

Northern Hungary, Hungary

GENERAL INFORMATION

Country: Hungary

Region Name: Northern Hungary

Region NUTS2 code¹: HU31 - Northern Hungary

Region NUTS3 code:

HU311 - Borsod-Abaúj-Zemplén

HU312 - Heves

Main urban centres in the region:²

Miskolc (145,248)

Eger (50,018)

Salgótarján (31,223)

Ózd (30,865)



1. NUTS: Nomenclature of Territorial Units for Statistics

2. Detailed Gazetteer of Hungary. https://www.ksh.hu/apps/hntr.main?p_lang=EN

Regional socio-economic profile

General description of the socio-economic profile of the region

Northern Hungary is one of the eight Hungarian statistical regions, located in the north-eastern part of the country. It includes the counties of Borsod-Abaúj-Zemplén, Heves and Nógrád. With a population of approximately 1.1 million inhabitants, the region accounts for 11.5% of the total population.³ Its GDP per capita in PPS is nearly half the EU average, while the unemployment rate in 2021 was 6.2%.⁴

The Heves economy is heavily centred around manufacturing, which accounted for 35% of the county's gross value added in 2021, well above the national average of 20% but below Borsod-Abaúj-Zemplén that has a share of 39%. The share of manufacturing in the

economy of Heves County has increased substantially, from 23% in 2009, while at the same time there has been a decline in 'Mining, Energy, and Water & Waste', which has fallen from 12.6% in 2009 to 5.7% in 2021.⁵

Northern Hungary is the last active coal region of Hungary, featuring the Mátra Power Plant (MPP), owned by MVM Mátra Energy Ltd. MPP operates two open-cast lignite mines: the Visonta mine in Heves county and the Bükkábrány mine, in Borsod-Abaúj-Zemplén county, which jointly account for 99% of lignite mining in Hungary. MPP is the second largest power plant of Hungary, providing 15% of domestic electricity production. It is also a major regional employer, supporting more than 2,000 workers directly and over 4,700 workers indirectly, and working with around 1,000 companies closely linked to the plant's operations.⁶ The power plant is also the largest carbon dioxide emitting facility in the country and is responsible for 8% of domestic GHG emissions and 10% of domestic CO₂ emissions.

Regional coal industry profile			
Coal mining			
Type of coal	Lignite		
Type of coal extraction	Open pit		
Number of operating coal mines	2		
Production of coal [Mt annual]	7.9 Mt/year	Year of prod. Data:	2021 ⁷
Main coal mining enterprises			
Name	Ownership	Number of employees	Year of employee data
MVM Mátra Energia Zrt	Public - MVM Group	1,400	2021
Total level of employment in coal mining (in the region)		1,400	2021

Regional coal power plant profile		
Coal power plants		Year of data
Number of coal power plants	1	2021
Installed capacity [MW]	853	2021
Share of coal in national power generation mix [%]	8.70% ⁸	2021

3. Eurostat. 2023. Population on 1 January by age, sex and NUTS 2 region. https://ec.europa.eu/eurostat/databrowser/view/demo_r_d2jan/default/table?lang=en

4. Directorate-General for Economic and Financial Affairs. 2023 Country Report - Hungary. https://economy-finance.ec.europa.eu/system/files/2023-06/ip241_en.pdf

5. START 2023. Identification of green economy opportunities and barriers in Heves County: Situation assessment and review of EU experiences

6. North Hungary in Transition. LIFE-IP North-HU-Trans Introduction. <https://igazsagosatmenet.eu/en/introduction/>

7. Alves Dias, P., Conte, A., Kanellopoulos, K., Kapetaki, Z., Mandras, G., Medarac, H., Nijs, W., Ruiz Castello, P., Somers, J. and Tarvydas, D. 2021. Recent trends in EU coal, peat and oil shale regions. <https://publications.jrc.ec.europa.eu/repository/handle/JRC123508>

8. Share of electricity production from coal. Our World in Data. <https://ourworldindata.org/grapher/share-electricity-coal?tab=table>

Main coal power plant operators			
Name	Ownership	Number of employees (estimation) ⁹	Year of employee data
MVM Mátra Energia Zrt.	Public - MVM Group	2 100 (direct) 4 700 (indirect)	2022
Total level of employment in coal power plants (in the region)		6 800	2022

Regional and local transition strategies and plans

Status and timeline of coal transition / phase-out

Hungary joined the Powering Past Coal Alliance in March 2021, with the aim of closing the Mátra Power Plant and phasing-out coal by 2025. However, due to the reassessment of energy security and electricity supply issues, in November 2023, the Hungarian government decided to extend the closure date of the plant, until a new combined cycle gas turbine power plant is ready to replace it. The new plant is expected to be operational no earlier than 2027. With the new license for the plant's lignite units valid until 2029, there is the possibility for Hungary to further postpone its coal phase-out date, if the implementation of the new gas plant is delayed, which is inconsistent with the coal phase-out date of 2025 that was agreed in the cohesion policy programme and in the corresponding Territorial Just Transition Plans adopted by the European Commission in 2022.¹⁰

Current regional strategies and plans for transition (including for economic development, diversification, and decarbonisation)

The **Territorial Just Transition Plan (TJTP) of Heves and Borsod-Abaúj-Zemplén counties** adopted in 2022 aims to mitigate the socio-economic impacts of the coal-phase out. The TJTPs foresee the following interventions: investment in training and retraining of the workforce, green economic diversification, technological change and promotion of research and development and innovation, encouraging the development of renewable energy infrastructure, promoting environmentally friendly

household energy production and use, green public transport development, mitigation of the effects of mine drainage, and sustainable repurposing of mining sites.¹¹

The **Matra Power Plant Decarbonisation Strategy** set out by MVM Group foresees the replacement of the coal power plant by a natural gas power plant, a waste incineration plant and about 200MW photovoltaic solar farms. There is also a plan for economic diversification that includes various strategic investments, including a solar panel recycling laboratory, a solar panel support structure manufacturing plant, a fish farm, a power line support pole manufacturing plant, a compost production plant, and a plant to produce building materials from mining waste. These investments are expected to create 800 jobs. However, the impact of these investments on displaced lignite workers, regional subcontractors and suppliers, and on the regional economy generally is unclear.¹²

The **Borsod-Abaúj-Zemplén County Climate strategy (2017)** delineates the County's efforts and interventions in emission reduction, adaptation, and awareness-raising. It outlines the necessary actions and measures essential to tackle these challenges, along with the resources and institutional structures needed to achieve these objectives. Additionally, the strategy underscores the importance of monitoring its implementation to ensure effectiveness. The strategy highlights the county's potential for further reducing greenhouse gas emissions, especially in the areas of residential energy consumption and improvements of energy efficiency.¹³

Similarly, the **Heves County Climate Strategy (2017)** sets goals across three major areas: the reduction of greenhouse gas emissions through mitigation and decarbonisation, adaptation strategies, and the cultivation of climate-aware behaviours. The strategy outlines various objectives designed to preserve the distinctive features of Heves County, such as the preservation of its grape and wine production. In essence, the strategy envisions

9. Government of Hungary, 2022. Territorial Just Transition Plan – Heves County. <https://archive.palyazat.gov.hu/download.php?objectId=1096607>

10. Beyond Fossil Fuels. Overview of national coal phase-out commitments (as of 07 December 2023). <https://beyondfossilfuels.org/europes-coal-exit/#:~:text=HUNGARY%3A%20COAL%20PHASE%20OUT%202027> (accessed 13/12/2023).

11. Government of Hungary, 2022. Territorial Just Transition Plan – Borsod-Abaúj-Zemplén county. <https://archive.palyazat.gov.hu/download.php?objectId=1096606>

12. Information provided from START application.

13. County of Borsod-Abaúj-Zemplén. 2017. Borsod-Abaúj-Zemplén County Climate strategy (2018) https://baz.hu/media/Borsod_Abauj_Zemplen_Megyei_Klimastrategia_TERVEZET_20171115_kikuld_74014.pdf

Heves County evolving into a county that proactively responds to the challenges of climate change by 2030. This transformation includes fostering a climate-conscious population, promoting an innovative economy, and ensuring the sustainable management of its natural resources.¹⁴

Principal actors in development and implementation of transition strategies and plans

At national level: Ministry of Energy, Ministry of Technology and Industry, Ministry of Regional Development, Coal Commission Secretariat (CCS), Hungarian Energy and Public Utility Regulatory Authority.

At regional level:

- Regional authorities: Government Office of Borsod-Abaúj-Zemplén County, Government Office of Heves County;
- Local authorities: Municipality of Abasár, Bükkábrány, Visonta, Markaz;
- Universities: Eszterházy Károly Catholic University, Gyöngyös University;
- Local Chambers of Commerce: Heves County Chamber of Commerce and Industry, Chamber of Commerce and Industry for Borsod-Abaúj-Zemplén County;
- Trade unions: Trade Union of Mining, Energy and Industrial Workers (BDSZ), Trade Union of Electricity Workers;
- Energy companies: MVM Mátra Energia Zrt;
- National and regional NGOs/think tanks: CEE Bankwatch, Energiaklub;
- International development agencies: Western Balkans Green Center.

Regional and local transition projects and initiatives

Notable ongoing and recent transition-related initiatives and projects

At a regional level, the project **“Secure and start implement an effective roadmap for the low-carbon transition of the single largest coal-region in Hungary” (LIFE-IP North-HU-Trans)** aims at supporting implementation of the Hungarian NECP, with special

emphasis on the decarbonisation and sustainable, just transition of the Mátra Power Plant and its region. The project started in September 2020 and will operate until October 2029. In the framework of the project, the Coal Commission was established as the first consultation platform of Hungary focusing on the questions of coal transition. The primary goal of the Coal Commission is to involve all stakeholders and ensure their participation in the transition process. Regarding decarbonisation, the project aims to create a roadmap for the gradual phase out of MPP; develop, test and assess renewable-based solutions for the post-mining sites; and foster capacity-building by recruiting and training decarbonisation and coal phase-out experts. The project will also implement a mentoring programme for affiliated and supply chain companies of the lignite sector vulnerable to the decarbonisation of the MPP.

The project **“Improving air quality at eight Hungarian regions through the implementation of air quality plan measures” (LIFE-IP HUNGAIRY)** aims to solve one of the most significant environmental problems, improving unfavourable air quality in ten Hungarian municipalities across eight of the country's regions. The project started in January 2019 and will end in December 2026. It is implemented through the development of emission databases, comprehensive awareness raising activities and the establishment of a national network of experts and consultants.¹⁵

The project **COAL-OUT** was a 1-year project (2021-2022) delivered by the NGOs Energiaklub, which examined the societal implications of the coal phase-out process and its already known or expected impacts on communities living in the vicinity of the Mátra Power Plant. The project focused on the territories in the Heves County close to the Mátra Power Plant (Gyöngyös, Visonta, Abasár, Markaz, Halmajugra, Detk, Ludas, Karácsond). To implement the project, Energiaklub collaborated with a local NGO and jointly carried out the following activities: a questionnaire survey tailored to the project's focus area; in-depth expert interviews/roundtable discussions; four public forums focusing on the social aspects of the coal phase-out process; a publication summarising project outcomes.¹⁶ Culminating in a closing conference for further dissemination, this effort resulted in a report titled “Life after lignite in the area of the Mátra Power Plant”, published in 2022.¹⁷ One of the most important conclusions of the project is the need for ongoing and transparent consultation and information regarding the transition, especially in light of the central role of the MPP in shaping the region's identity and economy. The study also underscored the critical need for precise information on the transition process, which will serve as a key tool in

14. Heves County Local Government Office. 2017. Heves County Climate Strategy https://archiv.hevesmegye.hu/files/klimastrat/Heves%20megye%20kl%C3%ADmastrat%C3%A9gi%C3%A1ja%202017%20szeptember%20kgy_KBTSz%20kieg.pdf

15. LIFE-IP Hungary. <https://hungairy.hu/en/project>

16. The study and the conference organized within the COAL-OUT project, together with other relevant materials, can be found here: <https://energiaklub.hu/kereses?search=coal-out>

17. Energiaklub. 2022. Life after lignite in the area of the Mátra Power Plant. https://energiaklub.hu/files/study/COAL-OUT_tanulm%C3%A1ny.pdf

clarifying misconceptions, explaining potential threats, and show potential opportunities associated with the power plant's transformation.

At a national level, the Ministry of Industry and Technology received the **support from DG REFORM for the preparation of the Territorial Just Transition Plans (2020-2021)** for the counties of Heves, Borsod-Abaúj-Zemplén and Baranya. Since 2023, the Prime Minister's office and the Ministry of Energy is receiving **support for the Implementation of the Just Transition Fund in Hungary from DG REFORM**, which assists national authorities in the optimal allocation of financial resources from the Fund. Specifically, the counties of Heves and Borsod-Abaúj-Zemplén are supported mainly in the formulation of municipal reclamation activities, the identification of opportunities for alternative landscaping and repurposing of the areas affected by mining activities, and through technical assistance for energy-poor household applications.¹⁸

Finally, the Trade Union of Mining, Energy and Industrial Workers successfully performed a two-year project on **supporting the mining employees of MPP in the labour market transition and in adaptability to labour market changes (2019-2021)**.¹⁹ In this project, BDSZ carried out a survey to learn about development plans and workforce requirements of the economic organisations within a 30 km radius.²⁰ The results of the survey demonstrated the importance of preparing the employee, covering various aspects like skills and competence assessment, provision of psychosocial support, and effective management of workplace stress during the transition. Moreover, significant emphasis was placed on creating a social dialogue and close cooperation between employers and employee representatives.¹⁸

Notable planned transition-related initiatives and projects

In preparation for the JTF calls for proposals, the following interventions related to economic diversification have been identified:

- Support investments in technology change and energy efficiency improvements that enable SMEs to lower GHG emissions;
- Support for research and development and innovation-based cooperation between education and research centres and SMEs to promote R&D activities with green economy innovation potential and R&D activities that increase efficiency and thus reduce GHG emissions;

- Support the diversification of the green economy and the creation of a circular economy by enterprises, in particular SMEs.

Regional and local transition challenges and opportunities

Nature and scale of key transition challenges

The region of Northern Hungary is facing several transition challenges. First, the business taxes paid by the MPP play a prominent role in the budget of many municipalities in the region. This income has been an essential financial source of rural development and infrastructure improvements in these settlements, which means that with the loss of the business taxes, these municipalities could find themselves in a difficult financial situation. Local municipalities and inhabitants are not prepared for a post-lignite era, as they face a very uncertain social situation against a background of unemployment, environmental degradation, poverty and income loss. Each municipality is affected to a different level by the local business tax paid by the power plant, but in general more than half of the revenue of the most affected municipalities come from this tax.

The transition will also have an impact on SMEs operating in the region as a part of the supply chain of MPP (MPP has nearly 1,000 suppliers and subcontractors). In addition, the Industrial Park of the MPP has 15 partners which use the services of the industrial park (e.g., purchase of electricity, steam, gypsum). These services will be significantly impacted if the MPP transforms its lignite-fired units into a combined cycle gas turbine power plant.

In addition, the challenges to the region are compounded by uncertainty over the actual phase-out date for use of lignite for power generation (see section: Status and timeline of coal transition / phase-out, above).

Nature and scale of key transition opportunities

Despite the challenges, the transition process offers opportunities both at a local and national level. At a local level, the transition projects and initiatives foster the collaboration between different regional actors, such as the regional and local public authorities, national industry associations, MATE University in Gyöngyös (the local education and research institution) and the companies closest to MPP which will be the most affected by the coal phase out. By linking local authorities with economic actors

18. Energiaklub. 2023. Support to the implementation of the Just Transition Fund in Hungary. <https://energiaklub.hu/en/project/support-to-the-implementation-of-the-just-transition-fund-in-hungary-5127>

19. More information about the project can be found here: <https://www.palyazat.gov.hu/eredmenyek/tamogatott-projektek/2164200201>

20. Trade Union of Mining, Energy and Industrial Workers. 2020. Supporting the mining employees of MPP in the labour market transition and in adaptability to labour market changes (GINOP-5.3.5-18-2019-125). http://mepa.banyasz.hu/images/letoltesek/K%C3%ADs%C3%A9rieti_projekt_m%C3%B3dszertan_elfogadott.pdf

at a municipality and regional level, the risk of competing for the same funds will decrease and synergies will be exploited.

With the closure of lignite mining, there will be significant re-cultivation tasks that could provide employment for a significant number of people for many years to come. This will provide opportunities for development in the fields of recreation, tourism, agriculture and the presentation of cultural heritage.

The number of hours of sunshine in the Heves County is above the average for Hungarian counties, which provides a strong basis for the expansion of solar parks or the construction of additional facilities, and the region has links to the battery manufacturing value chain. In that context, it will be fundamental to involve national industries in solar, battery and heat pump fields to support the value chain and bring knowledge to the region.

Sources

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Initiative for coal regions in transition

The Initiative for coal regions in transition is led by the European Commission.

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