International Conference on Knowledge Transfer About Just Transition
Eger | MAY 25-27 2022.

THE ROLE OF THE TRANSFORMATION OF THE MÁTRA POWER PLANT IN THE STRATEGY OF THE MVM GROUP

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MVM GROUP IS AN INDISPENSABLE PLAYER IN THE NATIONAL ECONOMY

4.1
BILLION EUR
SALES

581
MILLION EUR
EBITDA

4TH
LARGEST COMPANY IN HUNGARY BY SALES[2]

13TH
LARGEST COMPANY IN CENTRAL EUROPE BY SALES[1]

87,800
KM OF TRANSMISSION AND DISTRIBUTION LINE NETWORK

c.7.5M
direct customers[3]

41
TWh
OF ELECTRICITY SOLD/YEAR

122
TWh
OF NATURAL GAS SOLD/YEAR[2]

4.4
BILLION M³
OF NATURAL GAS STORAGE CAPACITY

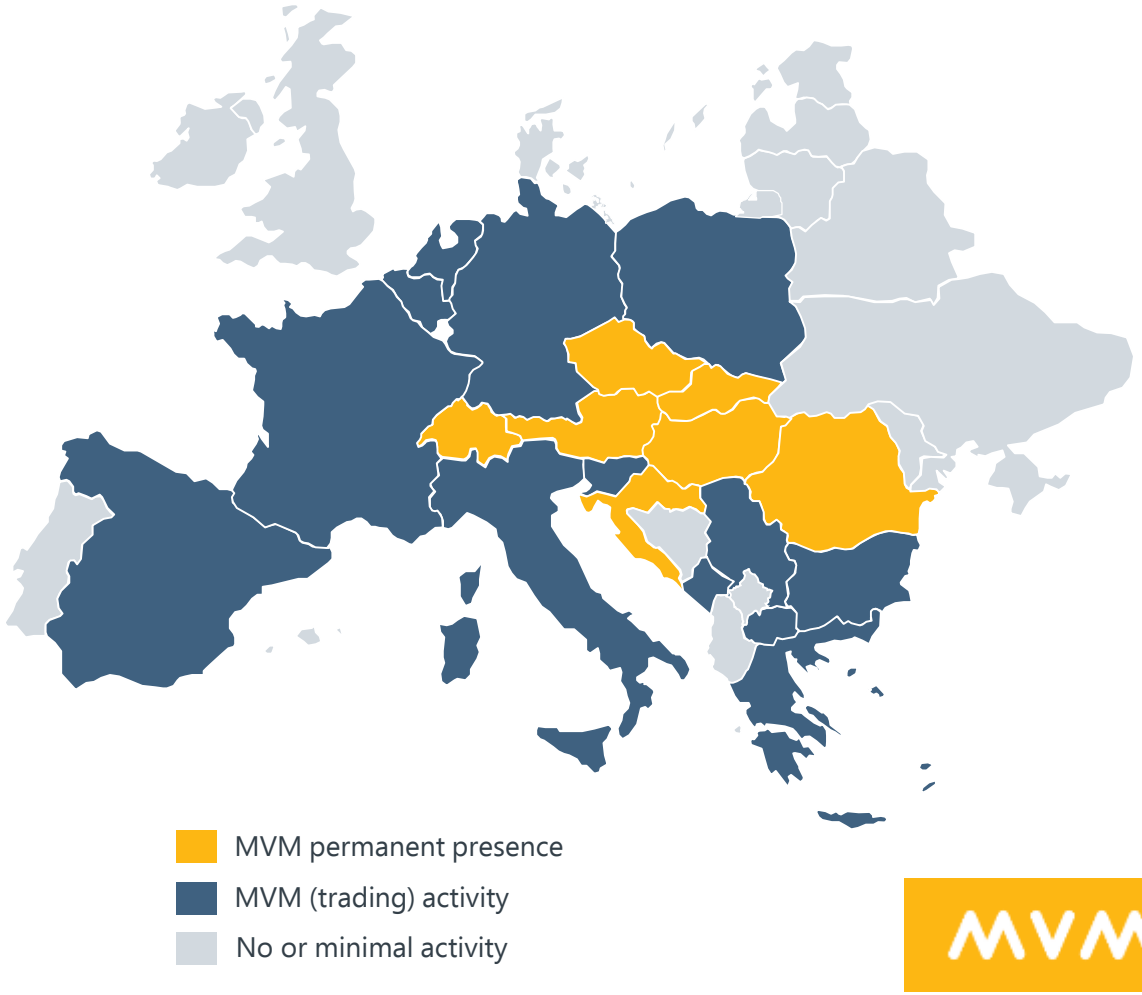
18,500
employees[3]

Figures shown as of Dec-2020 unless otherwise stated. Financial prepared on IFRS basis
(1) Coface CEE TOP 500 Companies (2020 Edition) (2) Includes 2 month contribution from Innogy CR from closing of the acquisition in late October 2020 (3) As of September 2021
Based on the annual average of MNB exchange rates

WE ARE A KEY ENERGY GROUP IN CENTRAL EUROPE

23 countries

Generation	Nuclear power plant Conventional power plants Renewables
Infrastructure	Electricity transmission and distribution Natural gas distribution Telecommunications Energy exchanges Mobility (e-mobility & CNG)
Wholesale and storage	Electricity and natural gas wholesale Natural gas storage
Retail	Retail supply of electricity and natural gas in Hungary
International	Natural gas and electricity retail in Czech Republic (innogy CR) Generation (hydropower, natural gas) Alternative mobility
Other areas	Beyond-the-meter products & services Engineering and construction services



Note: MVM Group active in 22 European countries and China. MVM has foreign representative offices in Brussels and Moscow.

INTEGRATED UTILITY WITH LEADING POSITIONS ACROSS HUNGARY'S ENERGY VALUE CHAIN

	Production	Wholesale	Infrastructure		Retail	Beyond the meter
Electricity	Nuclear Conventional Renewables	**Origination** **Trading** **Portfolio mgmt. services**	**Electricity TSO**	**Electricity Distribution** (DSO)	**Universal service provision** **Competitive supply services**	**Roof-top solar** **Energy efficiency & management services** **Third-party services**
Natural gas	Exploration and production (E&P)	**Origination** **Trading** **Portfolio mgmt. services**	Natural gas TSO **Natural gas storage**	**Natural gas Distribution** (DSO)	**Universal service provision** **Competitive supply services**	

Other markets

- **District heating**
- **Sustainable mobility**
- **Public lighting**
- **Engineering services**

Price-regulated and monopolistic activities

No MVM activity

THE MVM GROUP IS HUNGARY'S LARGEST ELECTRICITY PRODUCER

~3.9 GW

Total installed capacity of MVM Group's electricity generation units, including the 2,027 MW Paks Nuclear Power Plant and c. 259 MW of renewables.

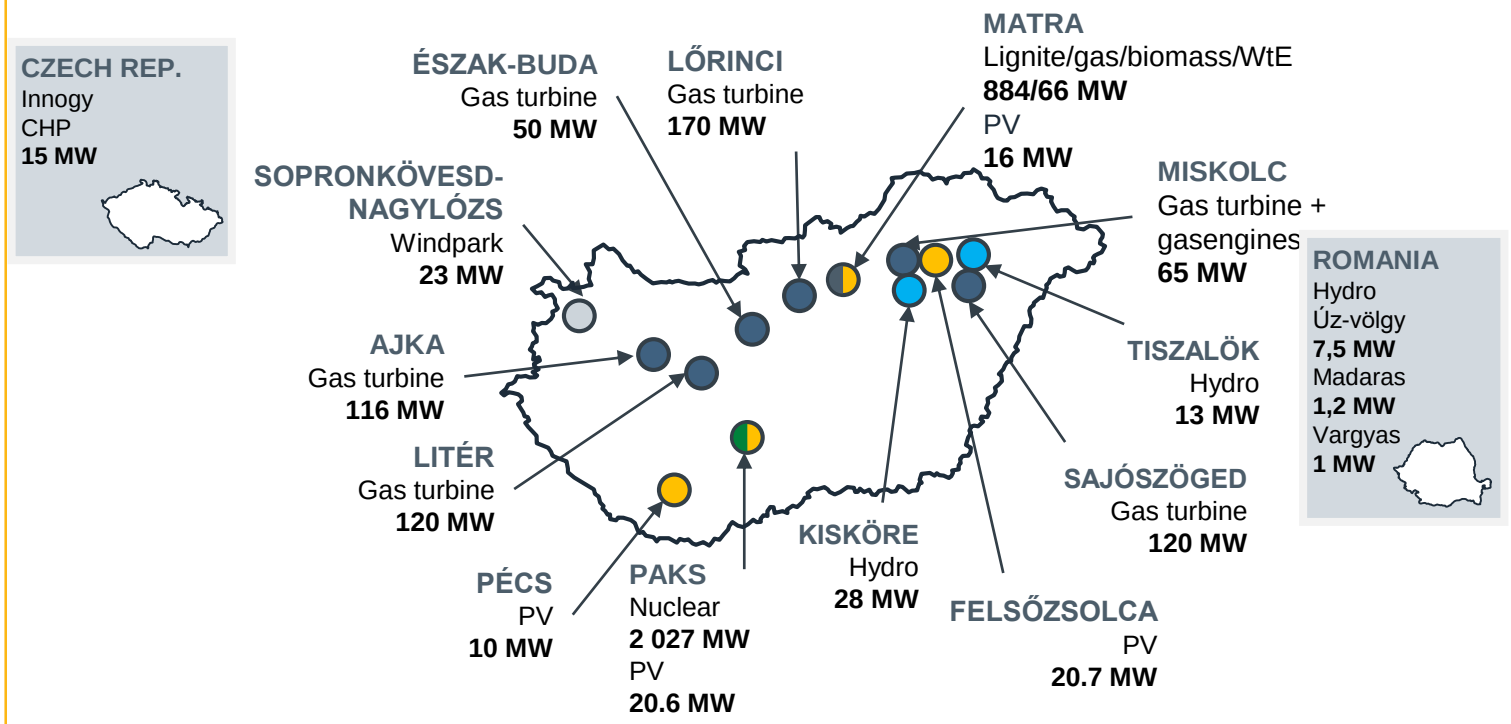
20.7 TWh[1]

Gross electricity output of MVM Group's power plants in Hungary in 2020.

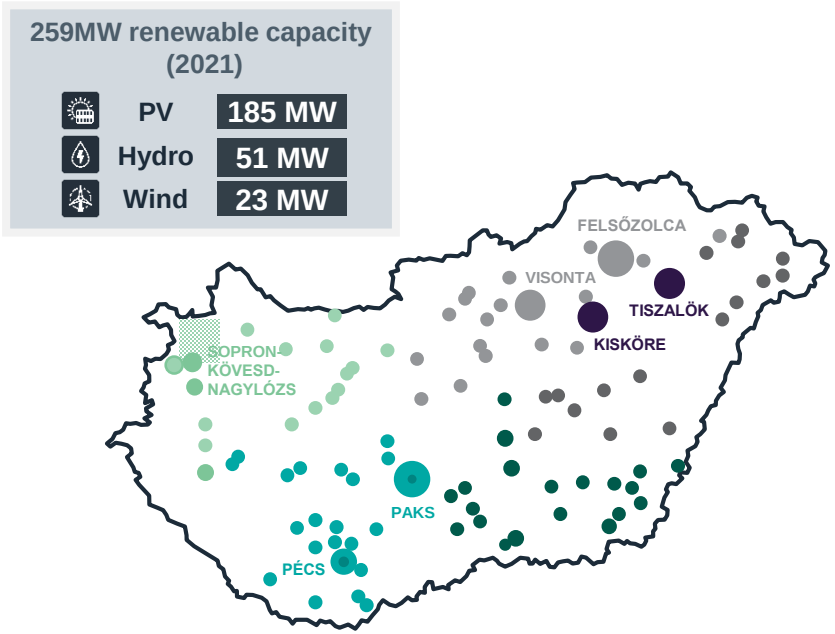
62%[2]

MVM Group's market share in 2020 based on gross electricity output.

Electricity generation units of the MVM Group (>10 MW)



RES power plants of the MVM Group



(1) MVM Paks Nuclear Power Plant Ltd., MVM MIFŰ Ltd., MVM Green Generation LLC., MVM Balance Private Limited Company, MPP Ltd. and NRG Finance Ltd.; (2) Based on national gross electricity output; Tiszavíz is part of MVM Group since 13 May 2021; Source: MAVIR Hungarian Independent Transmission Operator Company Ltd. (MAVIR)

THE INNOVATIVE MODERNIZATION OF THE MÁTRA POWER PLANT HAS AN IMPORTANT ROLE TO PLAY IN ACHIEVING THE GOALS OF THE NATIONAL AND MVM STRATEGIES

National Energy Strategy

- The share of carbon-neutral generation is expected to be 90% by 2030.
- A significant increase in installed PV capacity is expected.

National Energy and Climate Plan

- National GHG emissions must be reduced by at least 40% by 2030.
  - The CO_2 emissions of the Mátra Power Plant account for almost 50% of the emissions of the entire Hungarian electricity industry.
- Hydrogen can play a significant role in the strategy.

National Clean Development Strategy

- Coal-phase out with low-carbon power generation technologies.

Replacing the lignite blocks of the Mátra Power Plant with low carbon intensity technology

The MVM Group is the number one custodian of the implementation of national climate and energy policy goalstherefore we are building an efficient, diversified portfolio based on clean energy, while expanding and developing existing flexible capacities.

MODERNIZATION VISION PROGRAM OF THE MÁTRA SITE

1. Establishment of a **500-650 MW_e CCGT** capacity with natural gas-fired, high-efficiency, low-carbon and flexibly controllable electricity generation with the possibility of hydrogen co-firing.
2. Construction of a **45 MW_e** power plant unit for the use of RDF and biomass fuel.
3. Commissioning of a photovoltaic capacity of **200 MW_e** on the surface of the recultivated mine.
4. R&D&I project using technology for CO_2 capture and storage / recovery (**CCS / CCU**) process.
5. Industrial and environmental development programs.

1.CCGT

2.WTE/BIOMASS

3.PV

4.CCS PILOT

5. INDUSTRIAL AND ENVIRONMENTAL DEVELOPMENT

1. PILLAR : ~500-650 MW_E CCGT PROJECT

Construction time: 36 months
Operating time: 20 years

Construction site

- Combined cycle gas turbine producing natural gas, high efficiency, low CO_2 intensity and flexibly controllable electricity.
- The transforming electricity system requires the control power provided by flexible gas turbines.
- Reduction of CO_2 emissions.
- Brownfield investment, existing infrastructure.

2. PILLAR: 38-45 MW_E WtE/BIOMASS POWER PLANT

Construction time: 22 months
Operating time: 20 years

Construction site

- A complex biomass and waste management system: capacity expansion, use of existing infrastructure.
- The new WtE / biomass-fired unit is low-CO_2 and a well-controlled technology.
- Energy utilization, combined heat and power generation.
- Meeting the steam and electricity needs of the industrial park.
- Brownfield investment.

The operation of the new WtE / biomass block will be carried out in accordance with the objectives of the National Waste Strategy

3. PILLAR: 200 MW_E PHOTOVOLTAIC SOLAR PARK IN THE AREA OF THE MINES, THE RECULTIVATION OF THE MINES MAY START IN 2026

- New PV with a maximum capacity of 2 x ~ 100 MW_e is expected to be installed in the Visonta and Bükkábrány Mines, depending on the terrain.
- The PV mine installation is an alternative mine recultivation measure and its schedule should be in line with the reclamation schedule.
- The recultivation of the Visonta and Bükkábrány Mines could start in 2026, with further employment of workers.

The commencement or completion of the construction of PV power plants, the completion of mining activities and the recultivation of mining areas may change.

INTEGRATED LIFE PROJECT IN THE LIFE OF THE MVM GROUP

- As part of the LIFE Project, the MVM Group is preparing technical and innovation pilot (R&D) projects to secure and start implement an effective roadmap for the low-carbon transition of the single largest coal region in Hungary.

- Many member companies of the MVM Group are responsible for 19 actions during the entire project period.

- **The MVM Group is working on the following pilot projects and studies:**

  - **A8 - Strategy for converting post-mining landscapes into regional assets**

  - **C2 - Develop and implement transitional roadmap on the MPP sites**

  - **C4.1 - Artificial Inertia Project**

  - **C4.2 - Clean energy storage for balanced solar power**

INTEGRATED LIFE PROJECT IN THE LIFE OF THE MVM GROUP

- **C4.3 - Small scale solar power plant project with an installed capacity of 200 kW_p**
- **C4.4 - Open Innovation Platform**
- **C4.5 - Self-powered energy storage**
- **C10.1 - Detailed feasibility study for the establishment of biomass- and gas-fired boilers and a gas and biogas fired CCGT unit replacing lignite Units I and II of MPP.**
- **C10.2 - Preliminary studies to develop a small scale pumped hydro energy storage facility**
- **C10.3 - Preparation for licensing large-scale solar power plants on the MPP site**

THANK YOU FOR YOUR ATTENTION!

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