

Luxembourg, 16 March 2018

## Environmental and Social Data Sheet

### Overview

Project Name: *KEMIJOKI SIERILA POWER PLANT*  
 Project Number: *2017-0596*  
 Country: *Finland*  
 Project Description: *Construction of a 44 MW hydropower plant near Rovaniemi, Finland. The project will provide renewable electricity and controlling power to national grid.*

EIA required: yes

Project included in Carbon Footprint Exercise<sup>1</sup>: yes

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

### Environmental and Social Assessment

The project consists of a new hydro power plant with capacity of 44 MW located 20 km east of Rovaniemi, along the Kemijoki river. The plant comprises a dam with embedded spillways in the main channel of the river and earthen embankment dams to contain the reservoir mainly within the existing waterway. The plant will have a reservoir surface of 14 km<sup>2</sup> that will enable storing additional 65 Mm<sup>3</sup> of water.

#### Environmental Assessment

The project falls due to its technical characteristics under Annex I of the Directive 2014/52/EU amending the EIA Directive 2011/92/EU and thus requires an Environmental Impact Assessment (EIA). The EIA of the plant started in 1995. The environmental impact study was prepared and subjected to public consultation, after which it was approved by the regional environmental authority (Lapin Ympäristökeskus) in 2000.

The promoter finalised the plans and documents and applied for an environmental permit (the construction consent according to the Finnish Water Law) in 2005. The application was subject to detailed evaluation of benefits and damage compensations by independent assessors during 2005-2011. The permit, with conditions, was issued by the competent authority (Pohjois-Suomen Ympäristölupavirasto) in 2011, and was thereafter subject to court appeals in four stages (twice in Administrative Court and twice in Supreme Administrative Court). The Supreme Administrative Court's confirmed in 2017 the construction permit under Finnish Water Law with no further appeal.

The appeals to the Courts were filed by local residents and NGOs opposing the harnessing of this last stretch of the Kemijoki River. The main environmental concerns of the project opponents related to the effects on fish fauna and impact on a protected species.

Negative impacts on flora, fauna and recreational fishing are covered by the environmental study; proposed mitigation measures include scheduling construction work outside of bird

<sup>1</sup> Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO<sub>2</sub>e/year absolute (gross) or 20,000 tons CO<sub>2</sub>e/year relative (net) – both increases and savings.

Luxembourg, 16 March 2018

nesting seasons and creating new suitable nesting locations, creation of new land and aquatic habitats, and the planting and hatching of fish species. The project includes as well a bypass stream with environmental flow that allows fish and other aquatic fauna movements past the dam.

The project is situated at the only known site in Finland of an endangered species (butterfly/moth *Capricornia Boisduvaliana*), which is listed as critically threatened in Finland, although not a protected species as per the Habitats Directive. A plant species (*Moehringia Lateriflora*) that is protected under the Habitats Directive has also been identified in the reservoir area. The competent authority (Lapin ELY-keskus) has provided a derogation to the strict protection of these species set out under the national Nature Conservation Act and Article 13 of the Habitats Directive on the basis that there is no satisfactory alternative and the issuance of a permit with multiple conditions to ensure that the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range. These measures include multiple measures either to preserve the species in existing locations (e.g the construction of a protective dam for *Capricornia Boisduvaliana*) or to introduce them in similar habitats in the vicinity.

The presence of another species, *Ranunculus Lapponicus*, that is also protected under the Habitats Directive has only recently (2017) been identified in the area and a similar derogation to the strict protection under the Habitats Directive has commenced but not yet been completed. The promoter is preparing the mitigation plan and is expected to apply for this permit as soon as the plan is ready. According to the national threat assessment under Article 17 of Habitats Directive the species *Ranunculus Lapponicus* is vibrant (LC, Least Concern) and not endangered in Finland. The species has moderately rich occurrences, and the situation of the species can be judged stable and not threatened. The species is quite common in borealic nature of Lapland, just 35% of the known sites of this species are in established Natura sites. Maintaining the favourable conservation status of the species is thereby expected to be feasible with sufficient mitigation.

The nearest sites of Natura 2000 conservation are located 20 km to the south east of the Sierilä power plant. The sites are not along the river course and are comparatively far from the power plant; therefore, no significant impacts are expected. The promoter has provided written confirmation from the competent authority that no part of the project is likely to have a significant negative effect on any of such sites.

The project was identified as a "new project" in the River Basin Management Plan (RBMP) 2010-2015. It was concluded that it may endanger the status of "good ecological potential" of the particular river stretch. Thereby Article 4.7 of Water Framework Directive was triggered, it is properly referenced with justification (overriding public interest) and mitigation in Annex 1 of the management plan and it is thereby integrated in the management plan itself. The RBMP has been updated for years 2016-2021 and examines the cumulative impacts of water protection measures and impacts of envisaged significant projects in river basin. The Kemijoki basin has as well three high flood risk areas and the river basin has been subject to Flood Risk Management Plan 2016-2021. This plan controls the use of the reservoirs and spillways in flood situations and establishes the dam safety management. These plans have been internalised by the promoter as part of its operational asset management.

The power plant will be connected to the existing transmission network through a short (about 2 km) transmission line at 110 kV. The environmental impacts have been assessed in the context of the EIA of the power plant and are mainly limited to visual impacts and land use. The transmission line is, however, not part of the environmental permit but will need a separate concession approval from the Energy Authority. The approval is pending. For the

Luxembourg, 16 March 2018

permit application, a separate environmental assessment as required by Finnish law is prepared, confirming the low impact as described in the EIA.

### **EIB Carbon Footprint Exercise**

The direct greenhouse gas emissions from a hydropower plant are related to the emissions from the reservoir. For the project, the reservoir will mainly follow the existing riverbed and the increase in water surface area is only 3.6 km<sup>2</sup>. According to the Bank's methodology for reservoir emissions from wet boreal climate with ice cover for 180 days per year the total CO<sub>2</sub>-equivalent emissions are estimated at 4 thousand tonnes per year.

In accordance with the Bank's current Carbon Footprint methodology, it is calculated that based on the avoidance of electricity generation from a combination of existing and new power plants in Finland, the total relative effect of the project is a net reduction in CO<sub>2</sub> equivalent emissions by 68 thousand tonnes per year.

For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

### **Social Assessment**

The promoter has acquired the majority of the land affected by the power plant and reservoir. The remaining land acquisition through expropriation process does not result into any resettlement. The promoter has participated into livelihood improvements of affected people, including participation into the construction of a bridge over the river already during permitting process, and multi-use plan for the reservoir. The social impact of the project affects mostly to recreational use of the river, including use of some tourism enterprises (canoeing, snowmobile safaris, fishing). The multi-use of the new reservoir will still allow these activities to take place in slightly different form. The social impact overall is evaluated to be acceptable.

### **Public Consultation and Stakeholder Engagement**

Public consultation was carried out under the EIA process and subsequently under the framework of the RBDP. As noted above, the promoter is engaged in a number community engagement projects to improve local infrastructure and enhance the opportunities for local entrepreneurship.

## **Conclusions and Recommendations**

While the Project is beneficial in providing renewable energy generation, ancillary services and security of supply, it is, however, built in a location sensitive to some endangered species for which specific mitigation activities are required. At the same time, mitigating and compensatory measures are designed and also implemented in the River Basin Management Plan. Based on the information available, and with appropriate environmental conditionality (see below), the project is acceptable for EIB financing on environmental and social terms.

The detailed compensation plan for and the competent authority's decision to allow a derogation from the strict conservation status regarding *Ranunculus Lapponicus* should be a condition to disbursement of the Bank's funding to the Project.

The promoter shall undertake to promptly inform the Bank of any new species identified in the project area that would trigger the application of the Habitats Directive. In case any of the permits is cancelled or rejected by a court or by competent authority, the Promoter shall undertake to inform the Bank promptly.