German Hydropower Association

Open Letter: Hydropower in Europe plays a central role in the renewable energy system of the future and in the preservation of biodiversity.

Dear Ambassador Lars Danielsson, Permanent Representative of Sweden to the European Union,

Dear MEP Markus Pieper,
Dear MEP Christian-Silviu Buşoi,
Dear Commissioner Kadri Simson,
Dear EVP Frans Timmermans,
Dear Commissioner Virginijus Sinkevičius,
Cc: MEP Nils Torvalds, MEP Pascal Canfin, Shadow rapporteurs from the ITRE Committee for the revision of the Renewable Energy Directive.

We are reaching out to you on behalf of the more than 25,000 operators of hydropower plants and the association of stakeholders of all renewable energies in Germany and in Europe. In order to secure energy supply based on all renewable energies in an equal manner, the goals of the GreenDeal and REPowerEU must be adhered to!

We therefore ask you to consider the following points in the upcoming trilogue negotiations:

1. Hydropower, like all other renewable energies, must become part of the *acceleration areas*. In essence, this is about implementing the urgently needed acceleration of procedures and not at all about circumventing existing ecological regulations. Hydropower generates 1/3 of renewable electricity and, as a reliable available energy source, contributes strongly to the electricity market of the future, which will be increasingly characterized by volatile energy producers. It also contributes to achieving the objectives of the Water Framework Directive through measures for river continuity.
   The restrictions of Article 29b for hydropower must therefore be deleted.

2. No further restrictions or tightening of regulations must be added to those already comprehensively in place for hydropower. The Renewable Energy Directive must not be used to hinder the continued existence and expansion of important renewables such as hydropower. The proposal of the European Council[1] to exclude hydropower from the provisions of the RED must not be followed.

Hydropower is an essential and consistent Renewable Energy Source in Europe

Hydropower currently supplies about 32% of renewable electricity in Europe.[2] Its steadiness and good predictability are central in the mix of volatile renewables, making it one of the most important renewables. It continuously and immediately saves coal, gas, and nuclear power, and also has the highest CO_2 avoidance equivalent of all renewables making it a very effective contributor to saving greenhouse gas and mitigating climate

[1] 2021 0218(COD)-16h50-24_01_2023 (full after ITM9), **Article 1, first paragraph, point (5)(c)**, amending provision, numbered paragraph (8), first paragraph b(1), **123d**

[2] https://ec.europa.eu/eurostat/

change.[3] Hydropower, along with wind power, has the lowest environmental costs[4] and the highest CO_2-Avoidance factor among electricity generation methods. Methane emissions do not occur to any extent beyond natural occurrence, especially in small hydropower plants and plants located in high mountain areas.

Hydropower helps reduce overall costs in society as a whole as it contributes significantly to grid stabilization[5, 6] and facilitates access to the grid for the volatile portions of renewable energy. The contribution of small hydropower in the European Member States lowers electricity costs as the technology is efficient, mature, and proven, with no hidden costs for procurement, disposal, or negative human rights impacts. Electricity generation costs are comparatively low for hydropower due to its good controllability and long operating time.

The above characteristics of hydropower and its huge potential in the EU[7] make it key to the success of important EU goals such as climate neutrality, energy independence and peace (GreenDeal & REPowerEU). All nations that have managed to become climate neutral in the electricity sector have an outstanding share of hydropower electricity.

➔ To call for a generalized restriction on hydropower is irresponsible.

Hydropower supports in achieving our ecological goals

Hydropower, like any infrastructure, has an impact on the environment. As the technology has been used for centuries, much research and development has been done in the area of aquatic ecological adaptation. Hydropower use and good ecological status, according to the Water Framework Directive (WFD), can almost always be achieved by using the adequate accompanying measures. In recent years, a wide range of avoidance measures have been developed that minimize the impact of hydropower on water bodies, so that even in the case of intensive use, the ecological objectives will be achieved and environmental standards are fully complied with[8].

In the beginning of the 20th century about 600,000 hydropower plants were operated in Europe, which largely lasted until the middle of the century[9]. The fish population at that time was mostly good. Today, there are only about 25,000 plants. Establishing a link between the population decline of long-distance migratory fish and hydropower is therefore not causal. Moreover, long-distance migratory fish pass modern plants almost without injuries.

➔ Hydropower, with the right measures taken, is perfectly compatible with aquatic ecology. We call for the permit processes to be accelerated, taking into account ecological compatibility (=*acceleration areas*).

When promoting free-flowing rivers we must not fall into romantic ideas: most weirs were built for reasons of irrigation, groundwater elevation, retention of water in dry periods, drinking water production, flood regulation, etc. - collective beneficial uses in times of

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3 https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2018-10-22_climate-change_23-2018_emissionsbilanz_erneuerbarer_energien_2017_fin.pdf

4 https://www.umweltbundesamt.de/publikationen/methodenkonvention-umweltkosten

5 https://www.wasserkraft-deutschland.de/fileadmin/PDF/BDW_Vortrag_Zdrallek_Vorstellung_des_Gutachtens.pdf

6 Introduction to DIN 19752 „Wasserkraftanlagen – Planung, Vorhabenrealisierung und Betrieb“

7 Small hydropower has an additional potential in the EU exceeding the German electricity consumption three times (1710 TWh/a). Even under the strictest ecological conditions, a potential of 79 TWh was determined: Water Resources Management: https://doi.org/10.1007/s11269-022-03084-6

8 DWA-M 509 - Fischaufstiegsanlagen und fischpassierbare Bauwerke (5/2014)

9 Jeremy Rifkin: THE EMPATHIC CIVILIZATION – THE RACE TO GLOBAL CONSCIOUSNESS IN A WORLD IN CRISIS, Jeremy P. Tarcher / Penguin, New York, 2009

climate change[10]. Only a small fraction of these weirs is currently being used for hydropower.

The deconstruction of transverse structures and parallel structures in running waters (millraces & bypassing brooks) has already reduced aquatic habitats over the last fifty years. The further dismantling of transverse structures not only harms energy production, but also directly harms all aquatic life through the habitat loss and lowering of groundwater.

The contribution of weirs to climate adaptation is becoming increasingly relevant with progressing climate change as it helps to protect life and preserve habitats for nature. Achieving this in a cost-effective manner will be a key component for our future water management[11]. The basis of life for people and nature will only be preserved in the face of increasing climate stress if we combine technical and ecological measures in the best way possible [12].

➔ Hydropower is both climate protection and climate adaptation.

Especially at existing weirs, there is still considerable unused potential for repowering. Due to the different geographic and ecological conditions in the course of the rivers, case-by-case considerations are always called for – instead of generalizations. Some countries have identified their ecologically compatible hydropower potentials[13] [14] - these potentials should find their implementation in accelerated procedures and areas in the course of the energy crisis.

Hydropower creates regional value and citizen energy

Hydropower is deeply rooted in Europe and has a long tradition. Over 70% of the world's hydropower technology comes from Europe and each country in the EU has its own plants and plant manufacturers, creating jobs and value locally.
Hydropower, especially on a small scale, is a model for citizen energy and crisis-proven decentralized energy generation, especially in structurally weak areas. It has been there for decades and justifies and promotes the general acceptance for all renewable energies.

Yours sincerely

01. March 2023

Hans-Peter Lang - President - Bundesverband Deutscher Wasserkraftwerke e.V. (BDW)	Dr. Simone Peter - President - Bundesverband Erneuerbare Energie e.V. (BEE)	Dr. Helge Beyer - CEO - Bundesverband Deutscher Wasserkraftwerke e.V. (BDW)

[10] In addition, weirs have water-ecological advantages for species that don't migrate but stay local and are dependent on special habitats. Interconnection could become a problem for such species, i.e. by invasive species.
[11] https://www.nature.com/articles/s41558-022-01540-0
[12] https://www.wasserkraft-deutschland.de/presse/stellungnahmen/osterpaket-1-1-2-1.html
[13] https://www.energieatlas-bw.de/wasser
[14] Small hydropower has an additional potential in the EU of three times the German electricity consumption (1710 TWh/a). Even under the strictest ecological conditions, a potential of 79 TWh was determined: Water Resources Management: https://doi.org/10.1007/s11269-022-03084-6

EREF European Renewable Energies Federation

BEE Bundesverband Erneuerbare Energie e.V.

ARBEITSGEMEINSCHAFT WASSERKRAFTWERKE Baden-Württemberg e.V.

VBEW Energie. Wasser. Leben.

IGW Interessengemeinschaft Wasserkraft Baden-Württemberg e.V.

LEE NRW Landesverband Erneuerbare Energien Nordrhein-Westfalen

vfew Verband für Energie- und Wasserwirtschaft Baden-Württemberg e.V.

IHK Südlicher Oberrhein

Landesverband Erneuerbare Energien LEE Niedersachsen Bremen e.V.

WASSERKRAFT Ja bitte!

Kleinwasserkraft Österreich

Landesverband Bayerischer Wasserkraftwerke eG

IGW NRW Interessengemeinschaft Wassernutzung NRW

Plattform Erneuerbare Energien Baden-Württemberg

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