

EERA's feedback on the *Strategy for long-term EU greenhouse gas emissions reductions*

The research community plays a central role in translating political commitments into concrete progress for society. **Thus, EERA warmly welcomes the European Union's pledge to put in place an ambitious strategy for long-term EU greenhouse gas emissions reductions.**

This long-term framework must set the right direction to comply with the Paris agreement and respond to the urgency of climate change. Therefore, great challenges and opportunities need to be properly addressed.

The transition towards sustainable societies requires radical GHG mitigation by 2030

- **The current EU's commitments by 2030 are not ambitious enough** to keep the global temperature rise well below 2 degrees Celsius.
- **The sustainable transition requires a holistic, science-based understanding of nature, technology and people** in order to develop smart policies, committing companies, citizens, policy makers, researchers, and further stakeholders equally to reach the climate targets.
- **Disruptive changes are urgently needed in energy-intensive sectors.** Without radical transformations in energy and material-intensive industries (supported by investments in new industrial processes and products, carbon capture and storage etc.), it will not even be possible to achieve the 80-95% GHG reduction targets by 2050 as set in the current strategy.
- **The transport sector must reduce its emissions rapidly**, including road, air, and sea transport.
- Because of its impact, **land use, land-use change and forestry (LULUCF) should be part of the greenhouse gas emissions reductions strategy.**

The way forward for the European Union

- The transition towards a sustainable low-carbon and resilient economy requires high understanding of all processes and actors involved and thus **cross-sectoral and multidisciplinary research**. Energy and climate aspects should be increasingly integrated in domains like bioeconomy, circular economy, artificial intelligence, big data, and social sciences and humanities, to name a few.
- As disruptive innovations are urgently needed, this strategy should be linked with **more ambitious investment programmes in research and innovation** for a clean future. R&I organisations' efforts in fighting climate change should be supported, e.g. the development and demonstration of new technologies, systems and materials.
- **The digitalisation of energy systems offers new opportunities** for businesses and private consumers, and increases for instance the share of active consumers. Therefore, digitalisation needs to be promoted further.

- **Social innovation as a tool should be strengthened in sectors regulated by Effort Sharing legislation.** By 2030, the GHG mitigation in these sectors (transport, buildings, agriculture, small industries and waste) will be challenging in several EU Member States and require additional measures. These sectors include many local and private sector actors and governance in municipalities and will become increasingly important as the mitigation targets become more ambitious.
- **National and regional specificities need to be taken into account** in the new strategy, due to the large variety of opportunities and barriers between countries and spatial archetypes (e.g. urban, sub-urban, rural).

Taking up the international challenge

- **The EU has excellent opportunities to be in the frontline and become a world leader in providing technologies, services, and other solutions for GHG reductions.** The relatively high GDP/capita, high education, existing infrastructure and abundant natural resources (renewables, clean water, etc.) offer good opportunities to develop, demonstrate and implement smart and clean energy technologies and systems in an open market environment.
- At the international level, **the Mission Innovation challenges are essential** to deepen collaboration and encourage their members (including the EU) to increase efforts in clean energy research and innovation. They should be **further coordinated with the SET-Plan actions** to ensure a more efficient and coordinated response to climate change.

The new strategy must be highly ambitious, and followed by adequate actions at the EU level, based on the existing strong strategies already committed at national and regional levels. This strategy must provide a clear pathway for the EU towards a low-carbon society and demonstrate a strong commitment to the Paris agreement. Only against this background can the EU play a leading role at the next COP in Katowice to pave the way towards renewed and stronger climate commitments compatible with Paris Agreement objectives to keep global warming well below 2°C.