



Luxembourg, 13/09/2024

## Environmental and Social Data Sheet

### Overview

Project Name: *PUMPED STORAGE HYDRO POWER PLANT MODERNISATION*  
 Project Number: *2023-0937*  
 Country: *Poland*  
 Project Description: *Rehabilitation and modernization of 500MW pumped storage hydropower plant located in southern Poland. Works concern a major overhaul of the electro-mechanical and control equipment as well as the renovation of the upper artificial reservoir's sealing, of water conveyance tunnels and of hydraulic steelworks.*

EIA required: no

Project included in Carbon Footprint Exercise<sup>1</sup>: no

### Environmental and Social Assessment

This is an allocation under framework loan 2023-0621 - PGE REPOWEREU FRAMEWORK LOAN concerning the Rehabilitation and modernization of 500MW pumped storage hydropower plant located in southern Poland.

The existing pumped storage hydropower (PSH) plant was commissioned in 1979 and features four vertical pump-turbine units with a total pumping capacity of 540 MW and generating capacity of 500 MW.

Under this operation it is planned to execute a major overhaul of the electro-mechanical and control equipment of the plant inside the cavern (underground) powerhouse, as well as the renovation of the upper artificial reservoir's sealing, of water conveyance tunnels and of hydraulic steelworks.

The plant, especially the concerned equipment, reached the end of its technical lifetime and is in need for thorough overhaul and partial replacement to extend the plant's lifetime by several decades, and to improve overall efficiency and flexibility.

All planned project measures, including the renovation of civil and hydraulic structures, will take place within the premises of the existing PSH plant. No extensions and no additional land use is foreseen.

### Environmental Assessment

The project includes some components that fall under Annex II of the EIA Directive (2011/92/EU) as amended by Directive 2014/52/EU, thus required a review by the competent authorities at the planning/consent stage with due regard to the necessity for an environmental impact assessment.

The EIA legislation in Poland is based on transposition and implementation of Directive 2011/92/EU (amended by Directive 2014/52/EU).

<sup>1</sup> Only projects that meet the scope of the Carbon Footprint Exercise, as defined in the EIB Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: 20,000 tonnes CO<sub>2</sub>e/year absolute (gross) or 20,000 tonnes CO<sub>2</sub>e/year relative (net) – both increases and savings.



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The Competent Authority approved the various project measures in 2022 and 2023 with the comment that no Environmental Impact Assessment is required (screened out).

Minor impacts during construction may consist of increased noise and dust levels.

The fluctuation of water level in the lower reservoir is regulated by legal acts with constant monitoring, therefore operation of the power plant does not cause significant impact to water species. The extension of the power plant does not affect other species (birds, mammals, bats etc.).

The closest Natura 2000 sites are Beskid Mały (WDPA ID 555530869), with a part of it being 1 km to the north-west and another segment 1 km to the south-east. A national park (Park Krajobrazowy Beskidu Małego, WDPA ID 148575) surrounds the project site. These sites were established after the implementation of the existing PSH.

GHG emissions have been calculated but fall below the thresholds defined for the Carbon Footprint Exercise (CFE). The source of CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emissions for the project is from the electricity used for pumping. At project completion, the corresponding absolute emissions are estimated to be 13.3 kT CO<sub>2</sub>e per year for the additional annual energy storage. These absolute emissions are offset by avoiding conventional intermittent generation, which would alternatively provide the same service as the pumped storage hydropower plant in the 'do-nothing' scenario. Therefore, at completion, the programme is expected to enable a saving of approximately 12.7 kT CO<sub>2</sub>e per year.

### **EIB Paris Alignment for Counterparties (PATH) Framework**

The counterparty PGE Polska Grupa Energetyczna S.A. is in scope and screened in to the PATH framework, because it operates in a high emitting sector and it is considered to be of high vulnerability.

The counterparty already meets the requirements of the EIB PATH framework with its existing alignment plan and the counterparty has sufficiently demonstrated their alignment with the PATH resilience requirements.

### **Social Assessment**

The modernization of the PSH does not require any additional land use and residents living close to the power plant will not be affected.

### **Other Environmental and Social Aspects**

The borrower is known to the Bank from previous operations in energy generation and distribution grids. They have a solid organisational structure and sufficient E&S capacity to implement the project through its subsidiary in charge of renewable generation, which follows the same policies and standards as the group.

## **Conclusions and Recommendations**

The Bank reviewed the environmental and social capacity of the promoter, including its organisation, processes and procedures, and considers them to be satisfactory.

Based on the information available, the Project is expected to have minor negative residual impacts and thus is acceptable for Bank financing from an environmental and social perspective.

Most of the project components are not in scope of either Annex I or II of the EIA Directive. Some project components followed a screening procedure and the competent authorities concluded that an EIA was not required.



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The competent authority also concluded that the project is not likely to have negative impact on any of the nearby Natura 2000 sites.

The project does not require any resettlement.

Overall, the project will indirectly bring environmental benefits through increased round-trip efficiency of the electricity storage system and hence reduced CO<sub>2</sub> emissions.

The project is expected to increase the flexibility of the pumped storage power plant and thereby supports the efficient integration of intermittent renewable energy sources, such as wind and PV, in the Polish grid.