

EU Hydropower balances targets for climate and environment

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ABSTRACT: Against the backdrop of the war in Ukraine, the European Union (EU) faces the complex challenge of balancing energy security, affordability and competitiveness while making the transition to a decarbonised economy. Simultaneously, the world is facing an unprecedented environmental crisis. Climate change is no longer a distant threat but a pressing issue that requires immediate action. Biodiversity loss is proceeding at an alarming rate, further accelerated by rising temperatures, which will become the main cause of habitat and species loss by 2050.

To counter these crises, the EU is pursuing the massive expansion of renewable energies, especially wind and solar power, as part of its Green Deal strategy. However, integrating the variable electricity generation of these two technologies requires increased flexibility to ensure a balanced and reliable power system. Basically, a broad range of technologies is available to cover these needs. In this context, Hydropower stands out, as it offers flexible generation with its reservoirs and related run-of-river plants and electricity storage through its pumped storage facilities (i.e., flexible consumption and generation), on a large scale and in a sustainable manner.

In addition to contributing significantly to climate change mitigation, the European hydropower sector is committed to taking feasible measures to minimize its impact on nature when also acknowledging its positive contribution to meet social needs. How this is implemented and what innovative and integrated solutions that benefit nature and the climate look like is demonstrated in Eurelectric's [Power Plant Project](#).

Beyond climate and environment, hydropower plants provide further multi-purpose benefits for people, communities and the economy, such as supporting the mitigation of floods and droughts, providing water for drinking, irrigation and industrial needs as well as promoting tourism and navigation.