



ENERGIAÜGYI MINISZTERIUM



Diverse energy storage technologies for a balanced energy transition

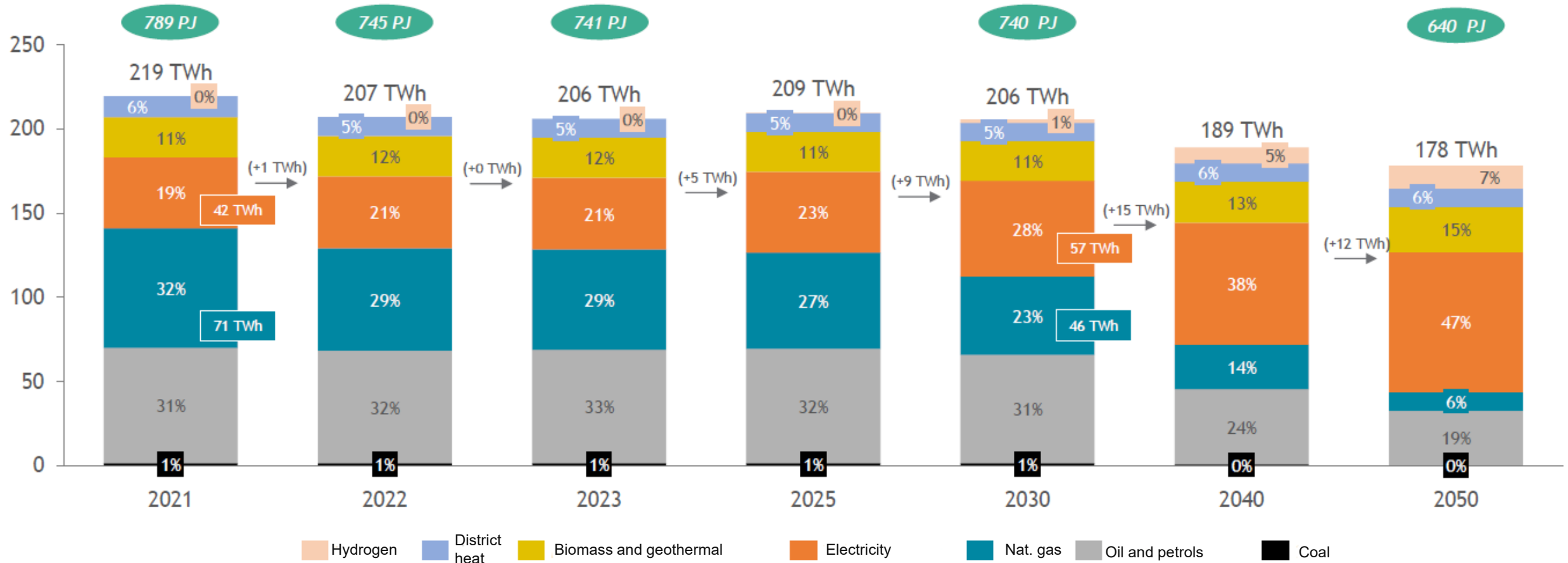
International Flow Battery Forum
24 June 2025 Vienna

Viktor Horváth
Deputy State Secretary for Energy Transition
Ministry of Energy, Hungary

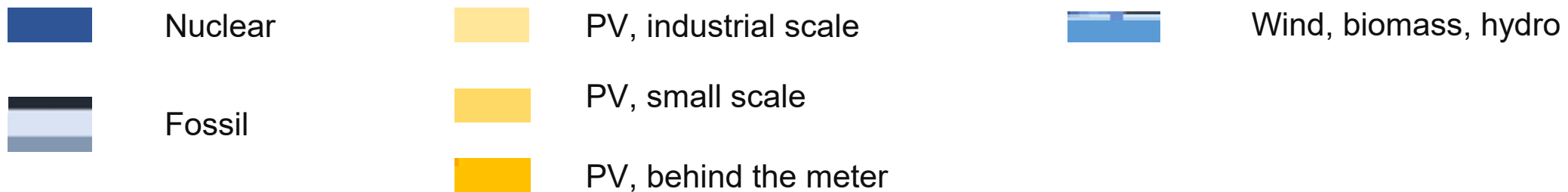
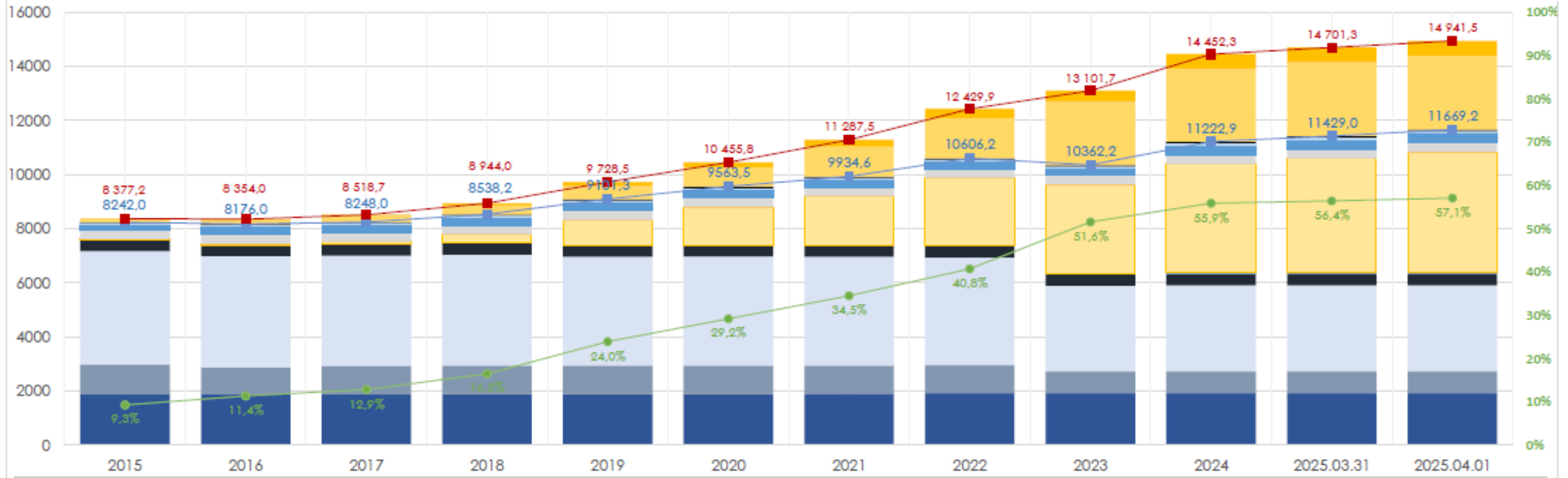
Electricity need steadily rises



Forecast for final energy consumption by sources (TWh)



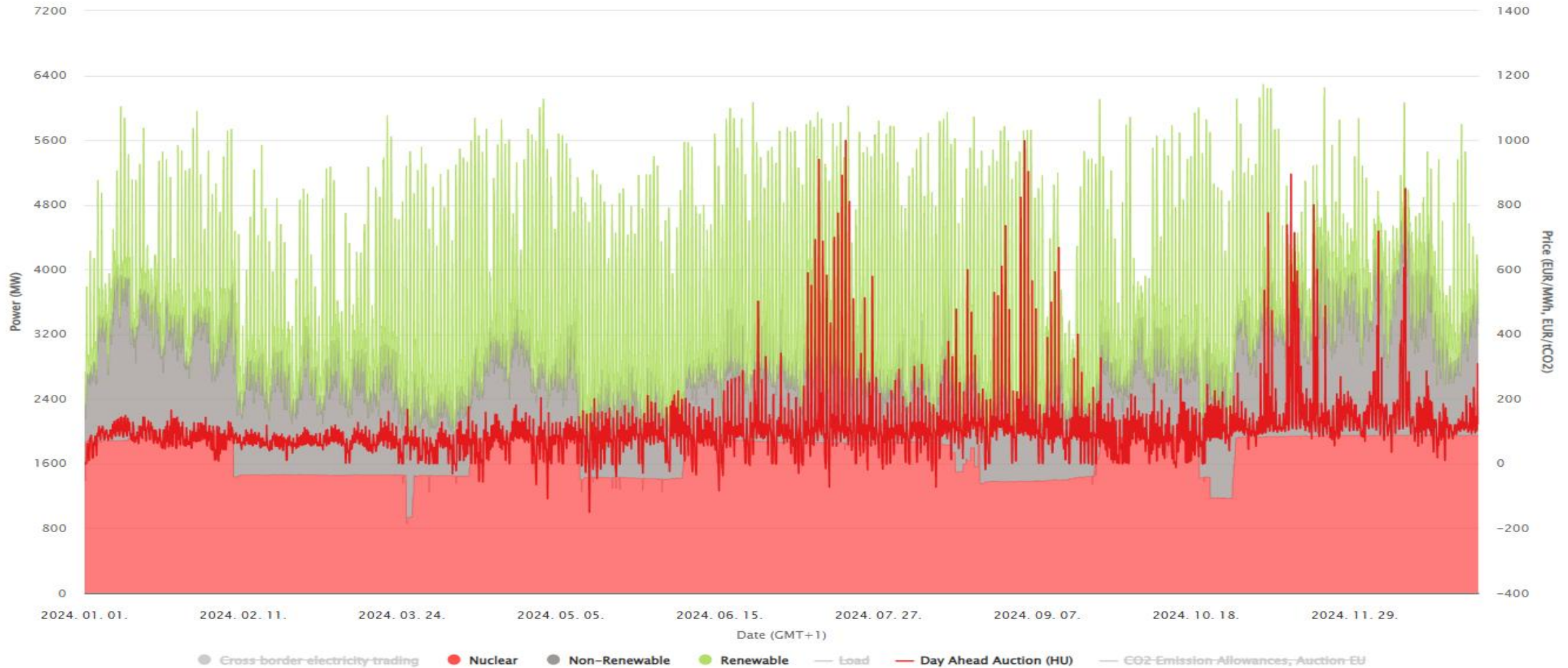
Electricity generation capacity mix in Hungary



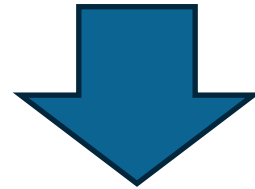
Market effects: volatile prices



Electricity production and spot prices in Hungary in 2024



- Highest solar energy capacity increase in the last 10 years in Europe
- Highest share of PV based electricity production worldwide: 25% in 2024
- Higher need for flexible sources and peak shaving
- Extreme price spikes are becoming more and more frequent in both positive and negative directions (306 hours with negative or zero prices in 2024)



Energy storage has a good business case in Hungary

Support scheme for energy storage for balancing services



EUR 155 000 000
GRANT (CAPEX + OPEX)
MAX 45% AID INTENSITY

- Eligible activities:**
- installing new energy storage capacity
 - connecting infrastructure investments

- Minimum expected output:**
- 440 MW new energy storage (8 times the capacity in 2023)

- Expected results:**
- Increased supply for grid balancing services
 - More resilient national grid



- Grid connection and aFRR accreditation is mandatory
- 3 windows used for technology lifetimes, some flow batteries successfully contracted
- 10 year OpEx aid contract with MAVIR after project closure.

The aid is granted for increasing energy storage capacities capable and willing for supplying grid balancing services. The OpEx aid is based on a contract-for-difference, the strike price is set by the NRA.

We are striving to create a balanced technology mix for storage



The tender focused to allocate funds for technological windows, which were established based on expected operational lifetime:

- **less than 11 year lifetime – EUR 100 million CapEx support allocated**
- **11 – 29 years lifetime – EUR 42,5 million CapEx support allocated**
- **at least 30 years lifetime – EUR 12,5 million CapEx support allocated**

Longer lifetimes were chosen before others.

**6 flow-battery projects have been chosen for support with an overall
33 MW/143 MWh**

Support scheme for renewable based energy storage for companies



Jedlik Ányos
Energetikai
Program

**Funds: EUR 125 million
Grant scheme**

Half of the envelope is for SMEs

**Grant volume for projects:
EUR 25.000 – EUR 2.5 million**



Beneficiaries

Any company

Aid intensity

Max 50%

**Expected output: at least 265 MW
new energy storage capacity**

Eligible activities:

- mandatory: energy storage procurement and instalment (electricity or heat)
- connected renewable generation (electricity or heat)
- grid connection

- An important support aspect is the highest possible proportion of self-sufficiency and the replacement of grid consumption
- The energy storage must be connected to a renewable producer (it can also be an existing one)

Status:

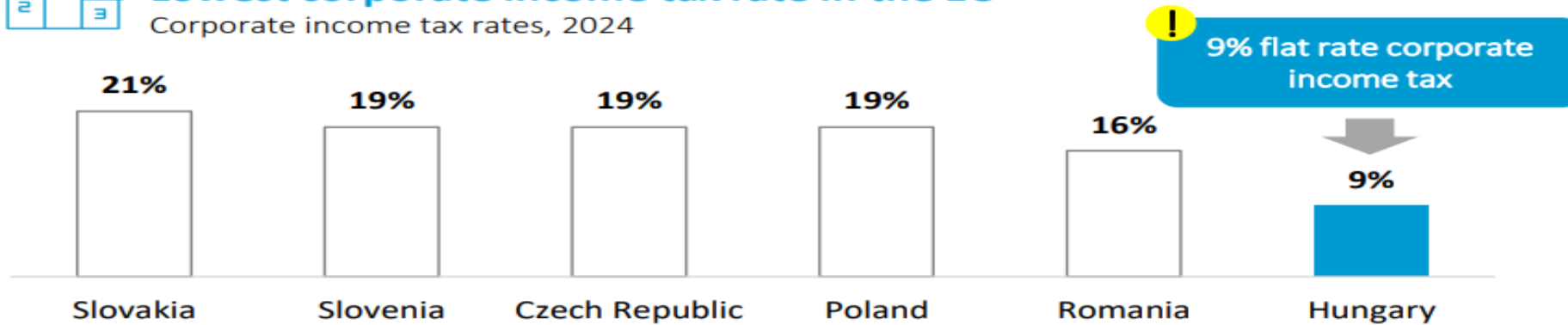
- Publishing the tender in July 2025
- Submission of grant proposals mid August – mid September 2025

Production in Hungary: open economy and a very competitive tax system



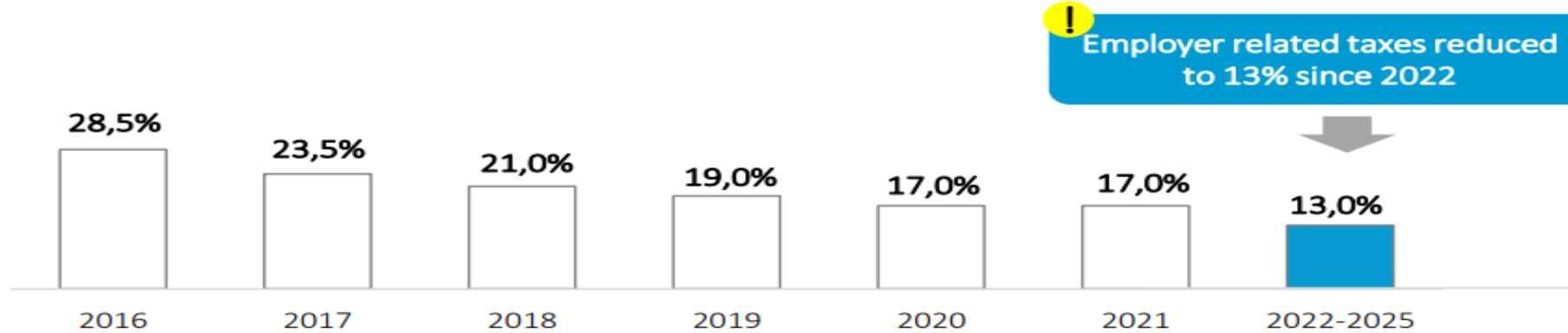
Lowest corporate income tax rate in the EU

Corporate income tax rates, 2024



Reducing tax burden on labour

Social charges (%) paid by the employer on top of the gross salary



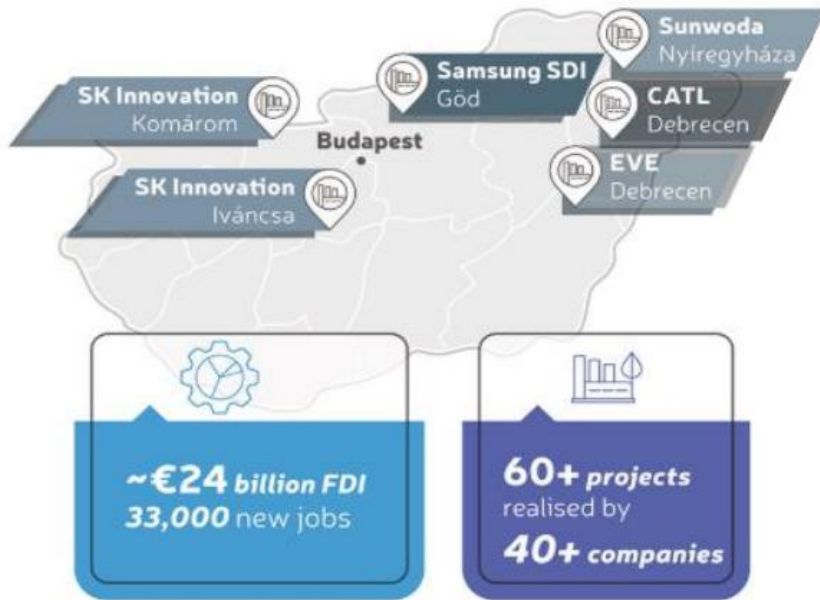
TAX EXEMPTIONS

Tax exemptions for **families with children**
People **under 25 years** and **mothers under 30**
are exempt from personal income tax



The Hungarian Government is aiming to introduce more reduction of social charges in the future

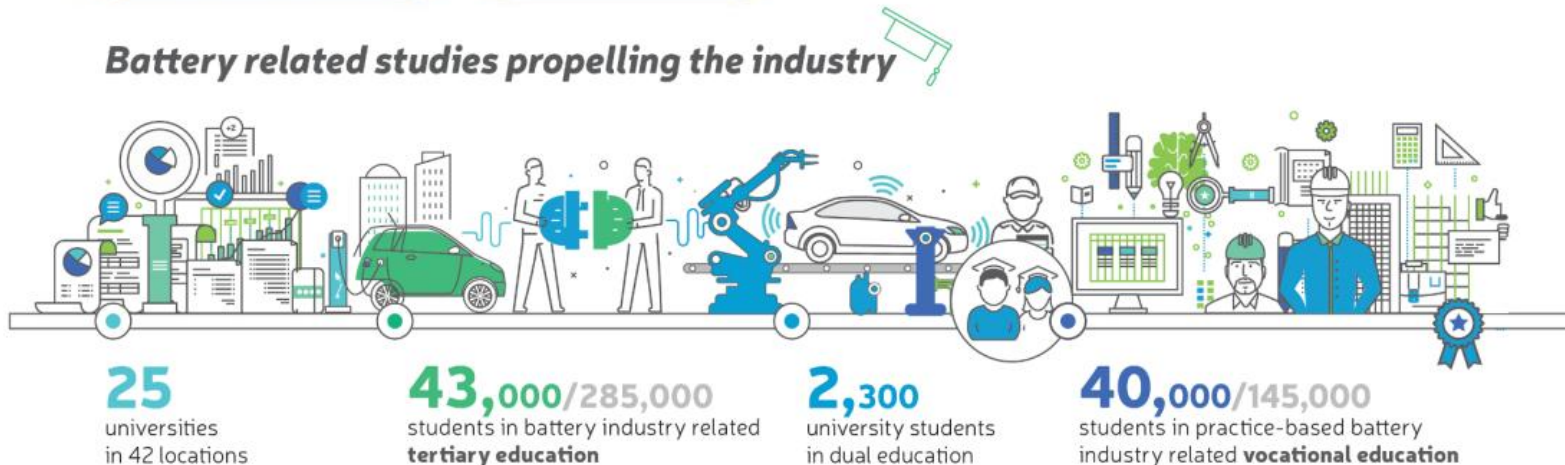
Battery industry in Hungary



Our partners in powering the new energy transition



Battery related studies propelling the industry



Did you know?



Hungary has implemented a flexible curriculum for vocational education, allowing to incorporate business specific content in one academic year.

+ Battery related studies and curriculum

Investment promotion in Hungary



NON-REFUNDABLE POST-FINANCED VIP CASH SUBSIDY



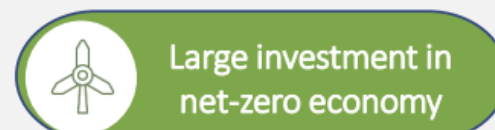
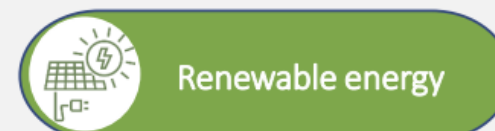
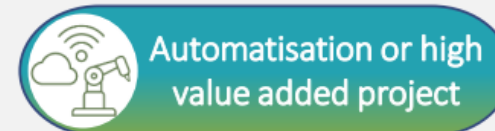
CORPORATE INCOME TAX ALLOWANCE

INDIVIDUAL GOVERNMENT DECISION

POSITIVE RETURN FOR STATE BUDGET

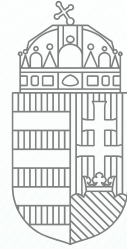


Investment project



Development project





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**Thank you
for your attention!**

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