Hungarian roadmap for phasing out coal and lignite from electricity production

Dr. Péter Kaderják
State Secretary for Energy and Climate Policy
How to sustain a coal and lignite phase-out that is as swift as possible while also ensuring the security of supply, affordable electricity and a just transition in regions dependent on coal?

Now

➢ 1 operating lignite fired power plant in Hungary (Mátra power plant)
  ▪ largest CO₂ emitter in Hungary, accounting for approximately 50% of CO₂ emissions in the energy production sector
  ▪ responsible for 14% of the total Hungarian GHG emission
  ▪ contributes to the emission of other hazardous air pollutants like PM2.5, PM10, SOx and NOx

➢ 1 coal fired power plant in Hungary (Vértes power plant) – phased out already as electricity provider

Future

✓ until 2030 all Hungarian lignite and coal fired power plants will be phased out
✓ 90% of electricity production should be decarbonised by 2030 (currently 60%)
✓ decommissioning of lignite-fired power plant decreases GHG emissions and emissions from hazardous air pollutants
Achieving the main targets of the recently adopted 2030 and 2050 energy and climate strategies also requires a gradual decarbonisation of the electricity sector.

Major energy and climate objectives for Hungary:
- **2017**: GHG: -32%, RES: 13.3%, EE: = 2005 (785 PJ)
- **2030**: GHG: min -40%, RES: min 21%
- **2050**: GHG: -100%

Energy and GHG intensity of Hungarian GDP 2000 - 2030:
- 2018: + 5.1% GDP, - 0.7% GHG
- 2019: + 4.9% GDP, -0.3% GHG
Decarbonisation of the electricity sector: No1 flagship project

- Decarbonising the power sector: 90% in 2030 vs 60% in 2020
- Nuclear capacity renewal
- Lignite phase out
- Solar-heavy RES-E portfolio build-up: 6.6 GW by 2030; 12 GW by 2040
- Gas based generation as primary backup
- Grid upgrade and re-regulation
- Flexibility market
- 1 million smart meters
- Import ratio: 20% in 2040
The reorganisation of the Mátra Power Plant goes beyond technological aspects, as it should also take into account the social-economic and environmental effects of the plant’s operation.

Decarbonisation plan for Hungary’s largest CO₂ emitter

Conversion of the lignite-fired Mátra Power Plant based on low carbon technologies, benefiting from the characteristics of the site.

Components of the reorganisation plan

- Construction of a new gas turbine power plant at the site of the Mátra Power Plant, with particular relevance for ensuring the security of supply in the eastern area of the country.
- Construction of a new PV power plant and industrial energy storage unit, and the energy recovery of refuse derived fuel (RDF).
- 1 lignite-fired block of the Mátra Power Plant is planned to be maintained as strategic reserve for emergency situations.
- Testing innovative RES-based technologies in the area of former outcrop lignite mines.
- Recultivation of former lignite mines.
- Economic diversification in the former coal- and lignite regions.
- Retraining programs for employees.
- Managing the situation of vulnerable energy consumers.

Financing from

a) LIFE Integrated Project supporting the whole North-Hungarian coal region between 2020 – 2029 and Just Transition Fund
b) Other financial means.
Thank you for your attention