Ministry of Foreign Affairs and Trade

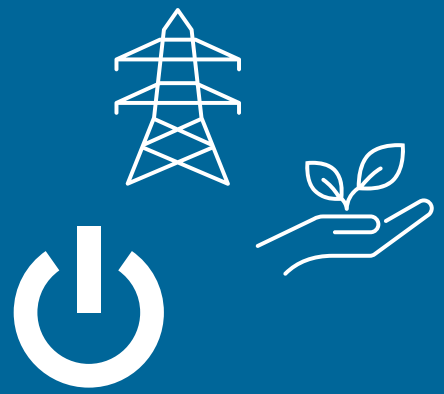
Green energy transition and the importance of cooperation

2024

Izabella Feierabend, Head of Department of Energy and Climate Diplomacy

Energy Market Trends in 2023

Growing energy demand, growing pace of energy investments, sustainability
Hungarian energy landscape in figures



PV capacities

8x
growth

Growing electricity demand in the EU

150%
By 2030

Almost carbon neutral electricity mix

90%

By 2030

Import dependence

82%

Russian natural gas

RES

25%

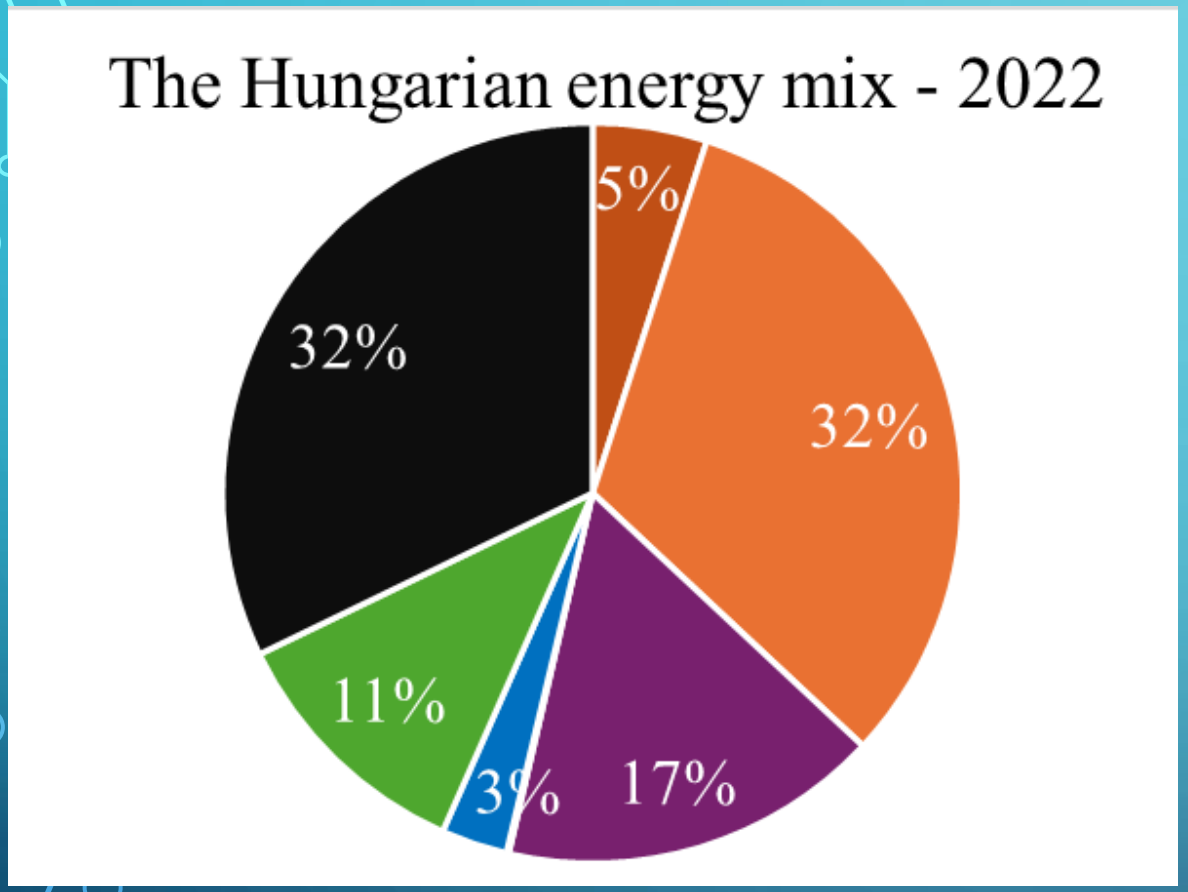
In the electricity mix

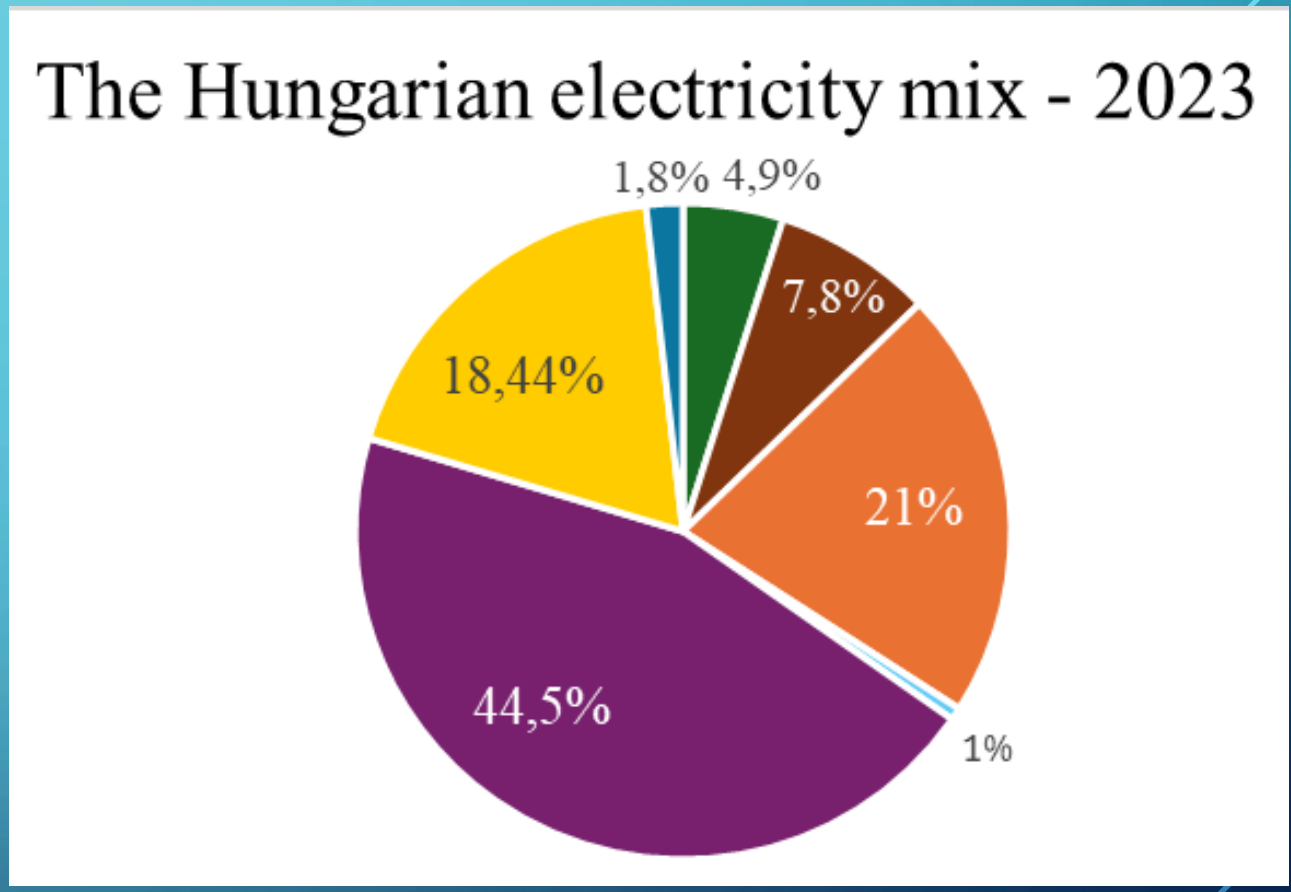
Nuclear

45%

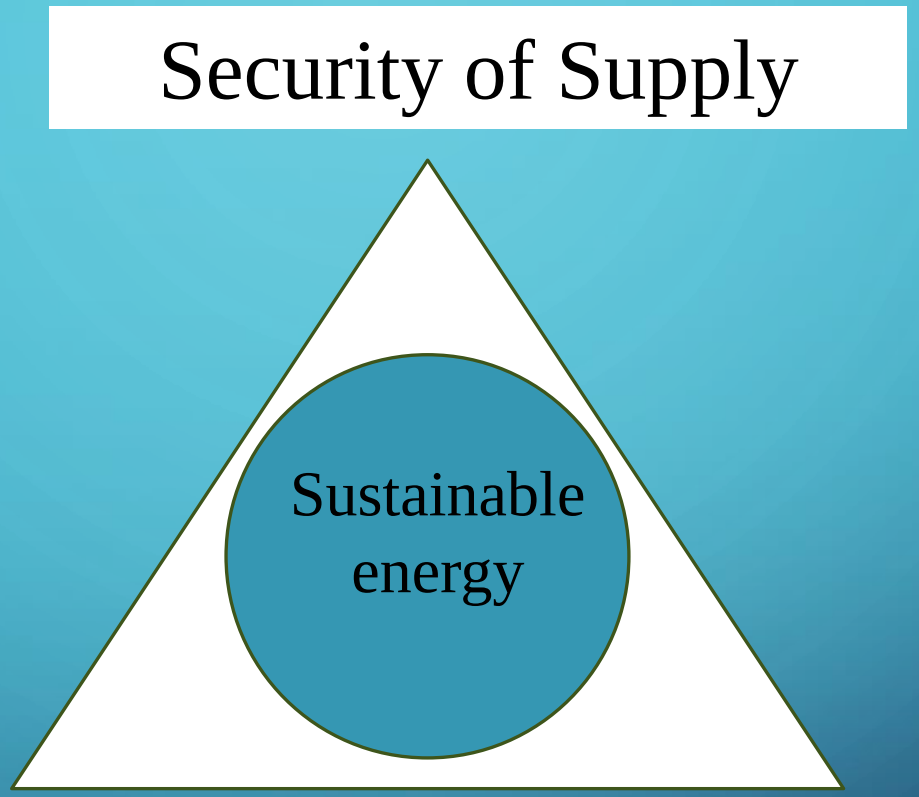
In the electricity mix

THE HUNGARIAN ENERGY MIX AND ELECTRICITY MIX

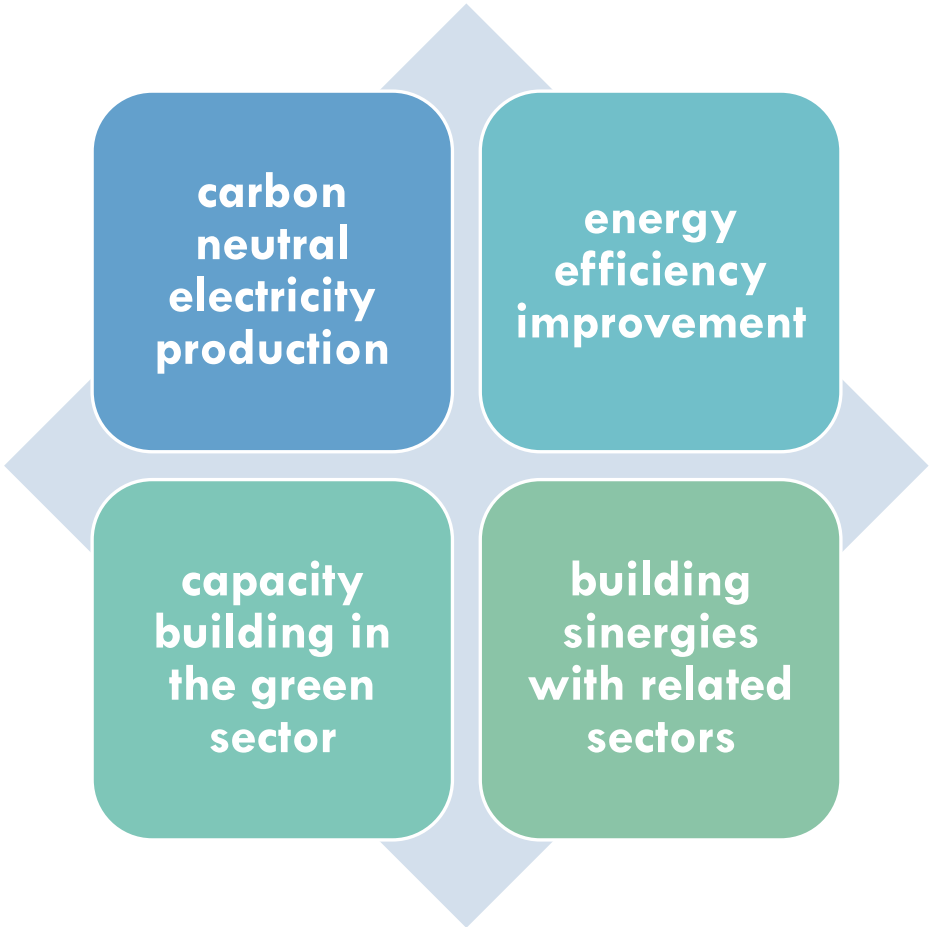




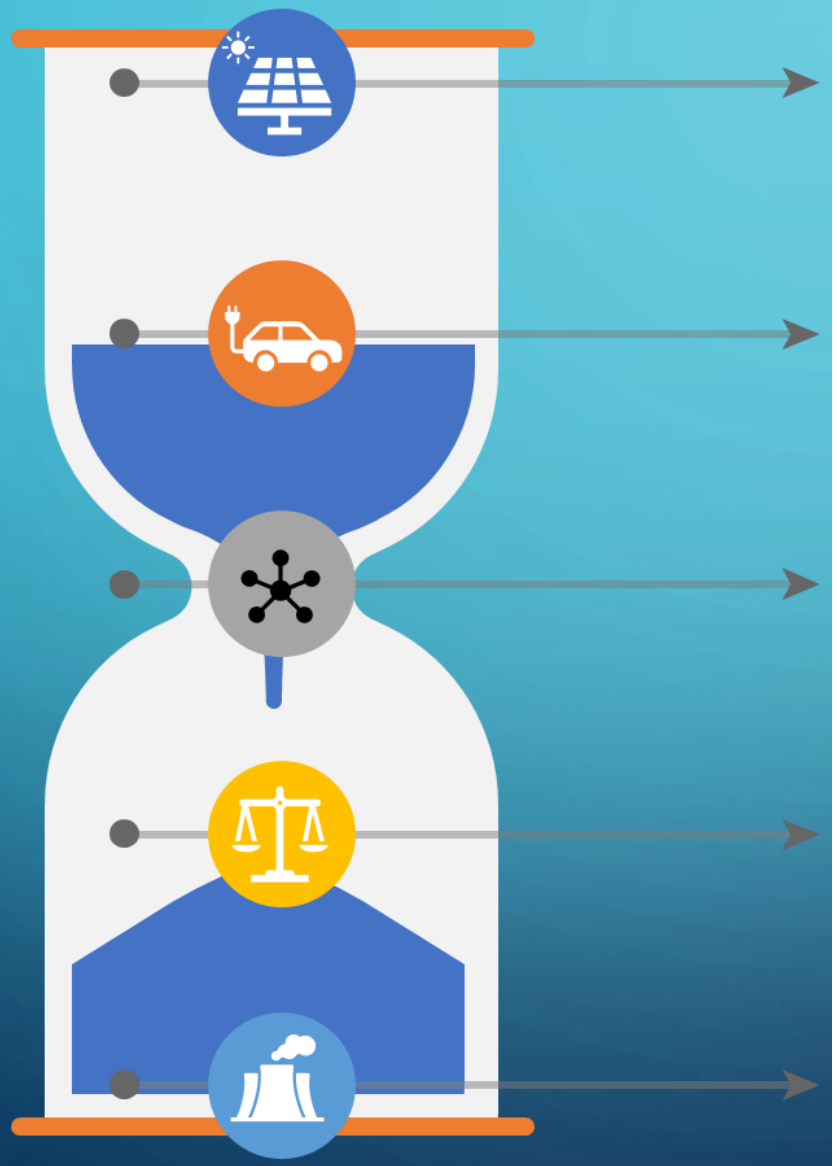
ENERGY POLICY TRILEMMA



GREEN TRANSITON STRATEGY



CHALLENGES OF ENERGY POLICY



Fluctuating VRES generation

(variable renewable energy sourced)

Electrification

Growing electricity demand
Storage and flexibility capacities

Electricity grid

Smart grid, increase predictibility and flexibility

Balancing supply and demand

A decentralized electricity market

Emission reduction

Meeting climate targets

Sustainable
Affordable
Competitive
Climate neutral

+ Green Energy import

Triple RES capacities

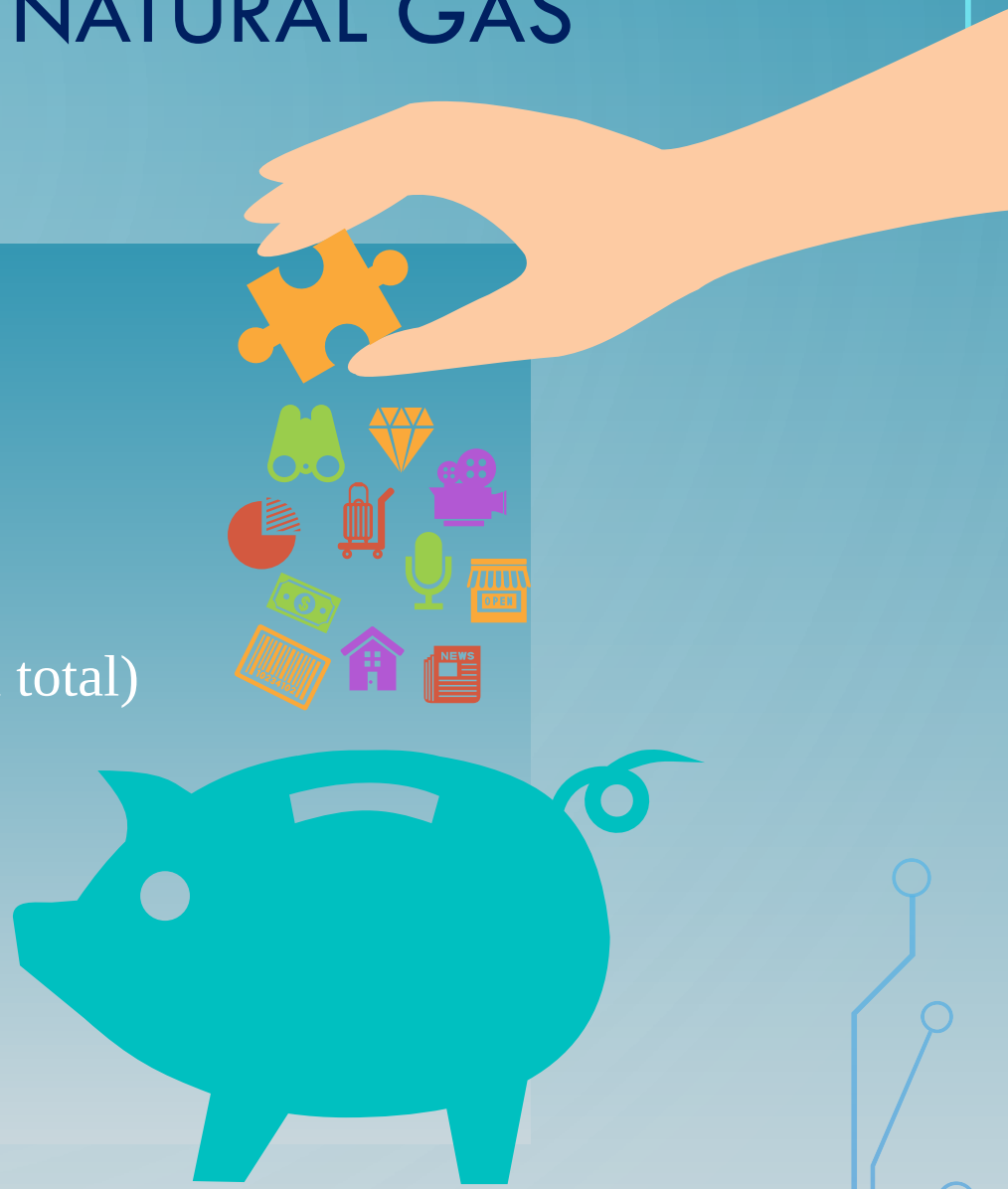
Grid investments should be tripled at a global level in order to integrate RES capacities

Investments related to natural gas transport and CCGT power plants is inevitable to guarantee energy supply and green transition.

Carbon neutral baseload power plants:
No NET ZERO without nuclear

ENERGY SECURITY: THE ROLE OF NATURAL GAS

- Natural gas as a transitional fuel in green energy transition
- Storage level: 21 September 2024: 92,62% full
  - 59,7% as a share of yearly consumption
- Turk Stream via Serbia – the main supply route
  - 5,4 bcm Russian gas arrived so far (in 2023: 5,6 bcm in total)
  – for Turkish and Azerbaijani gas sources as well
- Croatia KRK LNG – 1 bcm a year
  – capacity improvement expected
- Romanian Neptun Deep Project, commercial start 2027



ENERGY SECURITY: STABLE SUPPLY, CLIMATE NEUTRAL SOURCES

- The role of nuclear power in energy supply security and green transition
  - More than 65% of the electricity mix is carbon neutral - 80% comes from nuclear
  - Baseload electricity supply, low marginal cost, affordable, do no significant harm
- Growing PV capacities: 7085 MW – 2570 MW rooftop PV
  - Hungary has one of the highest PV share (among EU countries) in 2023 – 18,44%
- New NPP project - Paks II of 2400 MWe
- By 2030 the electricity generation will become 90% carbon neutral

THE GREEN ENERGY CORRIDOR PROJECT

- Agreement signed in 2022 – Azerbaijan, Georgia, Romania, Hungary
- Green energy import source for the EU
- Coordinating green energy strategies, sharing best practices
- Cooperation in green energy investments

THE GREEN ENERGY CORRIDOR PROJECT

Azerbaijan: 3-4000 MW new RES capacities in 5 years

- Exported to Europe or as electricity or in the form of hydrogen and derivatives

Georgia: 3300 MW new RES capacities by 2030 (almost 10 GW RES potential)

- To be exported to Europe through the Black Sea Submarine Cable

The Black Sea Submarine Cable 1190 km long submarine cable

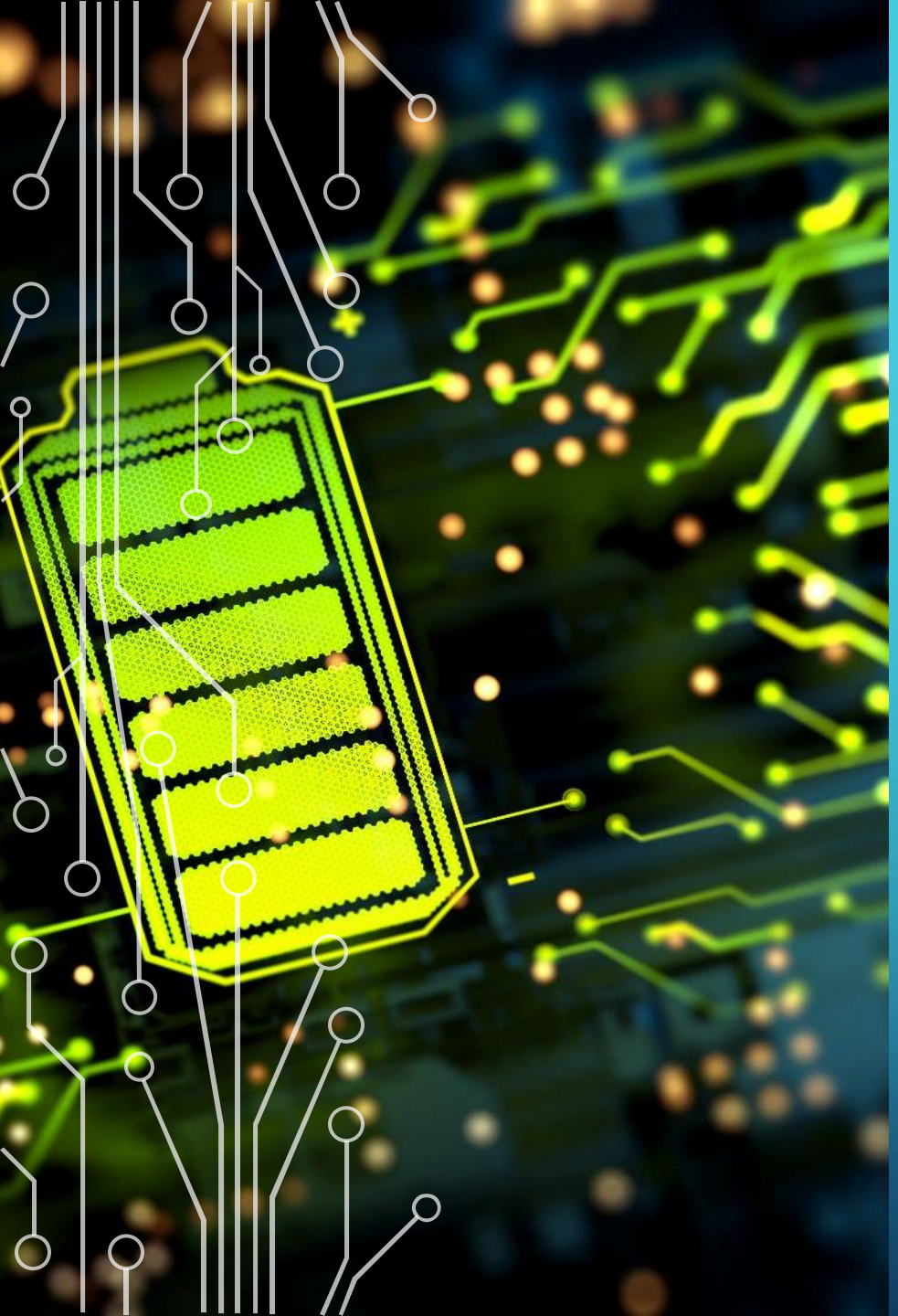
- Included in the ENTSO-E TYNDP

SERBIA AND HUNGARY ARE STRATEGIC PARTENERS IN ENERGY SECURITY AND ENERGY TRANSITION

- Natural gas transmission - more than 5,4 bcm natural gas from Russian sources has been supplied via Serbia this year
- Natural gas storage in Hungary – 90 bcm for now

SERBIA AND HUNGARY ARE STRATEGIC PARTENERS IN ENERGY SECURITY AND ENERGY TRANSITION

- The Pannonian Corridor Project – new electricity interconnection
  - Doubling the existing capacities
- The establishment of ADEX – regional electricity stock exchange
  - Optimise regional supply and demand
  - Create more favourable price mechanisms
- Cooperataion in the field of hydrogen



SERBIA AND HUNGARY ARE STRATEGIC PARTENERS IN ENERGY SECURITY AND ENERGY TRANSITION

- Corporate-level cooperation in the electricity production sector
- Supporting Serbian companies – with special attention to the Region of Vojvodina – in order to reduce the environmental impact of their activities.
- For Hungary, the green energy transition of the Western Balkans is a key priority.

THANK YOU FOR YOUR ATTENTION!