

# Coal Region in Transition Platform

## STRATEGIES AND PLANS FOR COAL REGIONS IN HUNGARY

**Ministry for Innovation and Technology**  
**State Secretariat for Energy and Climate Policy**

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5 November, 2018



## WHAT ARE THE EFFECTS OF CLIMATE CHANGE IN HUNGARY?

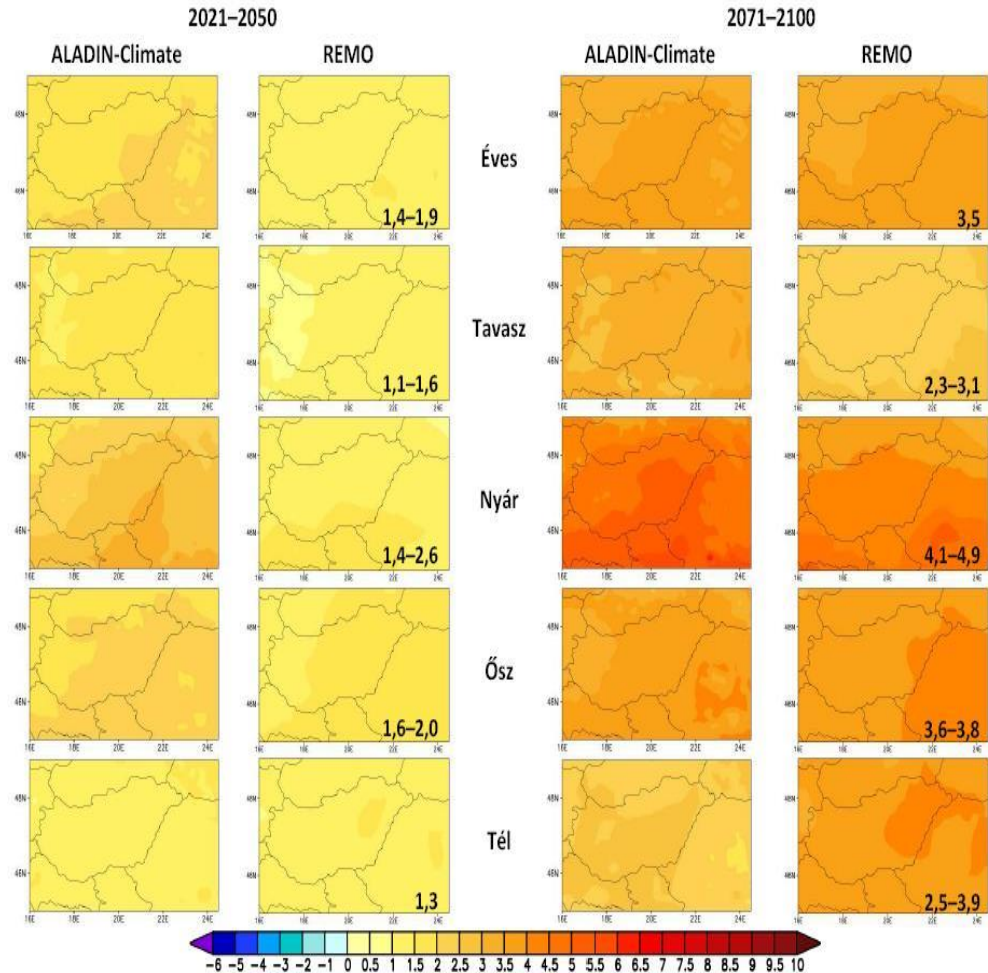
### Changes in the climate of Hungary:

- the 1° C rise in temperature since the last century has been higher than the global change

- The last 30 years shows intense warming

### Expected Climate Change in Hungary:

- average temperature will increase
- the expected evolution of climate extremities shows a distinct spatial distribution and affects primarily Central, Southern and Eastern regions of Hungary unfavorably

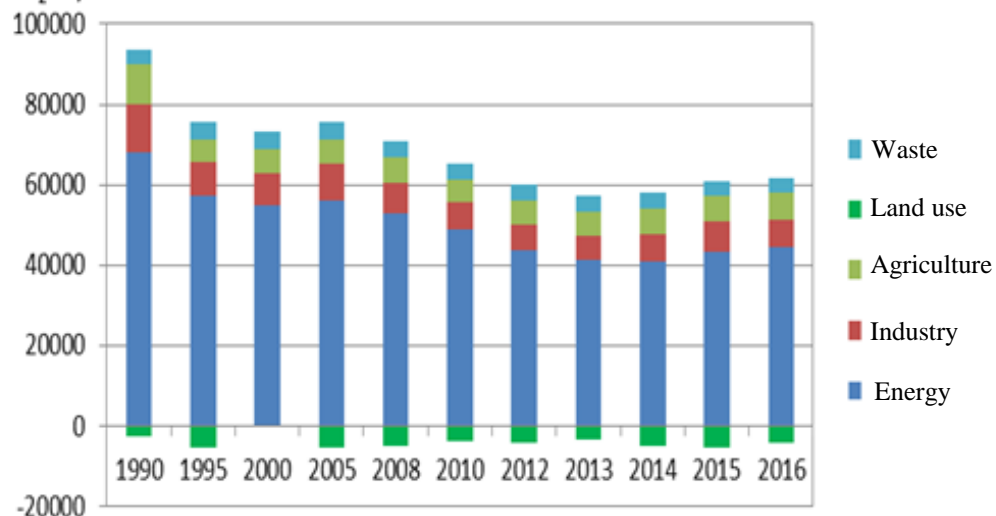




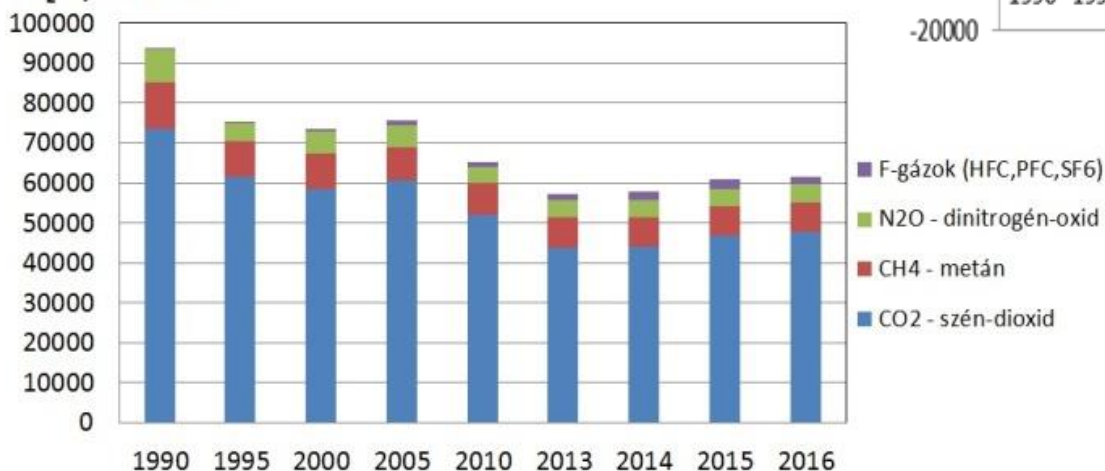
## CO<sub>2</sub> EMISSIONS IN HUNGARY

- **2016:** 44% reduction of greenhouse gas emission compared to 1985-87

CO<sub>2</sub> eé, ezer tonna



CO<sub>2</sub>eé, ezer tonna



- **2016:** Largest contributor: energy sector



10,0 t



12,0 t



18,5 t



8,7 t



8,5 t



6,2 tons  
(CO<sub>2</sub> eq)



1,8 t



11,0 t



7,6 t



20,2 t



6,8 t



## SECOND NATIONAL CLIMATE CHANGE STRATEGY

*First National Climate Change Strategy*



**Act LX. Of 2007 in force in 2013**



*draft of the second National Climate  
Change Strategy*



**Paris Agreement**

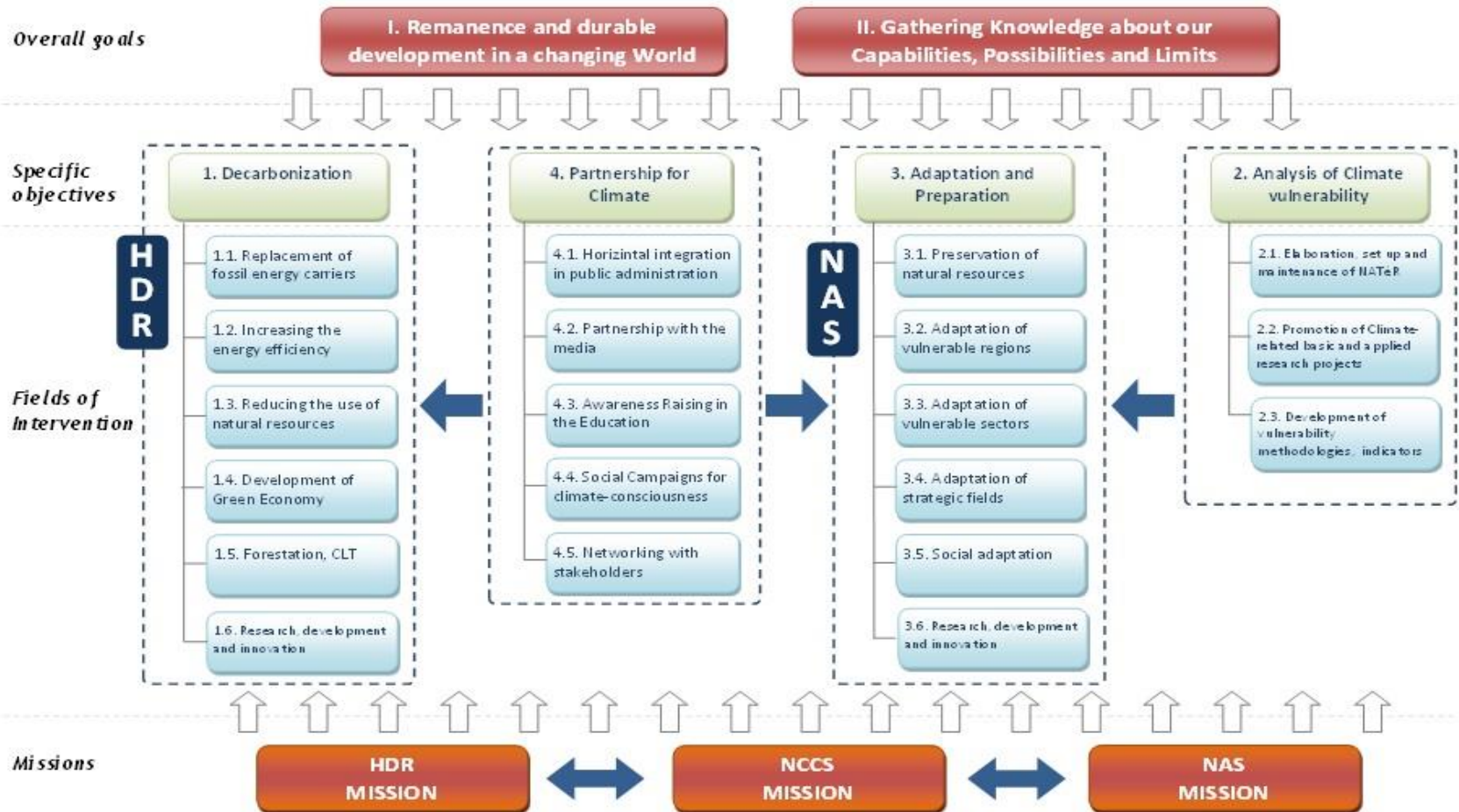


*Revision (approved by  
the Parliament on 29  
October, 2018)*

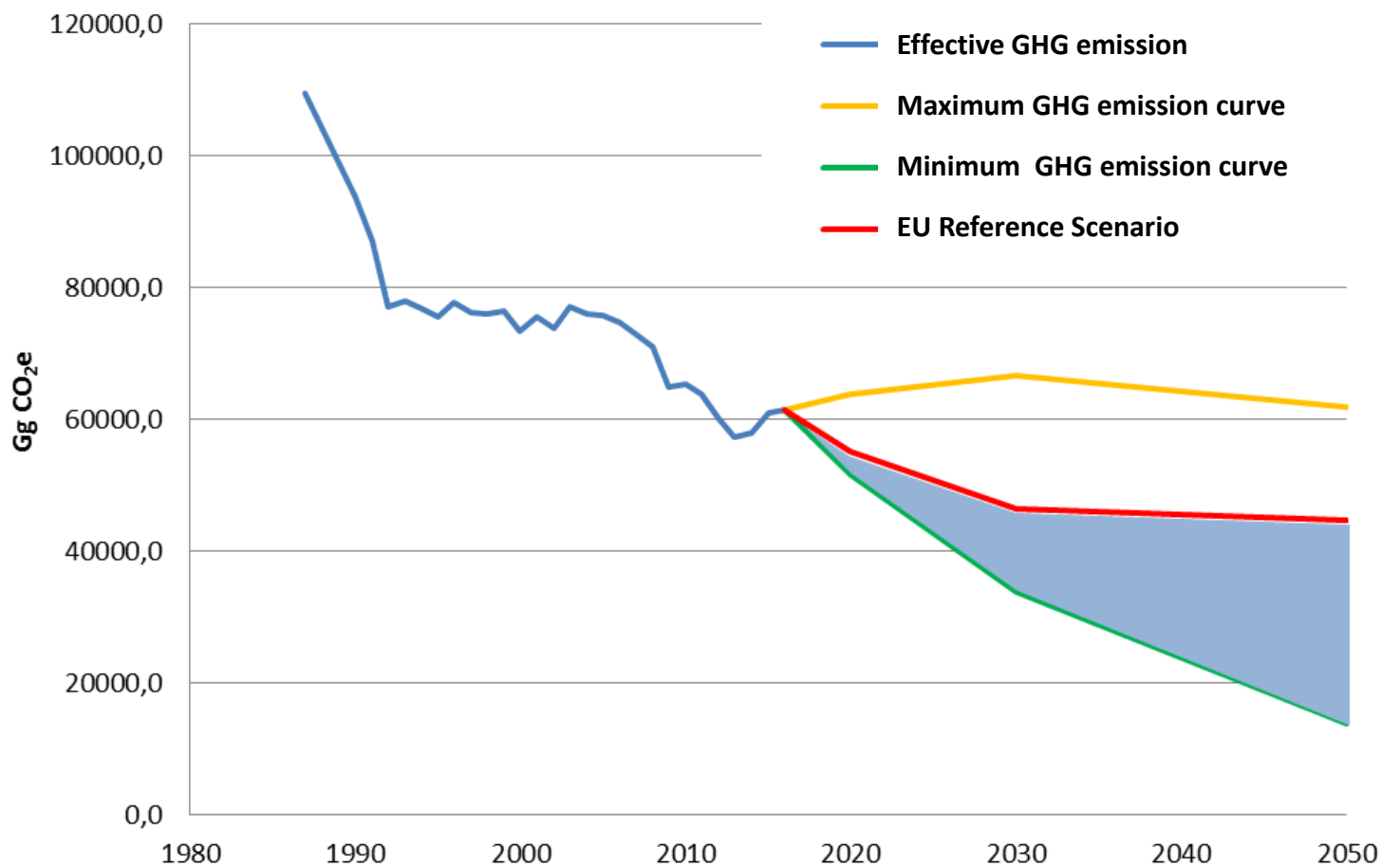




# HIERARCHY OF GOALS OF THE SECOND NATIONAL CLIMATE CHANGE STRATEGY



## MINIMUM AND MAXIMUM 2050 ROADMAPS OF HUNGARY





# DECARBONISATION

## Fields of intervention

**Replacement of fossil energy fuels**

Increasing the energy efficiency

Reducing the use of natural sources

Development of green economy

Forestation, CLT

Research, development and innovation

Short-term

Mid-term

Long-term

## Sectoral action lines

Electricity production

Buildings

Industry

Waste management

Transport

Agriculture

Carbon sequestration of woods

Carbon capture, storage and  
utilisation





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## IMPLEMENTATION

### *Climate Change Action Plan*

**Specific actions identified in order to achieve the goals of the strategy, including costs, resources and deadlines**

**Climate Change Action Plan  
Monitoring and control system**



Within six months after  
the adoption of the  
strategy  
(2018-2020)





## CHANGES AND CHALLENGES ON THE ENERGY MARKET

- Transformation of the global energy market
- Climate change
- Energy Union
- Security of supply
- Regional cooperation





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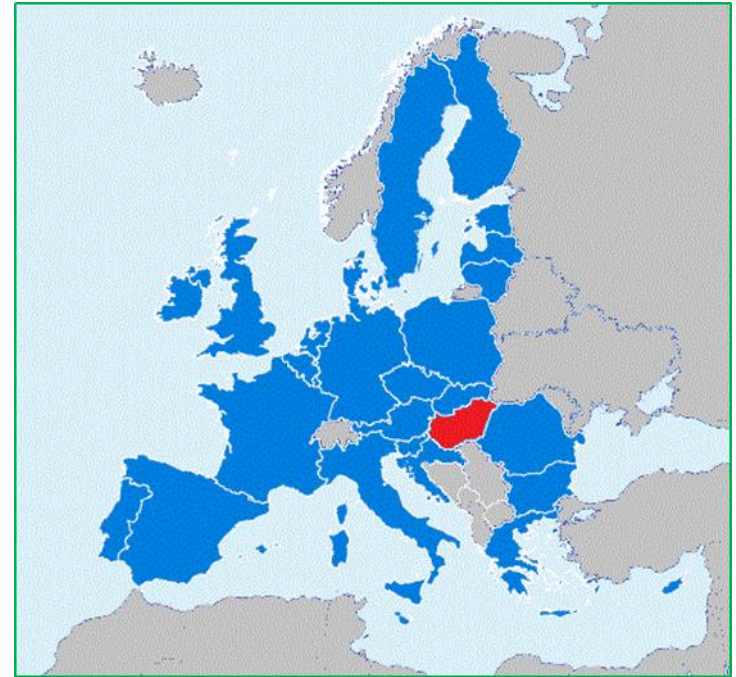


# Hungarian energy market background



## HUNGARY – KEY DATA

- **Area:** 93 030 km<sup>2</sup>
- **Population:** 9 778 000 people (2018)
- **GDP:** 139,04 billion USD (2017)
- **GDP/capita:** 15647.85 (2017)
- **GDP/capita PPP:** 26777.56 USD (2017)
- **Primary energy supply :** 1 076 PJ (2016)
- **Final energy consumption:** 726 PJ (2016)
- **Share of renewable energy in final energy consumption:** 14,14%
- **Total electricity production:** 31 968 GWh (2016)
- **Total electricity consumption:** 44.04 TWh (2016)
- **Installed capacity:** 8.6 GW
- **Energy import dependency - Energy dependency rate:** 55,6%





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## NATIONAL ENERGY STRATEGY 2030

Goals

- Security of supply
- Sustainability
- Competitiveness



Efficiency

Institutions

Renewable

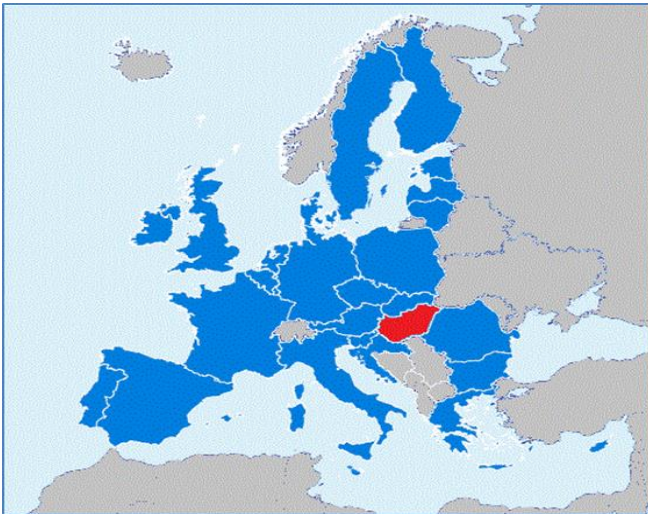
Tools

Regional  
cooperation

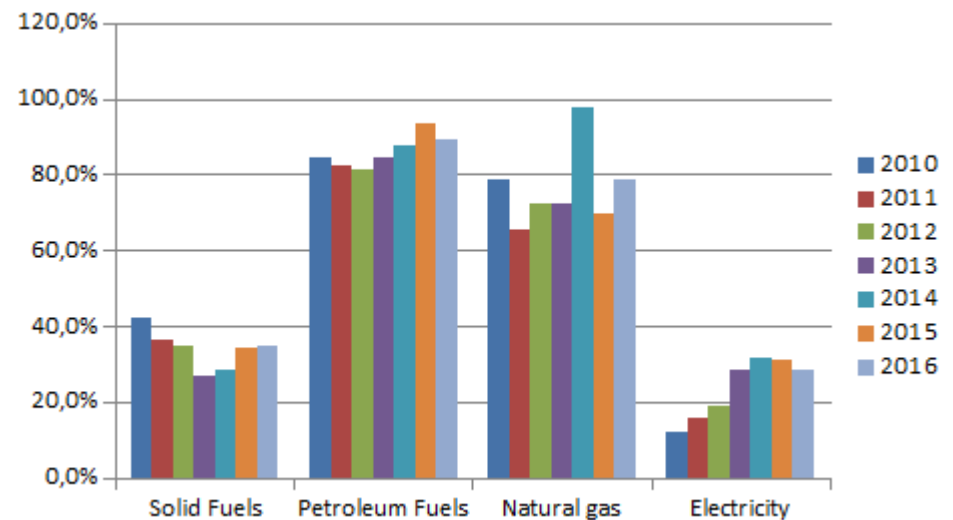
Nuclear



## HUNGARIAN ENERGY MARKET



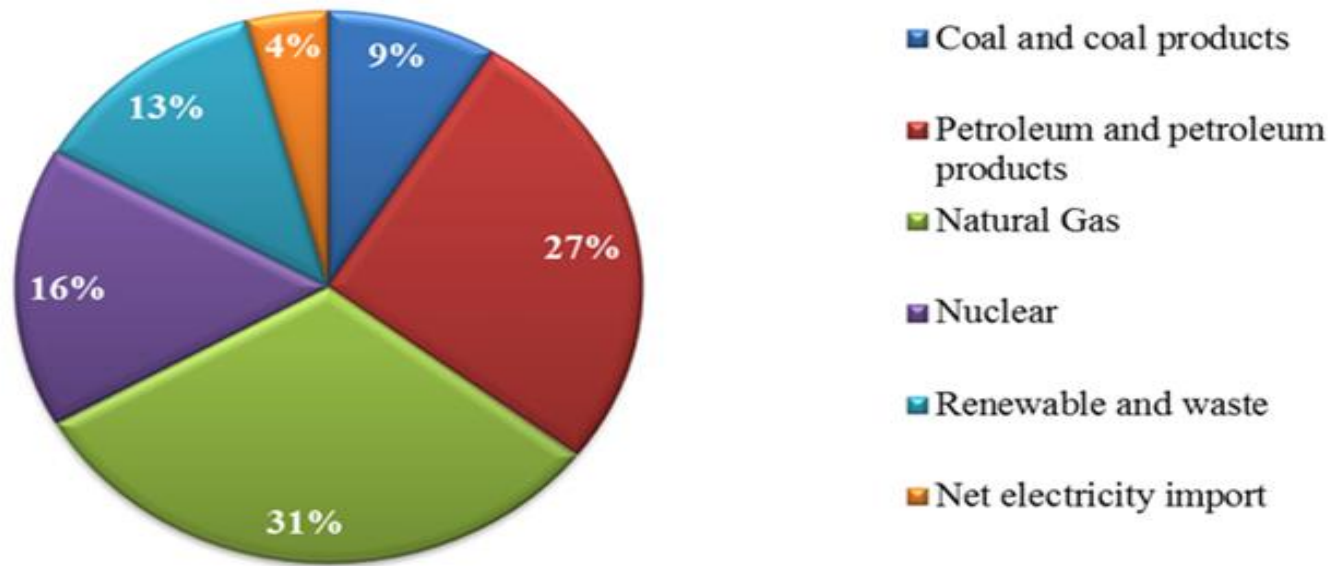
- Declining energy consumption
- Fully-integrated internal energy market
- Significant import dependency
- Importance of regional cooperation
- Strengthening role of the state





## ENERGY MIX OF HUNGARY

### Primary energy consumption by source, 2016

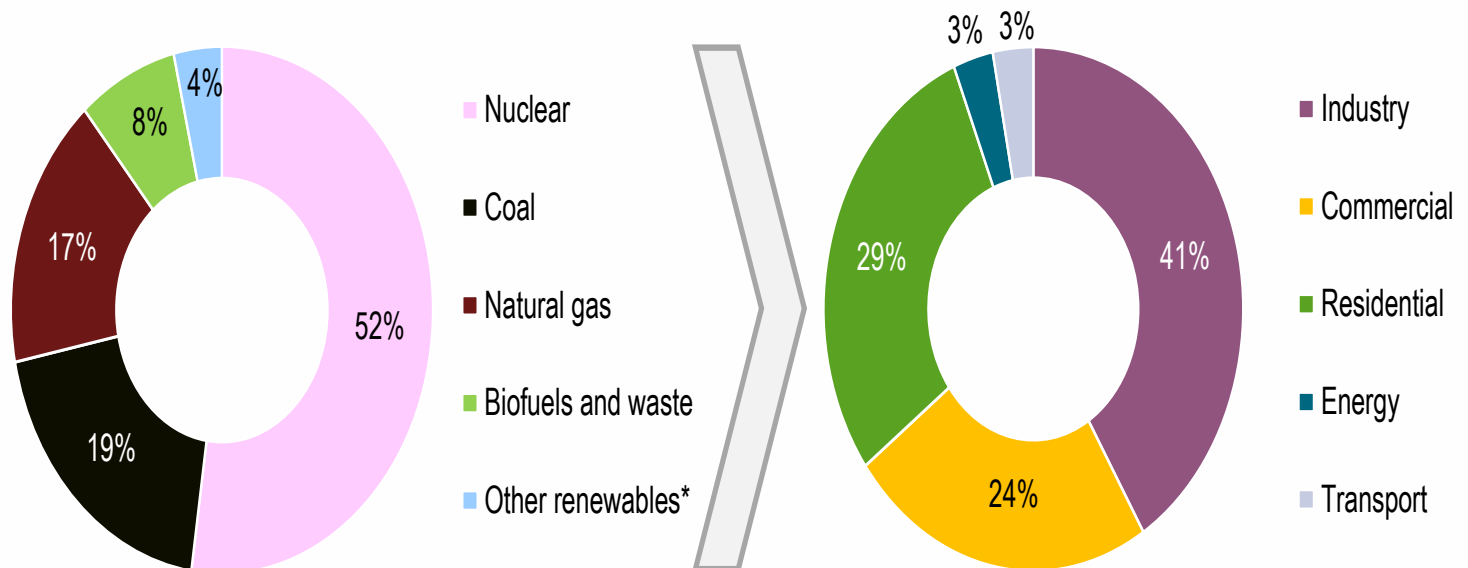




- Total electricity generation (2016): 31.3 TWh
- Total electricity consumption (2016): 44.04 TWh
- Installed capacity: 8.6 GW

## ELECTRICITY DEMAND AND SUPPLY

### Electricity generation by source and consumption by sector (2015)

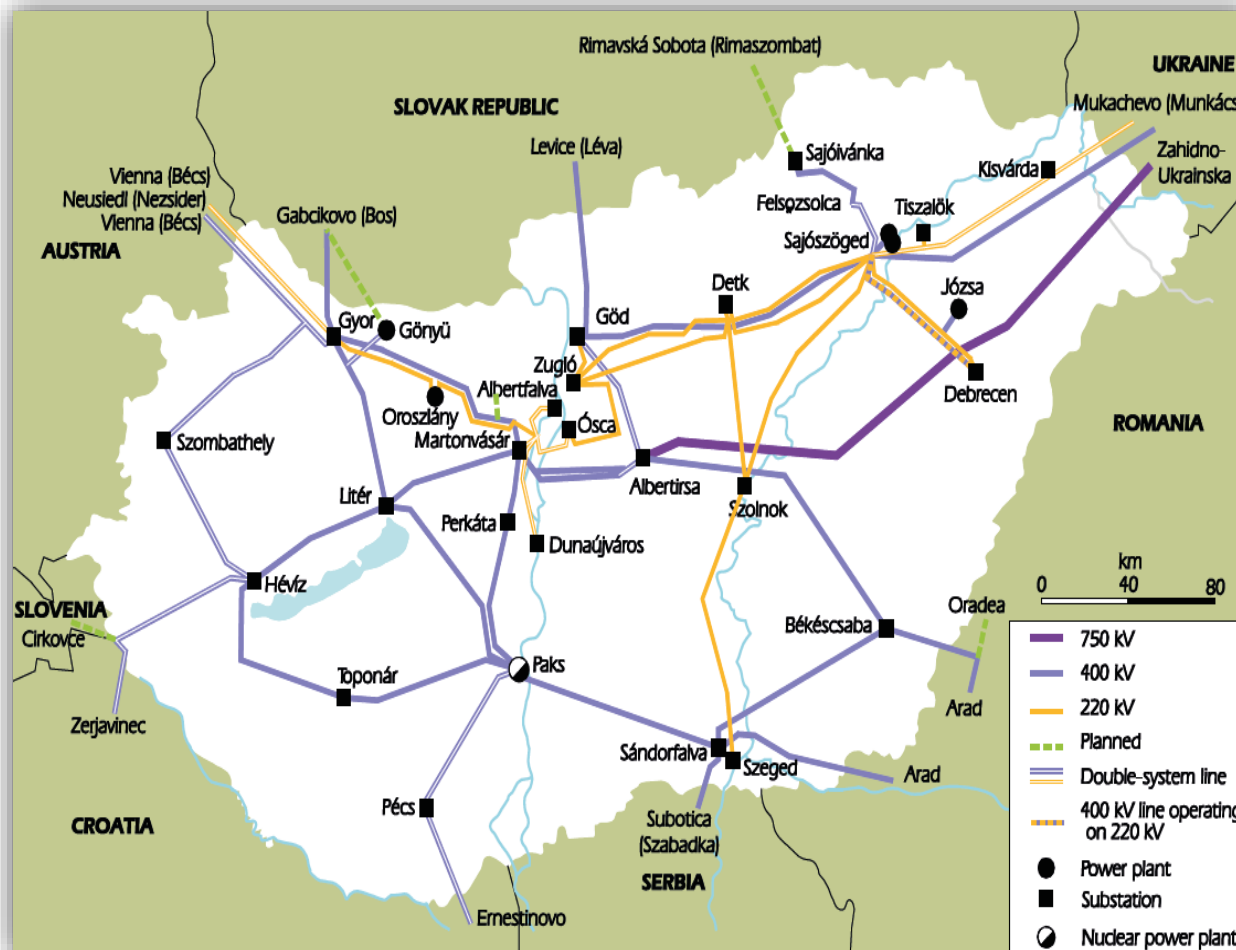






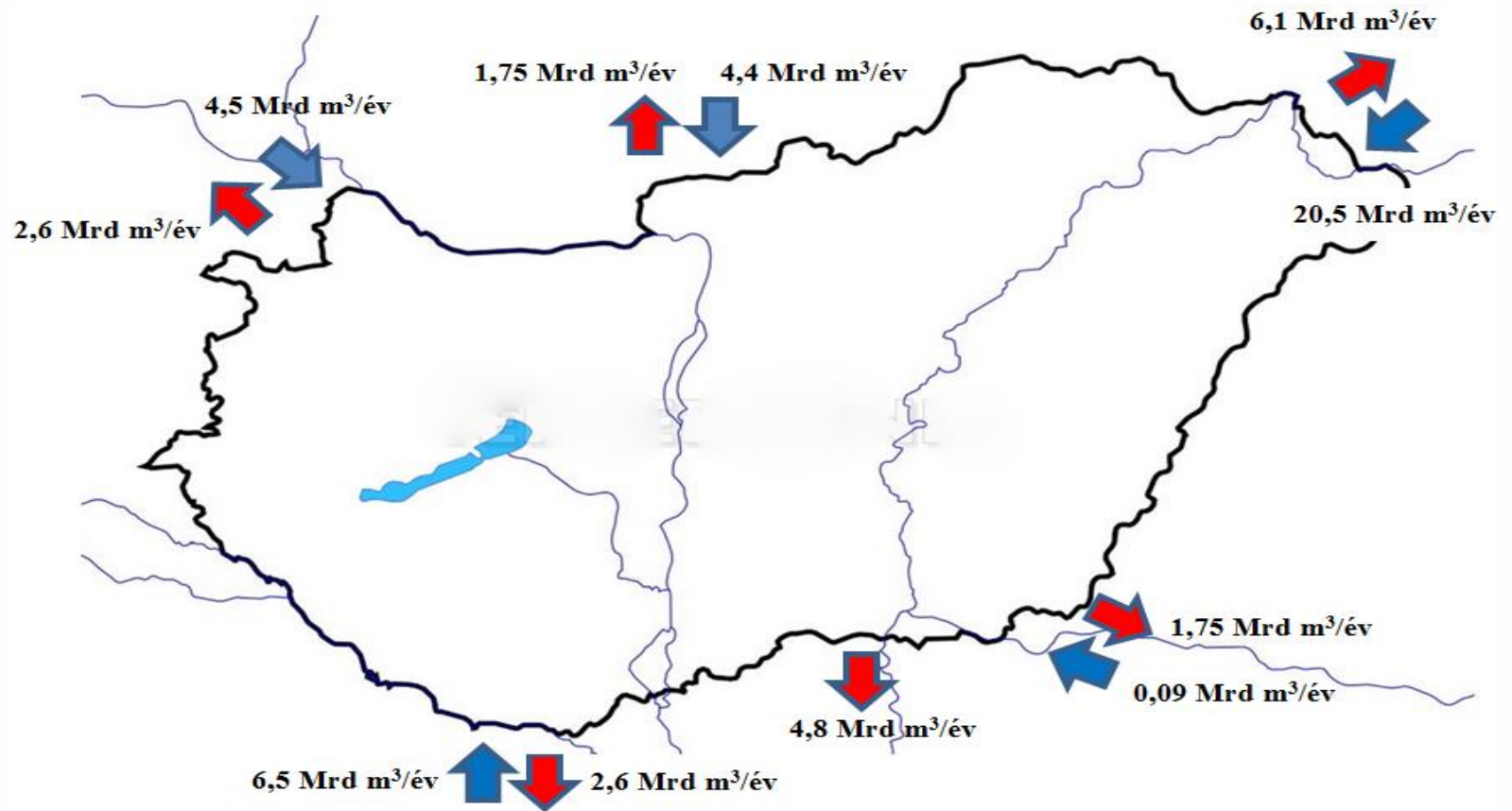
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## ELECTRICITY INFRASTRUCTURE





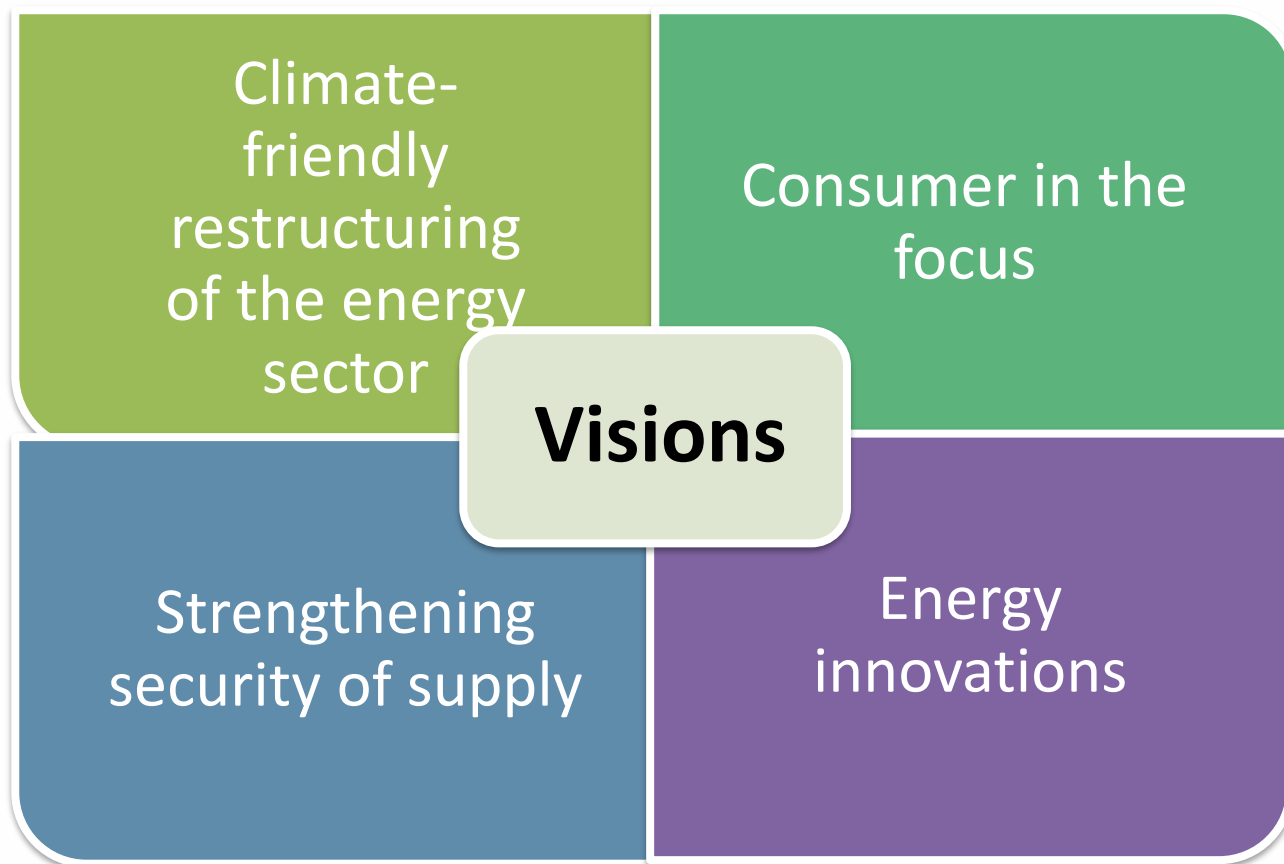
## REGIONAL COOPERATION - NATURAL GAS





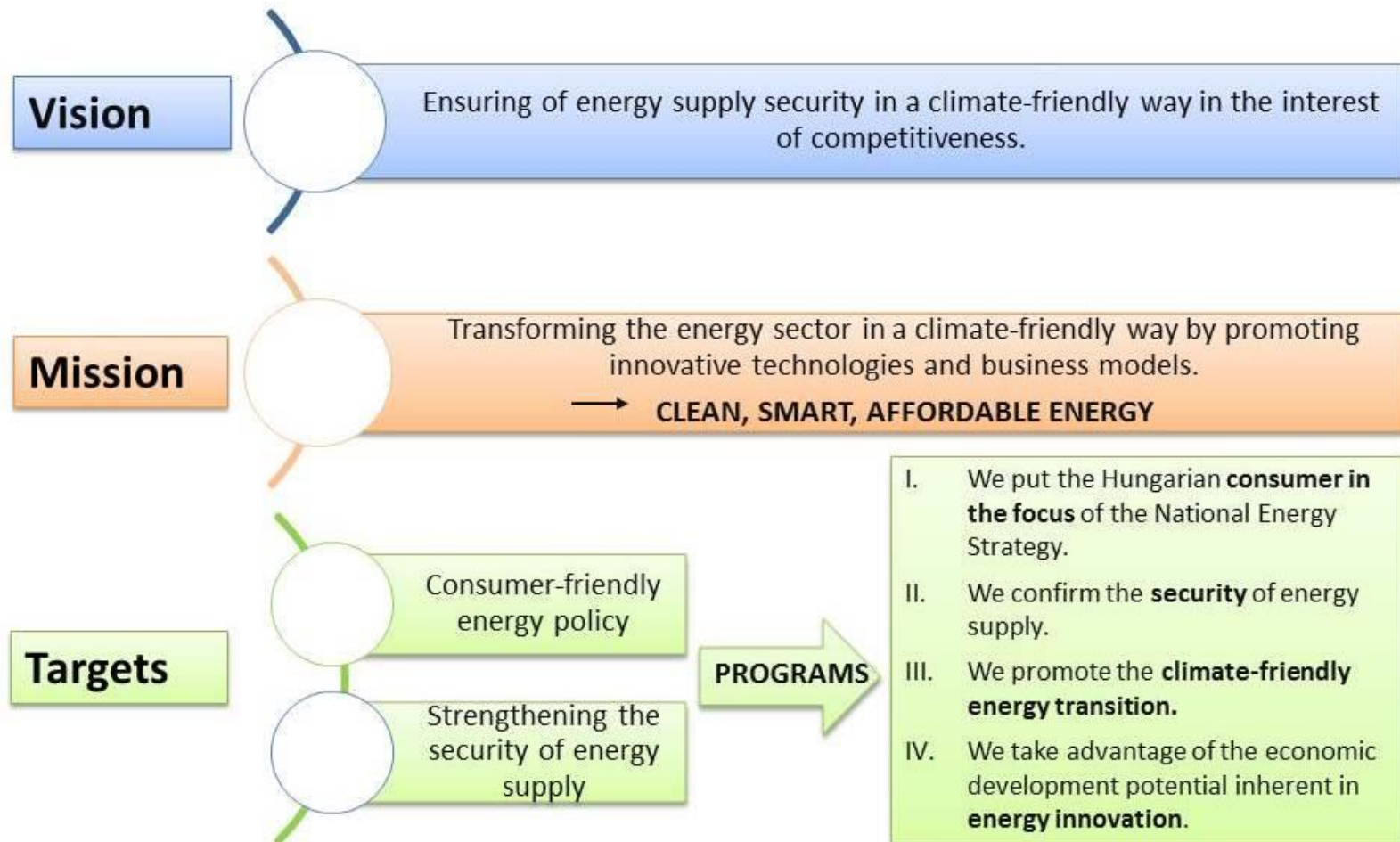
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## WHAT ARE WE TO MODIFY?



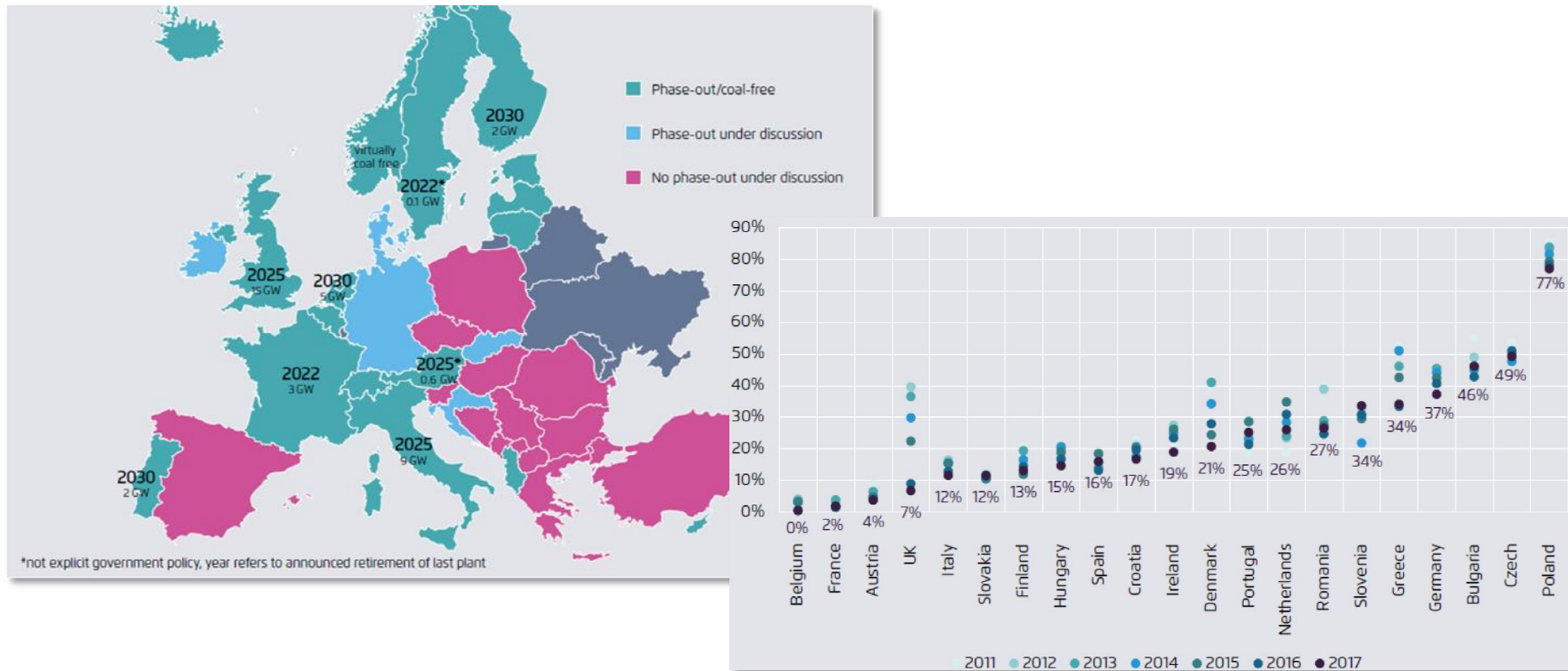


## NEW NATIONAL ENERGY STRATEGY (NES 2)



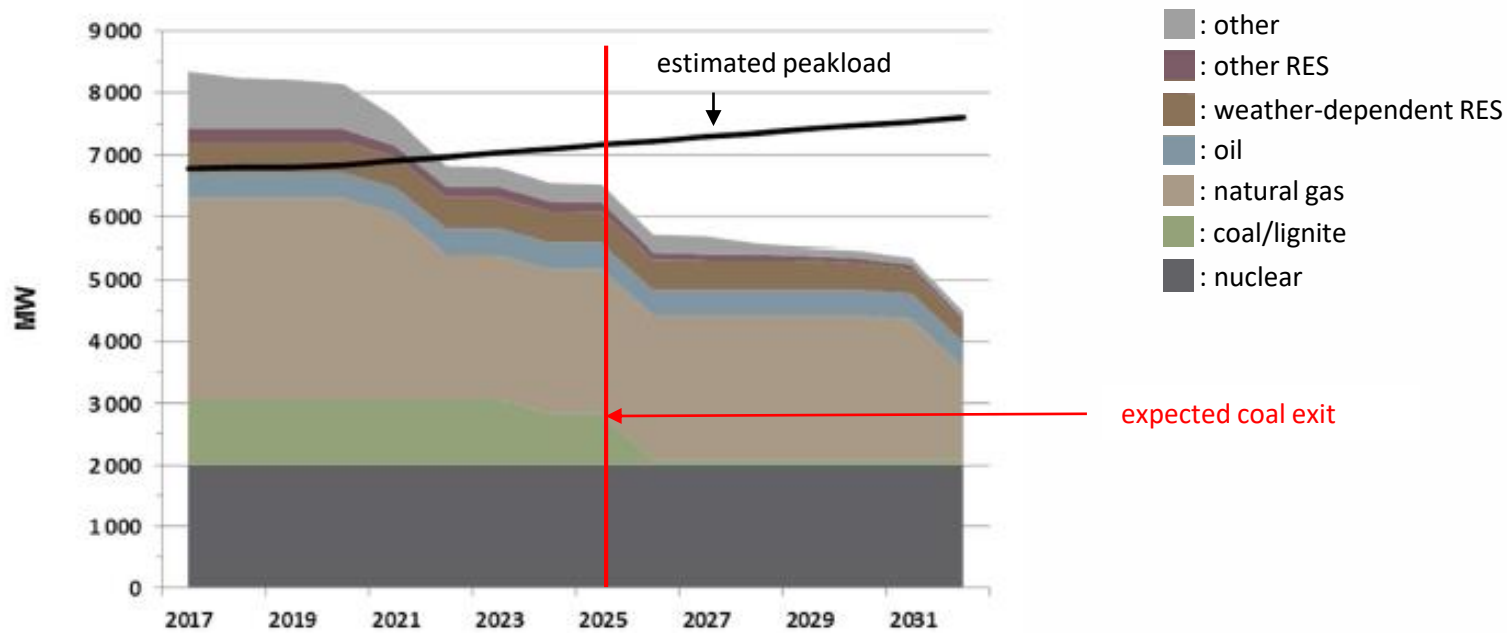


# THE POLITICAL DISCUSSION ABOUT COAL PHASE-OUT IS ABOUT TO START IN HUNGARY





## EXPECTED CHANGES IN DEMAND AND PRODUCTION OF ELECTRICITY UNTIL 2030



Source: MAVIR

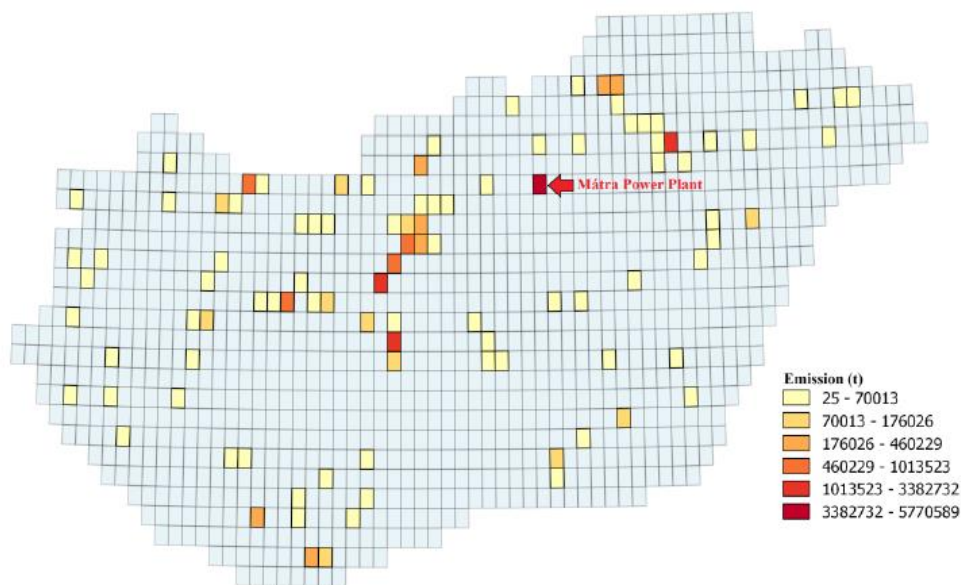


# MÁTRA POWER PLANT



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Emissions by ETS installations in Hungary (2017)



- MPP generates 15-20% of total domestic power production

- Lignite-fired power plant
- Single largest CO2 emitter in the country
- Accounts for nearly 50% of the total energy sector emissions
- 14% of the total CO2 emission







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Thank you for your kind attention!

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