

## **Independent opinion of Institute of Meteorology and Water Management - National Research Institute (IMWM-NRI): The Turów Lignite Mine has a insignificant impact on the hydrological conditions on the Czech side of the border**

**The Institute of Meteorology and Water Management - the State Research Institute has prepared an independent scientific study which indicates that it is the meteorological conditions, and not the Turów Lignite Mine operated by the company PGE GiEK, a member of the PGE Group, that exert the major influence on the water resources at the Polish-Czech border. Scientists' thirty years' observations show the mountainous area of the Żytawski Valley, where the Turoszów power generation complex is located, is particularly exposed to hydrological droughts.**



The study contains an analysis of conducted observations and measurements taken over a period of many years at various precipitation stations and water-level gauges located on the premises of the Turów Lignite Mine and its vicinity, on both sides of the Polish-Czech border.

IMWM-NRI experts carried out an assessment of the conditions on the basis of an analysis of daily rainfall trends and daily water flows, as well as an analysis of meteorological and hydrological droughts over the past 30 years. They analysed the data from the precipitation stations located in the nearest vicinity of the mine - in Sieniawka, Bogatynia, Wyszków, Bierna and Sulików, the precipitation stations located in the territory of the Czech Republic in Liberec, Bedrichov and Hejnice, as well as the water-level gauges on the Nysa Łużycka River located in Liberec (CZ), Hradec (CZ), Porajów, Sieniawka and Zgorzelec, the Turoszów water-level gauge station on the Miedzianka River and the water-level gauges on the Witka River located in the villages of Bily Potok (CZ) and Frydlant (CZ). The quantity and quality of the available research material gave the scientists access to reliable and representative results.

*The quantitative and qualitative analyses of precipitation and water flows carried out by the IMWM-NRI researchers indicate a lack of clear trends in the course of daily values over a period of many years. Moreover, no periodical anomalies were found for both precipitation and flows. The course of daily water flows over many years indicates a stable hydrological regime and no disturbances in the hydrological cycle. This is the basis for the statement that water flows on the Czech side are generated mainly by meteorological conditions and not by the activities of the Turów Lignite Mine. The influence of the Turów Mine on the course of daily flows is not significant, said **Przemysław Ligenza, Director of the Institute of Meteorology and Water Management.***

*Since the beginning of works on the extension of the Turów mining concession, the topic of water resources protection has been a priority. So far there have been no unambiguous expert opinions and evidence showing that the mine affects the eight active water intakes in the Czech Republic. In the case of the water*

*intake in Uhelna, due to its location, preventive protective measures are being taken, consisting in the construction of an anti-filtration screen at a depth of 60-110m and with a length of approximately 1200m, which will prevent any potential flow of water from the Uhelna area towards the mine. I emphasize that these are only preventive measures which we have voluntarily committed ourselves to as part of the environmental decision. Experts clearly indicate that it is not the Turów Mine, but the meteorological conditions that have the greatest impact on water levels on the Czech side, stressed **Zbigniew Kasztelewicz, Vice President for mining operations at PGE Górnictwo i Energetyka Konwencjonalna.***

The experts of IMWM-NRI also stress that nowadays droughts should be analysed as not only a natural phenomenon but also a synergy of natural climatic conditions and human activity influencing water circulation. The occurrence of drought cannot be prevented, but thanks to understanding the mechanisms of its occurrence it is possible to limit its adverse consequences. This is particularly important in areas with intensive economic activity.

Conducted analyses of drought periods indicate that mountainous areas are particularly vulnerable to hydrological droughts due to their initiating role in the shaping of water resources in Poland. The lack of snow cover observed in the recent winter periods disturbs the water resources recovery process. In the circumstances of water deficit caused by summer-autumn droughts, a drought appears already in spring, being a continuation of the drought from the previous season.

The study conducted by the IMWM-NRI shows that the impact of the operations conducted by the Turów Lignite Mine on water flows in the Żytawski Valley is not significant. This is an important statement in the context of the functioning of the Turów Mine, which has received an extension of the mining concession for 6 more years, and which, according to the resource documentation and the reasonable management of the available lignite deposit, should remain in operation until approximately 2044. After 2044, in accordance with the EU Green Deal, the areas of the Turów power complex will undergo the process of targeted land rehabilitation and revitalization.

At present the Turów Mine's operations cover a half of the mining area approved for this purpose in the concession granted in 1993. The extension of the functioning of the Turów Mine guarantees the continued operation of the Turów Power Plant and thus a secure supply of electricity to more than 3 million households until 2044. The Turów complex is also the largest employer in the Zgorzelec region. It currently employs over 3,600 people. Nearly 15,000 employees of supply and service companies are directly involved in the operation of the lignite mine and the power plant in Turów.

## **Additional information**

As part of the concession process, a detailed environmental report has been prepared. It includes analyses of any expected impact of the facility and, most importantly, specifies measures necessary to minimize any potential negative impact of the conducted activity. Several thousand comments and questions were answered, and the participants of the concession extension procedure, as well as persons interested in it, obtained the necessary information on all issues that raised any doubts. In accordance with the requirements of the national and EU law, representatives of administrative authorities, the public as well as the neighbouring countries, i.e. the Czech Republic and the Federal Republic of Germany, participated in the environmental impact assessment procedure. Various objections were raised under this procedure. Following the principle of good business practices, PGE GiEK organized additional meetings, not covered by legal regulations, with the residents of the Czech villages of Chotyne and Uhelna in autumn 2019. During the meeting they discussed measures to be taken to eliminate the potential negative impact of the Turów opencast mine on the border areas. In addition to the standard procedure required under the applicable legal regulations, meetings with the residents of Opolna-Zdrój were also held in the first half of 2019.

As part of its application for the extension of the concession until 2044, PGE GiEK is obliged to obtain a so-called decision on environmental conditions. An application for the issue of an environmental decision (which precedes the issue of a concession) was submitted by PGE GiEK as early as in 2015, and the environmental impact assessment procedure for the continuation of the mining operations on the Turów deposit took almost 5 years. The decision was issued by the Regional Director of Environmental Protection in Wrocław on 21 January 2020 after the completion of the environmental impact assessment procedure. The decision imposes specific obligations on the Turów Mine, including the implementation of a number of investments limiting its impact on the environment. These are so-called impact minimization measures. The subject of the environmental impact assessment procedure and cross-border arrangements included also the impact of the Turów Mine on water resources at the Czech border. The groundwater level has been monitored for many years by Polish-Czech and Polish-German specialist teams. The measurement network comprises 550 groundwater table sites, of which more than 150 belong to the Polish-Czech and Polish-German measurement network. The results of specialist surveys confirm that the mine does not cause the depletion of water resources at the drinking water intakes. In order to protect the only drinking water intake in Uhelna, which the Turów Mine may potentially affect, steps were taken to develop and implement an anti-filtration underground screen which will be constructed at a depth of about 60-110 m and which will prevent the flow

of water from the Uhelna area towards the mine. The effectiveness of the screen will be continuously monitored by the Polish-Czech monitoring system.

In response to the complaint requesting the closure of the Turów mine signed by the inhabitants of the Liberec Region in the Czech Republic and submitted to the European Parliament, in June this year the inhabitants of the local Polish districts started to collect signatures under the petition in defence of the Turów complex. On 22 June 2020, nearly thirty thousand people had already given their support to the petition. The petition emphasizes the social aspect and draws attention to the much larger lignite mines operating in the Czech Republic and Germany. The inhabitants intend to submit it to Ursula von der Leyen, President of the European Commission. The PGE Group supports this initiative by emphasizing that the Turów power generation complex is one of the key elements of the Polish energy system, operates on the basis of a concession granted in accordance with the applicable law, meets all environmental standards, and provides jobs for thousands of residents of the region.