ETIP HYDROPOWER

KRISTIAN RUBY

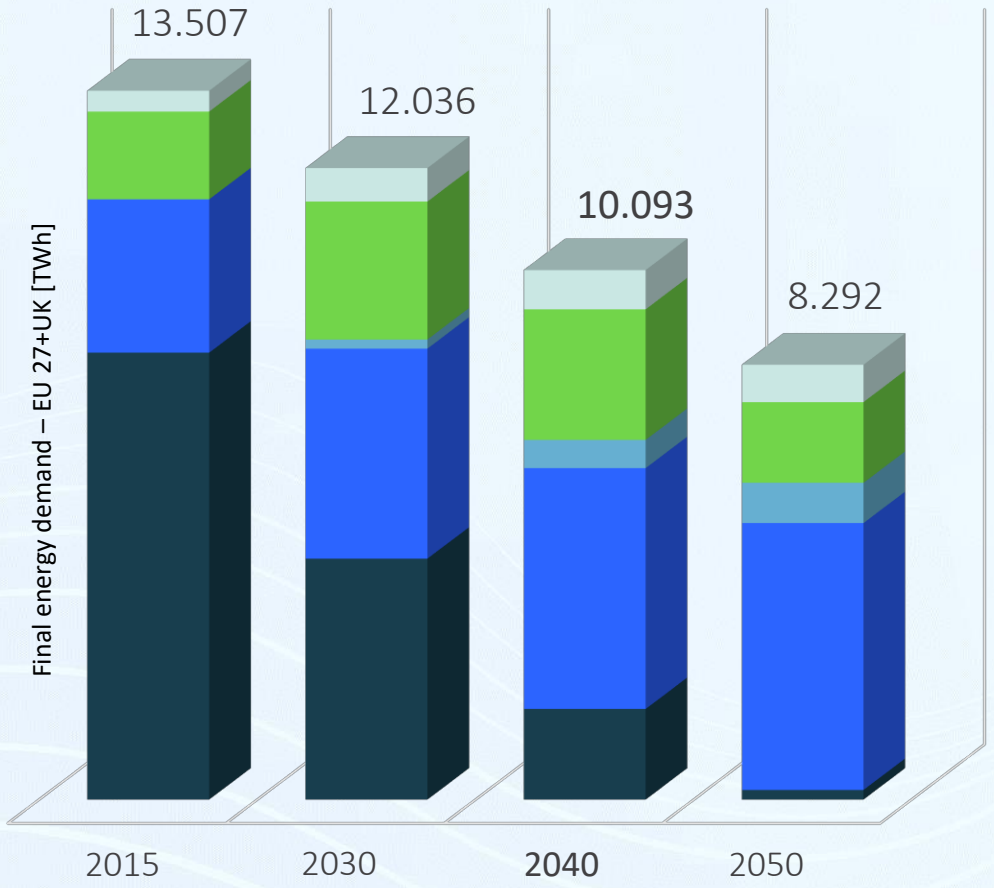
EURELECTRIC

Kristian Ruby is a widely recognised expert with a strong communication profile and extensive experience in political affairs. He joined EURELECTRIC from Wind Europe, where he served as Chief Policy Officer and was in charge of the development and implementation of the political strategy.
Prior to this, Ruby worked as a journalist and served seven years as a public servant in the Danish Ministries of Environment, and Climate and Energy and in the European Commission in the cabinet of the former Climate Action chief, Connie Hedegaard.
Kristian holds a master degree in history and international development.

Funded by
the European Union

Powering the Green Deal:
HYDROPOWER's Vital Role in EU's Sustainable Success

Electrification: THE energy efficient solution



Others

Bio & synth fuels

Hydrogen

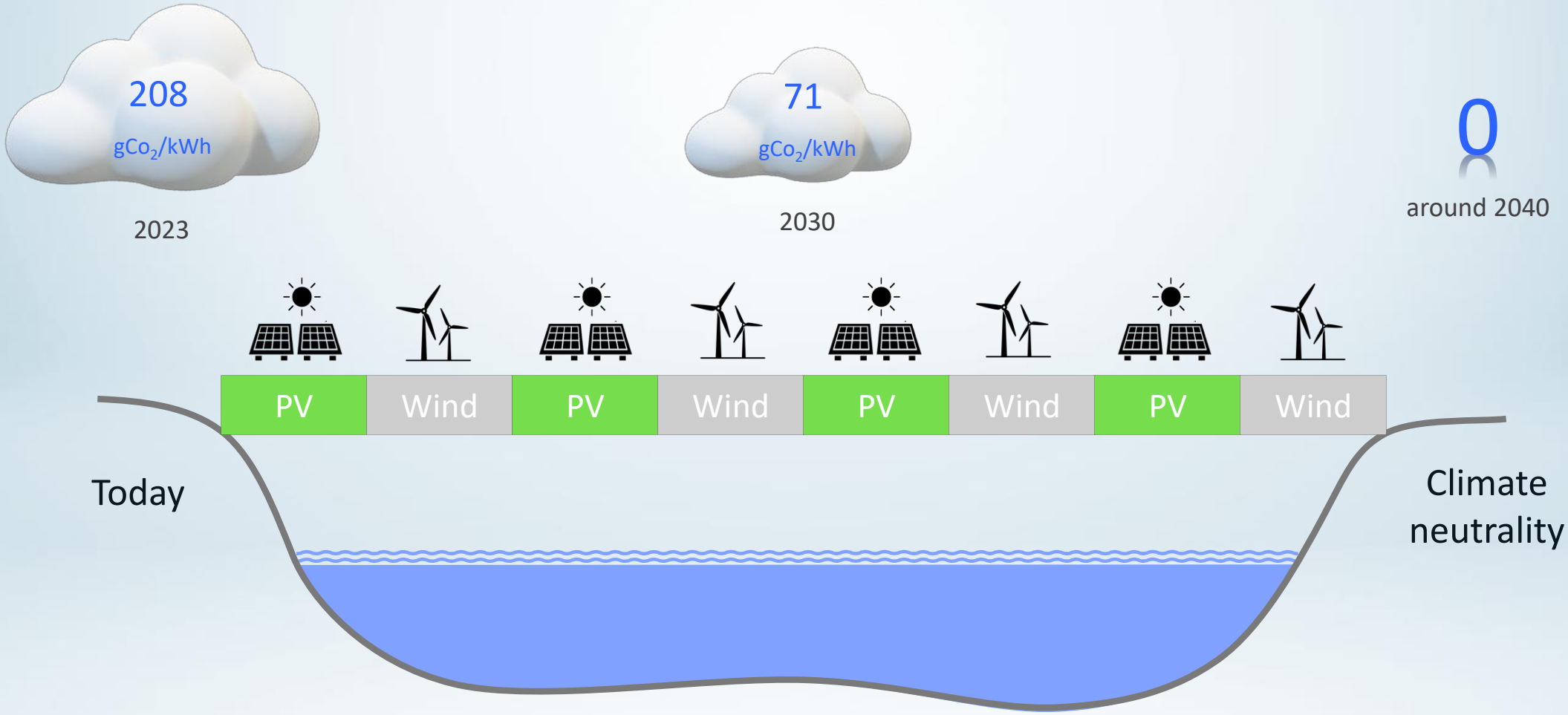
Electricity

Fossil

15% 29% 39% Energy efficiency versus 2015

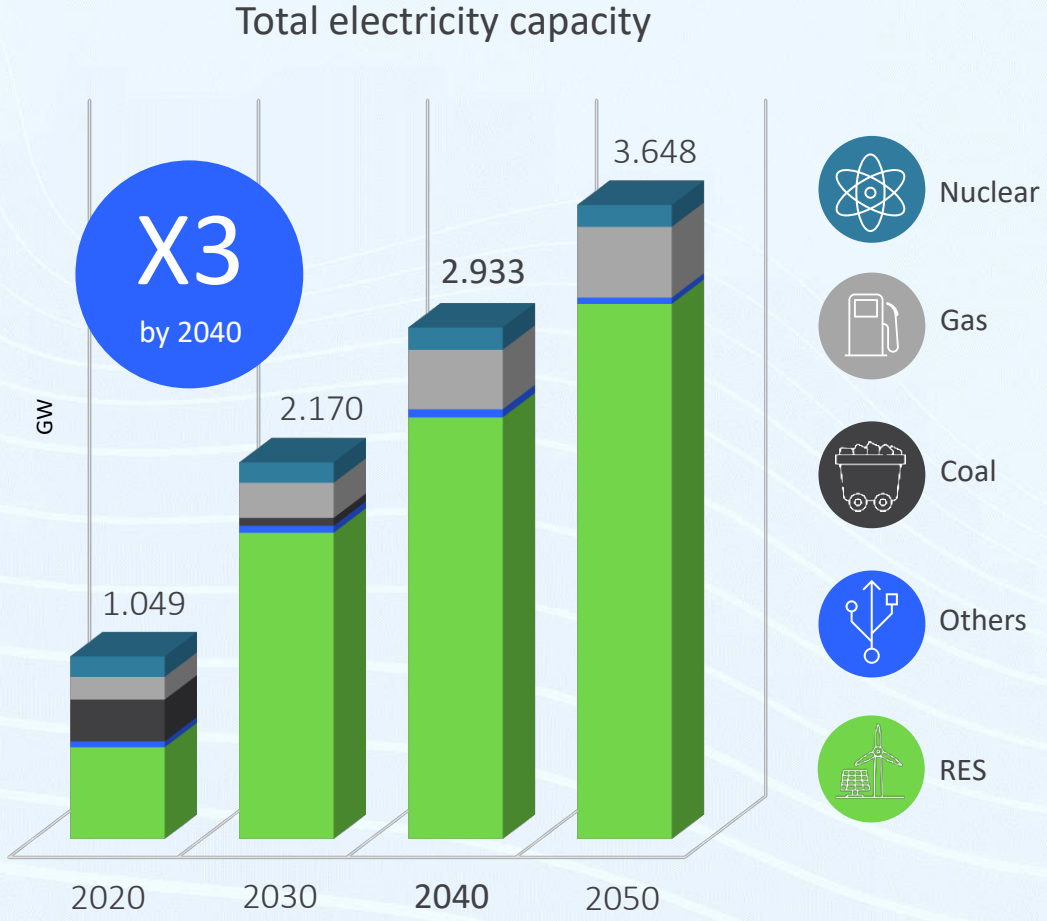
35% 48% 61% Share of direct electrification

The EU power sector is committed to achieving a net-zero electricity supply well before 2050



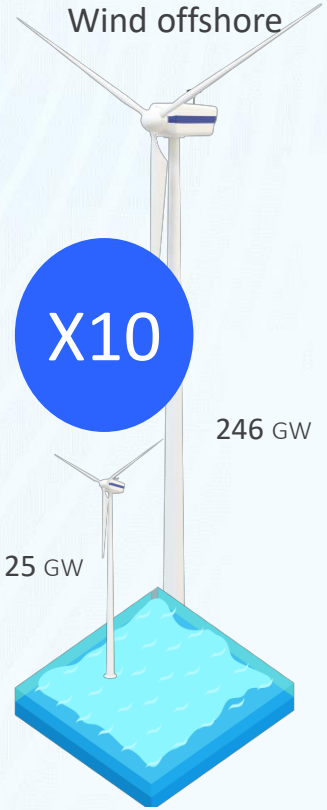
Power progress with unprecedented capacity growth

Total electricity capacity

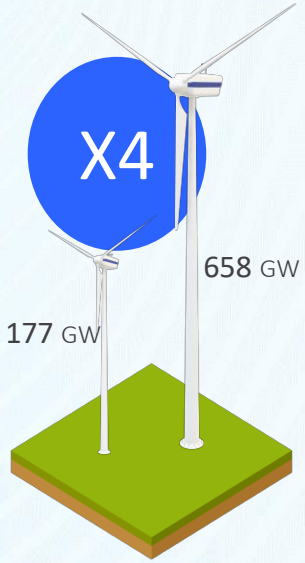


Solar PV

Wind offshore

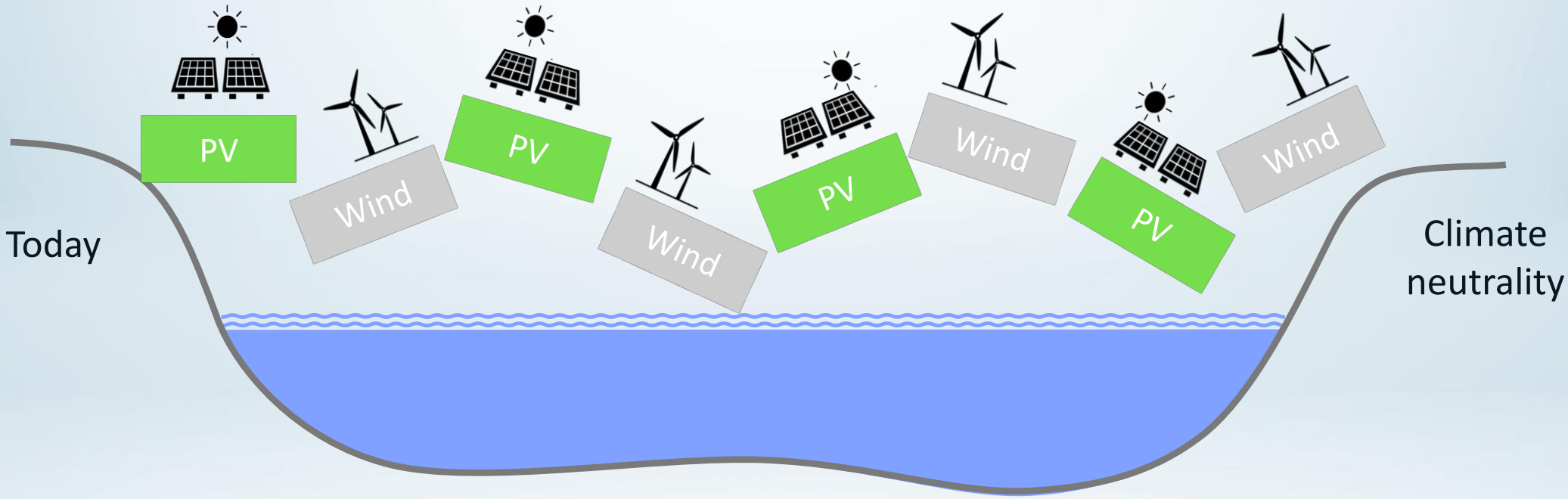


Wind onshore



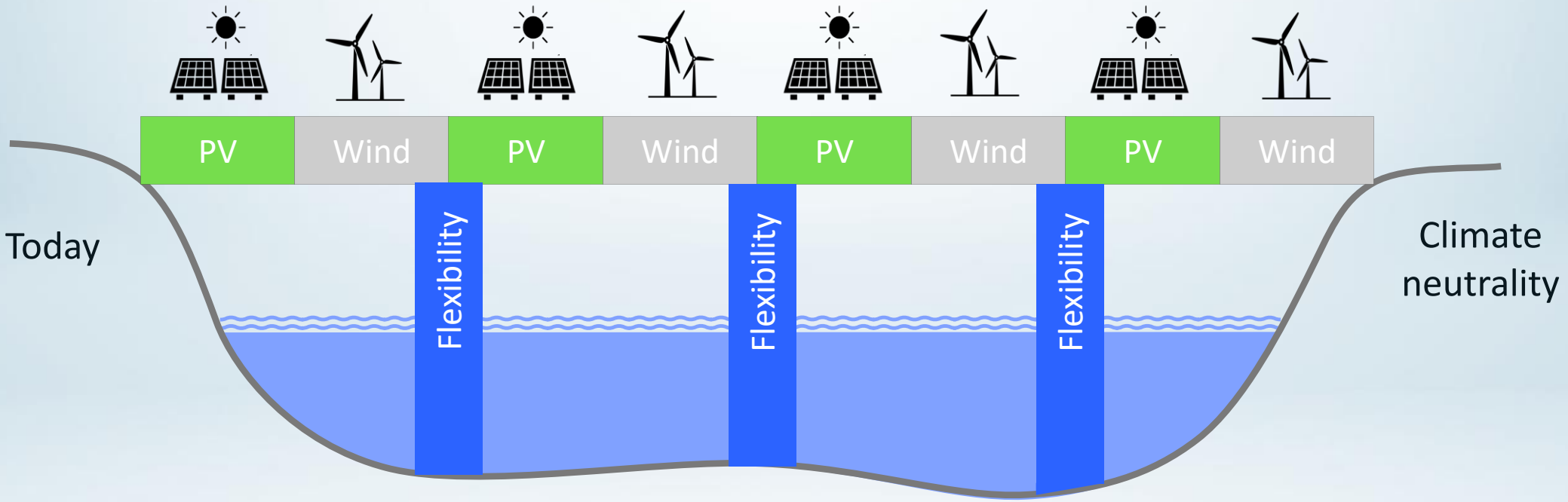
But increasing wind and PV capacity is not sufficient

Because these technologies are highly dependent on weather, gaps will occur in the power system between electricity supply and demand.



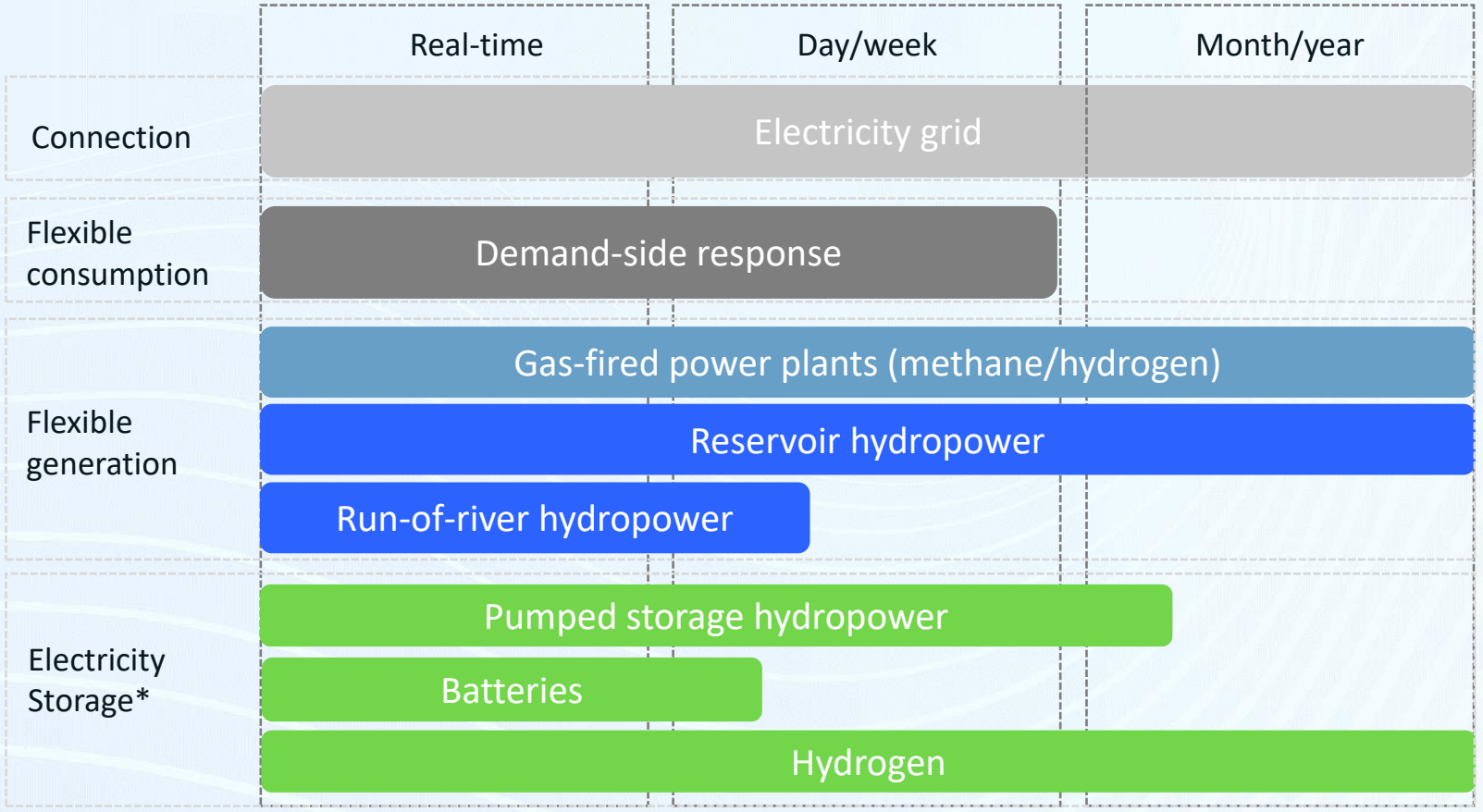
To integrate variable electricity generation flexibility is crucial

For a stable and reliable power system, a continuous balance of electricity supply and demand is imperative.



Flexibility can be provided by different sources and technologies

To meet the flexibility needs of an increasingly decarbonised EU power system, all sources and technologies will be required.



*Electricity storage facilities provide flexible consumption and generation

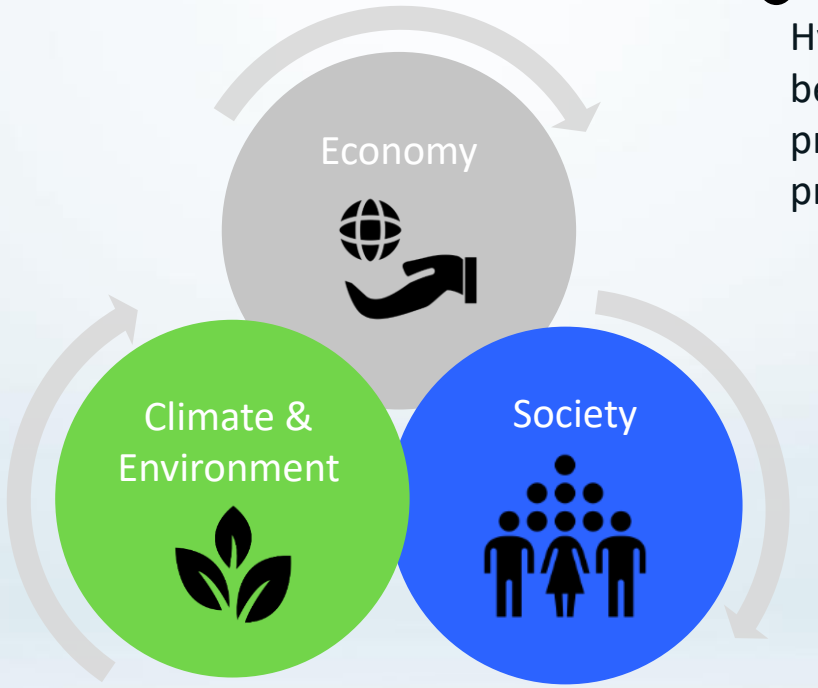
Hydropower is the only renewable technology providing flexible electricity generation and storage on large scale and in a sustainable manner.

Hydropower is the 2nd biggest renewable electricity source in the EU, bolstering industrial competitiveness and ensuring affordability for households.

Pumped storage hydropower provides more than 90% of EU's storage capacity. The EC's communication on 2040 targets envisages a **50% increase in installed pumped storage capacity**.

Hydropower is mature and highly efficient (50-100 years lifetime; 85-90% efficiency)

Hydropower offers additional socio-economic benefits such as mitigating floods and droughts, providing water for different needs, and promoting tourism and navigation.



The sector is committed to biodiversity conservation and enhancement through avoiding, minimizing, and compensating impacts.

Building on a European value chain, hydropower is highly independent from imports of critical raw materials, skilled labour or technological competence.

Hydropower has one of the lowest life cycle greenhouse gas emissions of all renewable energy technologies.

5 essential actions to fully unlock the potential of EU Hydropower

1. **Recognise the diversity of hydropower providing flexible renewable electricity generation and storage to ensure an efficient and reliable power system for decades.**

2. **Ensure a technology-neutral, stable regulatory environment and remove obstacles to strengthen** long-term visibility **and confidence of plant owners, operators and investors.**

3. Preserving market principles is essential for efficient dispatch and storage of electricity (i.e., flexible sources are activated when they offer the most value to the power system).

4. Acknowledge the sector's commitment to minimising environmental impact through habitat preservation, restoration, and river continuity enhancement.

5. Champion the diverse benefits of hydropower for society, the economy, and the environment, extending beyond the electricity system.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