

## **BACKGROUND**

Water scarcity is a growing concern in Europe, driven by climate change, population growth, urbanization, and inefficient water management practices. To combat this crisis effectively, an integrated approach is essential, leveraging the water-energy nexus to optimize water supply, treatment and use, while promoting energy savings, emission reductions and overall sustainability.

The water-energy nexus represents a critical interconnection between water and energy resources, underscoring their strategic importance for global economic growth and competitiveness. In 2021, approximately 10% of the world's freshwater withdrawals were attributed to the global energy system, as reported by the International Energy Agency (IEA). The nexus becomes even more significant when considering the power sector's vulnerability to water stress. This emphasizes the urgent need to address water shortages for enhanced energy security. Additionally, the growing reliance on water production through desalination processes underscores the urgency to optimize energy use in this highly energy-intensive sector. As researches anticipate a growing demand for water in the energy sector in the coming years, and vice versa, a pivotal solution lies in prioritizing energy efficiency measures. By focusing on enhancing energy efficiency, we can mitigate the impact of energy production on water resources, fostering a sustainable balance between these two indispensable elements for global prosperity.

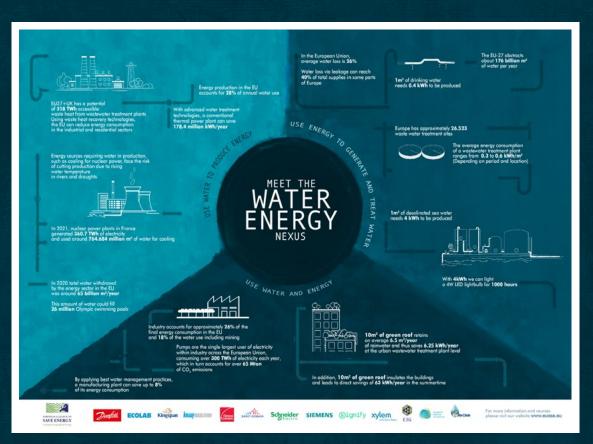
The next European institutional framework must work on a European Water Strategy, a comprehensive, integrated response to tackle water scarcity focusing on the synergies between water and energy use.

Creating a water strategy for the European Union that addresses the water-energy nexus and aims to boost competitiveness across various sectors requires a multifaceted approach.



### Through a water-energy nexus strategy the EU can:

- **Build accountability and responsibility** optimizing water supply, treatment and usage to reduce energy need and consumption across various industrial sectors, among citizens, in cities, in urban waste water treatment plants, in agriculture and desalination processes.
- Enhance competitiveness across European industries (including energy generation, food processing, manufacturing, chemicals) by reducing operational costs through efficient water and energy management.
- Reduce emissions through improved water and energy management practices that include measurement and mitigation leading to proper metrics of carbon accounting.
- Boost innovation integrating digital and nature-based solutions to support the transformation of infrastructure in Europe, smart water management and the restoration of the natural water cycle in urban areas.
- **Build an enabling economic environment** to support the objectives mentioned through new business models, dedicated pricing models and incentives.



EU-ASE Water-Energy Nexus Infographic. Click here to find out more.

## **ACTION PLAN**

To do so, for the next institutional term 2024-2029, the European Alliance to Save Energy urges policy-makers to:

## Complete and strengthen the EU and national policy and regulatory framework.

This implies supporting the transposition of key directives and their provisions aimed to increase water and energy savings, for example the Energy Efficiency Directive (EED), the Urban Wastewater Treatment Directive (UWWTD), the Industrial Emissions Directive (IED), the Nature Restoration Law (NRL).

#### **Facilitate Public-Private Partnerships.**

Technologies and solutions for water and energy savings exists, they are cost effective and are made in Europe. The EU Institutions must foster engagement and promote collaboration with the private sector to share best practices, drive innovation and jointly invest in and implement water-saving and energy-efficient technologies. Partnerships must include joint efforts to build capacity and develop a skilled workforce that is able to implement water-energy nexus strategies; and joint initiatives to embrace digital solutions for monitoring, analyzing, and optimizing water and energy usage in real-time, enabling informed decision-making. These partnerships would be key for driving adoption of technologies and demonstrating projects too.

#### Provide finance for innovation, research and implementation.

It is essential ringfencing public resources and establish dedicated funding programmes and mechanisms to support the water-energy nexus' innovation, research and deployment of technologies and solutions in the European market. Public resources should be used to lead by example, attract private investments in the long term and stimulate the use and creation of financing schemes used to upgrade existing infrastructure and make them future proof.

#### Forging responsibility to instigate change

Notwithstanding the severe impact that water scarcity and the energy crisis have on European daily life, there is still a lot to explain and a lot to learn. The EU must launch a pan European awareness campaign targeting policy makers, businesses, cities, local authorities and citizens highlighting the importance of sustainable water and energy management. In parallel water and energy conservation should be integrated into school curricula to instil a culture of responsible resource usage from a young age. There is very little time, water or energy to waste.



## CONCLUSION

The European Water Strategy outlined above fosters an integrated approach aligning water and energy management. It suggests to work around four areas of actions: establishing a robust regulatory framework, encouraging public-private partnerships, providing financial support and raising awareness. We are standing ready to help because we believe that through such a concerted effort Europe can address its water and energy crisis while promoting sustainable growth and increased competitiveness, securing long term resilience and environmental conservation.

# ABOUT THE EUROPEAN ALLIANCE TO SAVE ENERGY (EU-ASE)

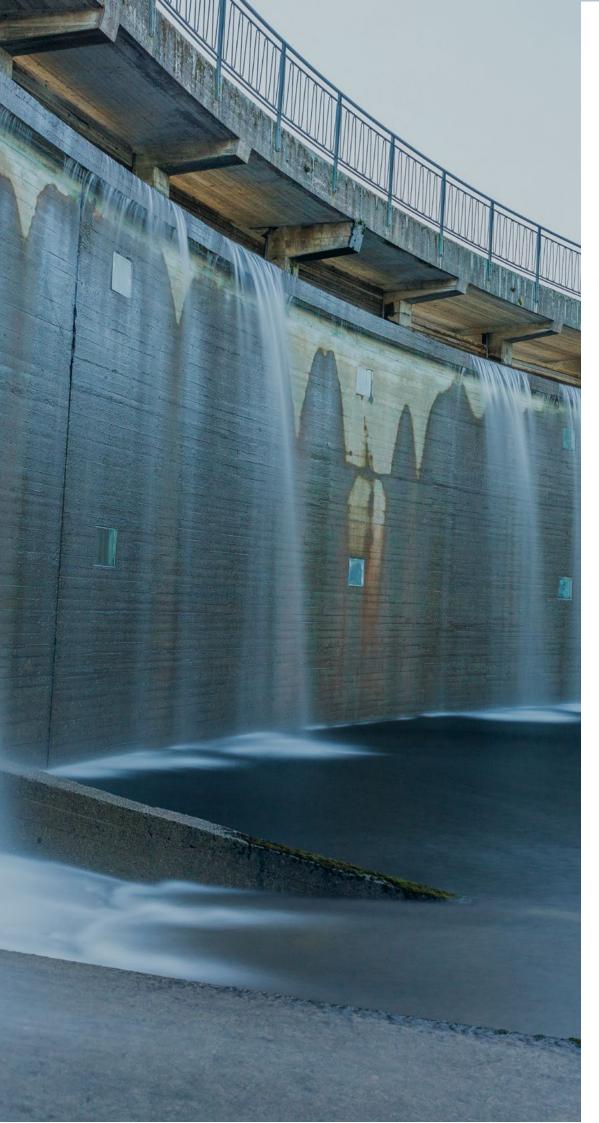
The European Alliance to Save Energy (EU-ASE) is a business-led, multistakeholder platform allowing leading multinational companies to join environmental campaigners to advance energy efficiency in the European Union. The Alliance's business members have operations across the EU27, employ over 340,000 people in Europe and have an aggregated annual turnover of 115 billion euros. Membership include industry leaders Danfoss, Ecolab, Kingspan, Knauf Insulation, Owens Corning, Saint-Gobain, Schneider Electric, Siemens, Signify, Xylem and leading environmental organisation E3G, ECF and Kyoto Club.

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