Nuclear Power in Clean Energy System

The Outlook for Nuclear Power in Advanced Economies

MINISTRY OF
INDUSTRY AND TRADE

Ing. et Ing. René Neděla
Deputy Minister of Ministry of Industry and Trade

Current status

- The Czech Republic operates two nuclear power plants with a total of six VVER units – in South Bohemia the NPP Temelín (2x 1125 MWe) and in South Moravia the NPP Dukovany (4x 510 MWe).
- NPP Dukovany is currently in the phase of long term operation (since 1985 more than 30 years of safe operation).
- Both NPP are owned and operated by partially state owned utility ČEZ, a.s (the State owns almost 70% share).

Nuclear energy in context of overall energy policy (State Energy Policy)

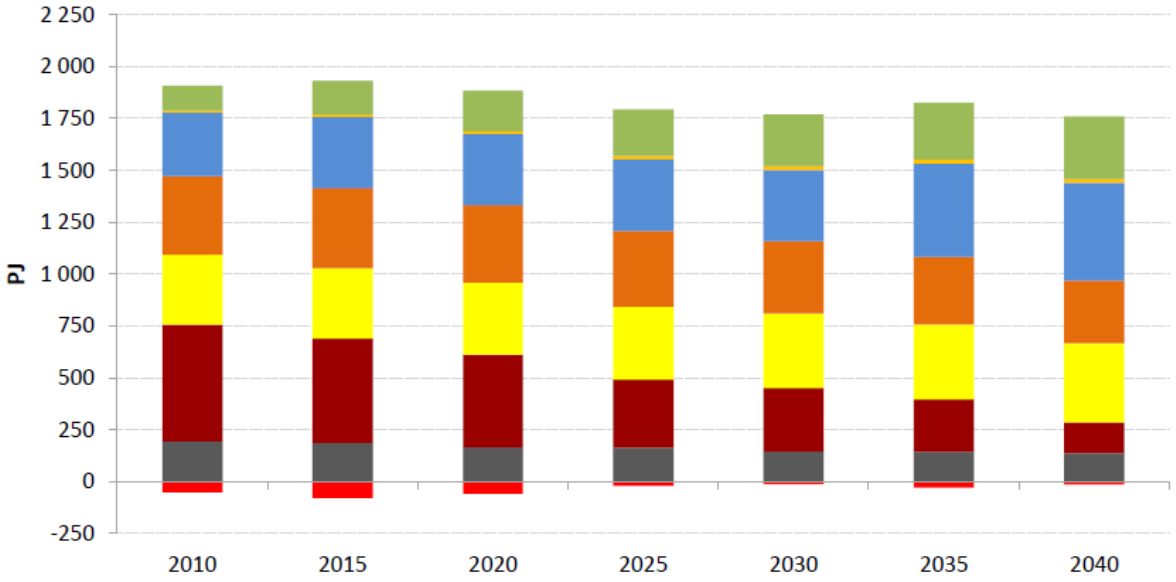
Nuclear energy is planned to be the vehicle for:

- Transition to a low/zero carbon energy in 2050 (in line with our commitments to decarbonization targets)
- Ensuring energy security (ability of long-term electricity supply even in the absence of external supply sources)
- Ensuring reliable and price competitive electricity for economy, industry and households
- Safety and protection of environment

Initial assumptions

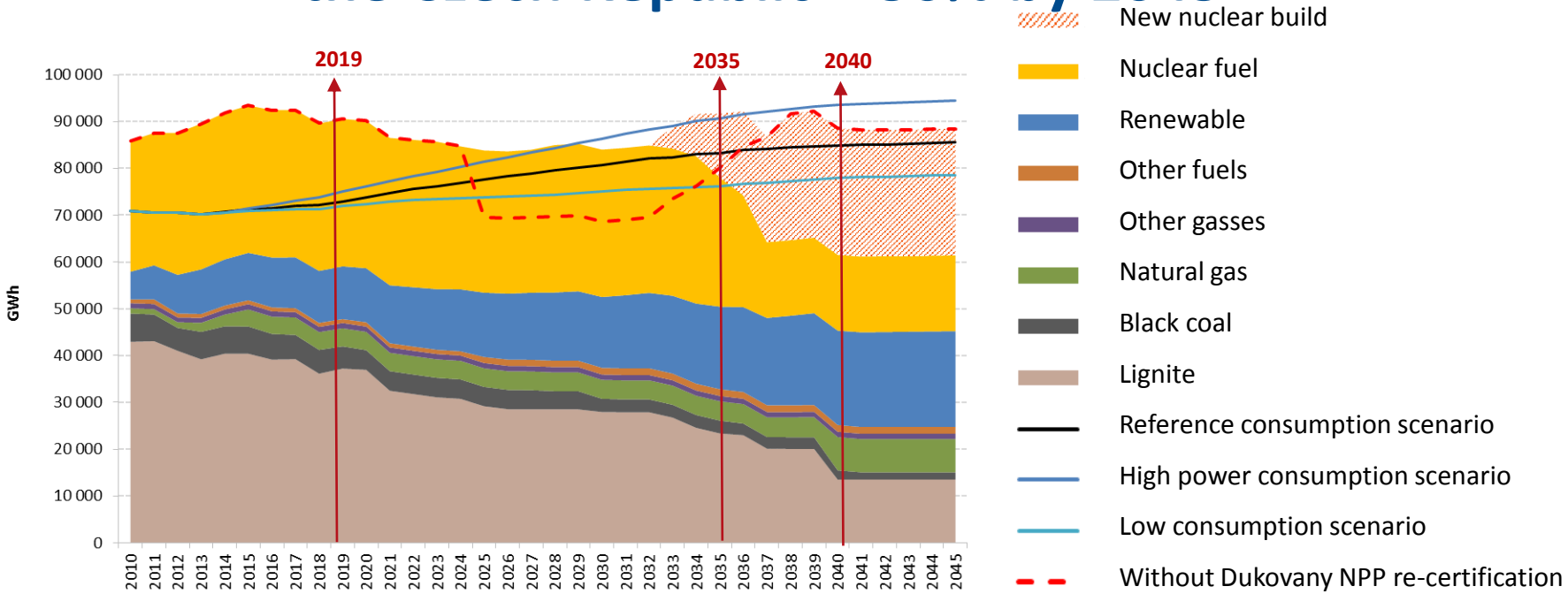
- According to our projections of future development in energy sector, consumption of electricity in the CZR will be further increasing due to further/continued electrification of economy/society.
- At present nuclear energy plays an important role in the Czech electricity generation portfolio; contributing to app. 33 % of annual electricity production.
- Under current knowledge and conditions there are no zero-emission energy sources that could replace coal at the needed extent, but the nuclear
- No-action approach would lead in the near future to considerable electric energy production gap -> this would jeopardize security of energy supply.

Development and structure of primary energy sources

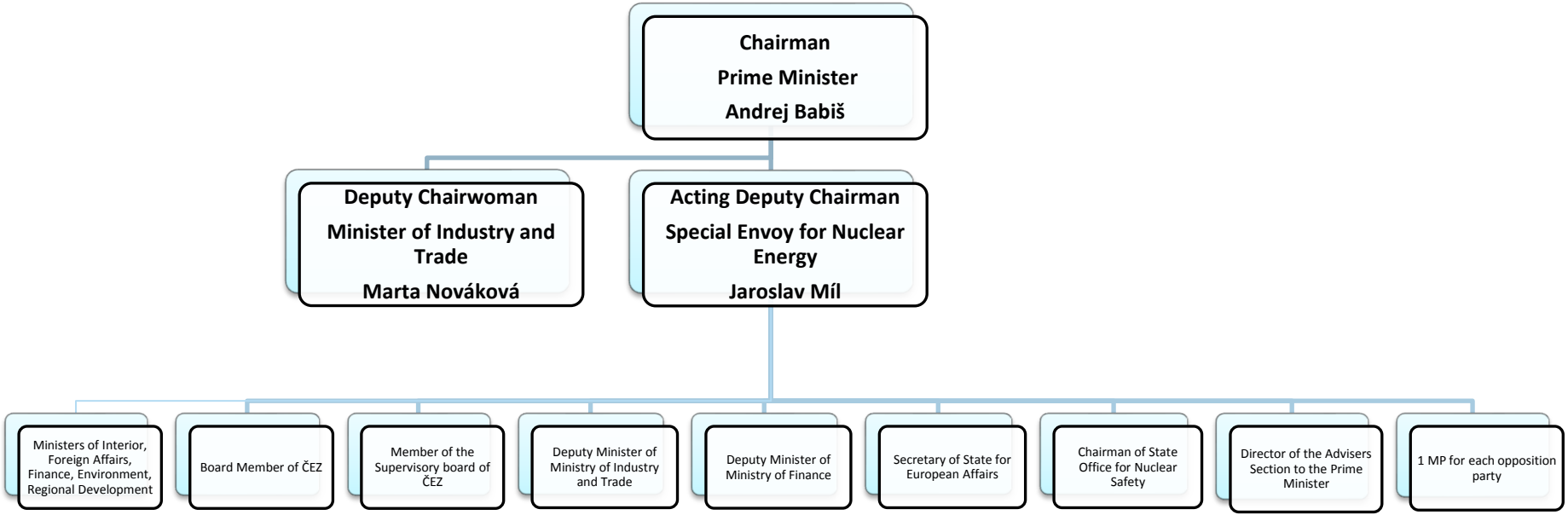


Renewables
Other fuels
Nuclear fuel
Oil and oil products
Natural gas
Lignite
Black coal
Electricity (balance)

Planned nuclear power share in electricity generation in the Czech Republic – 50% by 2045



Permanent Commitee for Nuclear Energy



Thank you for your attention

MINISTRY OF
INDUSTRY AND TRADE

Ing. et Ing. René Neděla
Deputy Minister of Ministry of Industry and Trade