurs (natural and legal persons)

owners associations

housing associations

cities and municipalities (including municipal districts)

business entities

other legal entities

Finances

- Annually about 50 million EUR available – largest subsidy program in Czech Republic targeting households
- Up to 50% of costs can be reimbursed (typically)
- Remodeling must be carried out first, then subsidy can be requested, based on proper documentation of energy efficiency improvements and proper receipts of construction work
- Maximum amount of subsidy per household: about 185,000 EUR
- For the construction of passive homes, support limited to 16,650 EUR
- Maximum amounts of subsidy is also limited by the type of remodelling (windows, doors, solar panels, roofs, biomass boiler, heat pump, etc)

Lessons learned (1)

- Transparent privatization is key:
 - government should not impose conditions for bids, as it suppresses competition and thus prices (instead, privatized firm can be regulated by National Regulator)
 - Potential of corrupt links between political actors and domestic bidders (much greater risk than from bribes from foreign and domestic corporations)
 - Attempt to protect workers in energy sector can have unintended consequences (better to let energy market decide what firms succeed, and use extra funds from privatization for social support)
- Without privatization, risk that powerful state-owned enterprises (ČEZ) will control or dictate state policy, rather than the state dictating energy policy (risk of “state capture”)
- True independence of Energy Regulator is a slow process; not achieved all at once

Lessons learned (2)

- Feed-in tariffs can be good system for support of renewables, but the pricing level must be set by experts, and in a cautious way to avoid boom-bust cycles;
- Evidence that the Czech boom-bust cycle led to 1) increased electricity prices for consumers, as well as that 2) political insiders and shell companies largely benefited
- Green Savings Program is very successful, because it uses the European Union Allowances to continue to support energy efficiency
- That program also benefits ordinary households and municipalities, rather than just the ultra-rich

Recommendations for Ukraine (1)

- If any enterprises are still to be privatized, solicit bids from major European actors that can boost efficiency and investment, and place market competition as a priority over maintaining *status quo*.
- Energy sector reform should go hand-in-hand with anti-corruption reform.
- Absolute need for strong, independent regulator for setting tariffs, for consumer protection, and for competition in the energy sector.
- Regulator should be appointed by the President and approved by the Parliament, to help ensure balanced, non-political candidates are appointed.
- Tariffs set by the National Regulator for electricity and natural gas should enable competition, product differentiation, and modest profit margins, as well as ensure that price increases or decreases are harmonized with changes in the average Ukrainian income.

Recommendations for Ukraine (2)

- Energy efficiency programs are costly, but are cost effective in terms of increasing energy efficiency of existing housing stock
- Do not support subsidies for new homes/buildings, with respect to size of housing stock and demographic decline
- Support modest feed-in tariff system for renewables, with prices that are stimulative but not leading to a boom-bust cycle; this should also be seen as a potentially large market for employment
- The price for supporting renewables should be seen in light of the geopolitical risks of the current energy supply and thus the need for domestic diversification.

Thank you!

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