

Environmental and Social Data Sheet

Overview

Project Name: EDF GAVET HYDROPOWER
Project Number: 2013-0567
Country: FRANCE
Project Description: The project comprises the construction of a new 92 MW run-of-river hydropower plant ("Romanche-Gavet") replacing a cascade of six existing facilities in the Isère Department (south-eastern France), around 80 km from Grenoble.

EIA required: Yes

Project included in Carbon Footprint Exercise¹: Yes

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

Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

Overall, the project is expected to have positive environmental and social impacts. The negative impacts are deemed to be limited and appropriately mitigated, with no significant negative residual effects. The promoter is ISO 14001 certified and has put in place sound environmental management systems. Therefore, the project is acceptable to the Bank in environmental terms.

The project will contribute to climate change mitigation by supplying an additional 560 GWh/y of hydropower to the French grid, replacing a cascade of 6 existing hydropower plants that have reached the end of their useful life. The project will replace fossil fuel-fired generation with energy from a renewable source, thereby avoiding the release of significant amounts of carbon dioxide and other polluting emissions to the atmosphere.

The project has been screened in by the competent environmental authority and a full EIA was carried out. The new hydropower plant will improve the continuity of the river flow and the quality of the water, thereby benefiting fish movements and aquatic biodiversity. The main environmental concerns relate to the potential disturbance of protected species, modification and pollution of surface and ground waters, deforestation and noise and visual impact during construction. These will be adequately mitigated by the promoter.

The project is not expected to have a significant impact on any site of nature conservation importance. The promoter assessed the potential impact of the project on the five surrounding Natura 2000 sites. Based on this analysis, the EIA concluded that no significant effects on such sites were expected, and this was confirmed by the competent authority as part of the appropriate assessment under Art. 6.3 of Habitats Directive.

The EIA includes an assessment on water quality elements showing that the modifications on the Romanche River are not likely to deteriorate its status/potential and therefore Art. 4.7 of the Water Framework Directive is not applicable. This has been confirmed by the water authority.

¹ 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 CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

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Some sections of the tunnelling works involved in the project pass through geological zones with a risk of containing naturally-occurring asbestos. No evidence of the presence of asbestos has yet been found; however, appropriate operating procedures, as approved by the French authorities and under the supervision of an independent panel of experts, will be applied when excavating zones with a risk of containing asbestos. With these measures in place, the possible presence of asbestos is not considered to represent a hazard to construction workers or to the local population.

Environmental and Social Assessment

Environmental Assessment

The project falls under Annex II of the EIA Directive 2011/92/EU and has been screened in by the environmental competent authority. A full EIA procedure was therefore carried out. The conclusion of the EIA is that there are no significant adverse environmental and social risks as a result of the project.

The EIA concludes that the main environmental risks are related to the presence of protected species, modification and pollution of surface and ground waters, deforestation and noise and visual impact during construction. Adequate mitigation measures are in place and residual impacts are considered acceptable. No cumulative impacts were identified on the EIA report, which was approved by the competent authority (DREAL²) in 2009. In May 2013 the project was assessed in the framework of the Hydropower Sustainability Assessment Protocol showing very high performance against the Protocol topics and criteria³.

The new project will simplify the complex current scheme while improving fish movement, sediment transport, aquatic biodiversity and water quality:

- The new plant will improve the Romanche river continuity, by replacing the six existing hydropower plants with a new underground facility. Five dams will be removed, benefiting migration and other fish movements and allowing a more natural sediment regime.
- The continuity flow will increase from ca. 1 m³/s (current flow at existing facilities) to 3.8 m³/s, which corresponds to 10% of the annual average flow as required by French legislation transposing the Water Framework Directive. This will have a positive impact on the quality of water and invertebrate and fish population. In particular, it will provide optimal conditions for adult trout and will enhance the productivity of benthic invertebrates due to an increase of the wetted width.
- In addition, the choice of an underground facility will minimise the visual impact of the hydro scheme during its operation and will facilitate access to the valley for leisure purposes.

The main environmental risks are due to the presence of protected animals at (or close to) the construction sites, the construction of a new reservoir and the modification of surface and underground water. These are considered to be adequately mitigated by the promoter.

- The promoter has identified some protected animal species that could be potentially disturbed by the project. Construction works (mainly deforestation and earthworks) may disturb breeding activities and/or destroy hibernation sites of some protected birds, reptiles and mammals as well as disturb bats during their hunting activities and other movements. Appropriate mitigation measures have been proposed and

² Direction Régionale de l'Environnement, de l'Aménagement et du Logement

³ Assessment report available on :

<http://www.hydrosustainability.org/IHAHydro4Life/media/ProtocolAssessments/PDF%20Reports/Romanche-Gavet-Final-Report-18-Sep-2013.pdf?ext=.pdf>

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approved by the competent authority to avoid, reduce and mitigate this risk, including site restoration and compensatory reforestation activities as required under national legislation and reflected on a derogation that was issued by relevant authority. The implementation of such measures is expected to be sufficient to ensure that there will be no net loss of protected species and habitats. This will be monitored during 15 year after operation of the plant.

- The facility includes a small reservoir with a storage capacity of 180 000 m³. The dam will present a barrier to aquatic organisms and transform faster flowing waters into slow. A fish ladder at the inlet gates and monitoring of aquatic organisms is expected to mitigate the impacts of the dam on the aquatic environment.
- The EIA concludes that the project will not have significant effects on any site of nature conservation importance. This was confirmed by the competent authority. There are five Natura 2000 sites in the vicinity of the project, from which only one was considered to be potentially affected by the project (i.e. FR 8201738). A further analysis was carried out by the promoter and the appropriate assessment under Art. 6(3) confirmed that there are no significant adverse impacts on this site.
- During construction, expected impacts include potential pollution and increase of turbidity of the surface water, deforestation (mainly in the inlet area), increase of suspended matter, noise and visual impacts. To mitigate these, water quality will be monitored by the promoter in coordination with the national competent authority (DDASS⁴), best site construction practices are in place (including wastewater treatment at the cement factory) and the promoter will restore the site after construction (including reforestation) and monitor it during 15 years.
- Potential impacts on springs contributing to potable water supply have been assessed through a specific study. These are expected to be limited and will be mitigated through a monitoring programme during both construction and operation of the hydropower plant.

The EIA concludes that the project is compatible with the achievement of good ecological status or potential of the affected water body as required by the Water Framework Directive (WFD 2000/60/EC). It includes an assessment on water quality elements showing that the modifications on the Romanche River are not likely to deteriorate its status/potential and therefore Art. 4.7 of the WFD is not applicable. This has been confirmed by the water authority.

During the first phase of construction, it was identified that some sections of the headrace tunnel pass through geological zones with a risk of containing naturally-occurring asbestos. The areas of risk have been classified as zone 1 and zone 2, corresponding to a very low to low risk of the presence of asbestos. An independent panel of experts has been appointed to supervise the tunnelling works. The promoter has proposed an operating procedure for mitigating the risks associated with drilling in areas with a risk category of 1 (very low risk) which has been approved by the French authorities, and following completion of the construction of a protective dyke to prevent damage from future landslides, the works were restarted in August 2015. The promoter is currently in discussions with the contractor to define operating procedures for tunnelling in areas with a risk classification of 2 (low risk) and is expecting to obtain the required approval of the authorities by the end of 2016. In the event that asbestos fibres are detected, the contractor will be required to apply additional protective measures, including individual protection for workers (masks, self-contained breathing apparatus, etc.), and pressurised working vehicles.

The construction of a new 63 kV transmission line and the decommissioning of the existing facilities do not fall under the scope of this project. These activities are being administered as separate projects within the promoter's organisation and for both of them an EIA was or is

⁴ Direction Départementale des Affaires Sanitaires et Sociales

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being carried out.. The first one was approved by DREAL in 2012 raising no significant environmental and social risks while the latter is due to be submitted in 2014.

Finally, the project will contribute to climate change mitigation by providing 560 GWh/a of hydroelectricity to the grid, i.e. around 40% more than the existing facilities, which are at the end of their useful life.

EIB Carbon Footprint Exercise

The project's emission savings are estimated at ca. 87 500 tonnes of CO₂ equivalent per year. This has been calculated according to the EIB Carbon Footprint Methodology.

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.

Public Consultation and Stakeholder Engagement, where required

Local communities and other relevant stakeholders were involved in public consultations as part of the concession process for the Romanche-Gavet component in 2009-2010. The promoter has developed a Communication Plan covering the construction period which aims at identifying the project stakeholders and engaging them in a number of activities such as conducting regular consultation meetings, organising public visits or publishing newsletters.

Other Environmental and Social Aspects

Environmental monitoring systems will be established during the construction and operation of the Romanche-Gavet hydropower scheme, in accordance with the ESIA. These include regular monitoring of water quality and aquatic ecosystems, follow up of the implementation of mitigating measures and monitoring of site restoration after construction (during the first 10 years of operation).

The project is expected to improve the safety of hydropower operations, generate employment, boost the local economy and improve access to fishing and other leisure activities in the valley. The promoter has included a labour insertion clause requiring a minimum of 5% of total construction hours to be performed by social insertion staff such as non-qualified young, long-term unemployed or disabled people.

The promoter is accredited to meeting ISO 9001 and ISO 14001 and will apply appropriate health and safety standards in line with the relevant EU OSH Directives.