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DIRECTORATE-GENERAL FOR ENERGY

Directorate C – Green Transition and Energy System Integration
C.1 - Renewables and Energy System Integration Policy
The Head of Unit

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Ms Claire Baffert
Senior water Policy Officer
WWF European Policy Office

By email:
cbaffert@wwf.eu

Dear Ms Baffert,

Thank you for your letter of 6 February 2023 to Executive Vice-President Timmermans, on the role of hydropower in the deployment of renewable energies in the European Union. I have been asked to reply on his behalf.

Based on the Commission's proposals of July 2021 ⁽¹⁾ and May 2022 ⁽²⁾, the EU co-legislators are currently finalising the revision of the Renewable Energy Directive.

The ability of hydropower plants to produce renewable energy, provide baseload and flexibility and, depending on the technology, balancing and/or ancillary services to the grid will be increasingly important with the transition to a system largely based on variable renewable energy production. Due to their flexibility and large storage capacity, hydropower plants, of all sizes, are one of the key technologies to back up variable renewables such as wind and solar power in the context of an increasingly decentralised energy system.

The Commission recognises that hydropower has environmental impacts which must be adequately managed and mitigated, notably in accordance with the Directive 2000/60/EC ⁽³⁾.

As for all construction projects, developers are obliged to evaluate thoroughly, in cooperation with all stakeholders, the short and long-term costs and benefits for society,

⁽¹⁾ Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directive (EU) 2018/2001 of the European Parliament and of the Council, Regulation (EU) 2018/1999 of the European Parliament and of the Council and Directive 98/70/EC of the European Parliament and of the Council as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652, COM(2021) 557 final

⁽²⁾ Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources, Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency, COM(2022) 222 final

⁽³⁾ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, OJ L 327, 22.12.2000, p. 1–73.

the environment and economy before construction work could start. This needs to be ensured by obeying the respective legal frameworks (such as the Aarhus Convention, the Water Framework Directive, the Environmental Impact Assessment Directive⁽⁴⁾ or the Birds⁽⁵⁾ and Habitats⁽⁶⁾ Directives) and applying voluntary criteria on sustainable development (like the Hydropower Sustainability Assessment Protocol) including social, environmental, technical and economic considerations.

Permit-granting procedures for the construction, operation and repowering of hydropower plants are the means to ensure the balancing of different societal interests and the respect of environmental legislation. Notably, the criteria under Art 4(7) of the Water Framework Directive aim at ensuring that possible ‘deterioration’ of ecological status under this provision is justified and mitigated. While the environmental impacts of hydropower projects cannot be completely avoided, they can be reduced through appropriate mitigation measures. The hydropower sector has reduced its environmental impact over the last decades, for example through the installation of fish-friendly turbines and the inclusion of fish ladders in dams to prevent the fragmentation of migration routes. However, the impact on river flows, and in the case of impoundment, on lakes is typically unavoidable owing to alteration of hydrology and morphology of affected rivers and lakes.

The growth potential of hydropower in Europe is limited apart from the extension of pumped hydropower and small hydropower.⁽⁷⁾ According to the International Renewable Energy Agency⁽⁸⁾, the project pipeline in EU countries for 2022-2037 consists of 3.7 GW of conventional hydropower in four Member States and 12.9 GW of pumped hydropower in seven Member States. This compares to a currently installed capacity of 150 GW in the EU27⁽⁹⁾, most of which being conventional hydropower.

Hydropower plants represent less than 3% of barriers in European rivers – ca. 21,000 hydropower plants exist in Europe⁽¹⁰⁾, forming part of more than 1 million barriers identified by the AMBER project in 36 countries⁽¹¹⁾.

The EU Biodiversity strategy for 2030⁽¹²⁾ underlines that greater efforts are needed to restore freshwater ecosystems and the natural functions of rivers. This can be done by

⁽⁴⁾ Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (OJ L 26, 28.1.2011), as amended by Directive 2014/52/EU (OJ L 124, 25.4.2014).

⁽⁵⁾ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds, OJ L 20, 26.1.2010.

⁽⁶⁾ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, OJ L 206, 22.7.1992, p. 7–50.

⁽⁷⁾ In-depth analysis in support of the Commission Communication COM(2018) 773 “A Clean Planet for all - A European long-term strategic vision for a prosperous, modern, competitive and climate neutral economy”, 28 November 2018.

⁽⁸⁾ IRENA (2023), The changing role of hydropower: Challenges and opportunities, International Renewable Energy Agency, Abu Dhabi. Available at: <https://www.irena.org/Publications/2023/Feb/The-changing-role-of-hydropower-Challenges-and-opportunities>

⁽⁹⁾ European Commission, Directorate-General for Energy, EU energy in figures : statistical pocketbook 2022, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2833/334050>

⁽¹⁰⁾ Ca. 19.000 of these are located within the EU. <https://www.eea.europa.eu/data-and-maps/figures/recorded-hydropower-plants-in-europe>

⁽¹¹⁾ <https://amber.international/>

⁽¹²⁾ COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE

removing or adjusting barriers that prevent the passage of migrating fish and improving the flow of water and sediments. To help make this a reality, at least 25,000 km of rivers will be restored into free-flowing rivers by 2030 through the removal of primarily obsolete barriers.

You rightly point out that hydropower is susceptible to climate risks related to water scarcity and droughts, especially in Southern and Eastern Europe. On the other hand, when it comes to flood risks, hydropower plants can also be a source of resilience.

In order to achieve the ambitious EU targets linked to the European Green Deal and the objective of the REPowerEU plan to reduce our dependence on imported fossil fuels, it is important to streamline permit-granting procedures for all renewable energy projects without compromising the application of relevant environmental legislation.

Therefore, the provisional agreement on the revision of the Renewable Energy Directive, as well as the Council Regulation (EU) 2022/2577 ⁽¹³⁾ which is currently in force, establish that renewable energy projects shall be rebuttably presumed as being in the overriding public interest and serving public health and safety when balancing legal interests in the individual cases, for the purposes of the relevant articles of the Birds and Habitats Directives and the Water Framework Directive.

The permit-granting rules in the so-called “renewables acceleration areas” is accompanied with conditions, including the conduct of a strategic environmental assessment, establishment of rules for mitigation measures when planning and designating such areas, and screening of individual projects to determine if any of such projects is highly likely to give rise to significant unforeseen adverse effects in view of the environmental sensitivity of the geographical areas where they are located and therefore needs to undergo an environmental impact assessment in accordance with the Environmental Impact Assessment Directive. It should be noted, that the provisions of the Water Framework Directive remain fully applicable in renewables acceleration areas, which is going to be stressed in a recital of the revised Directive.

I hope that you find these elements helpful in reply to the concerns raised in your letter.

Yours sincerely,

Electronically signed

Łukasz Koliński

COMMITTEE OF THE REGIONS: EU Biodiversity Strategy for 2030 - Bringing nature back into our lives, COM(2020) 380 final

⁽¹³⁾ Council Regulation (EU) 2022/2577 of 22 December 2022 laying down a framework to accelerate the deployment of renewable energy.