

EERA's feedback on the European Commission's

Roadmap for the Action Plan on the Digitalisation of the Energy Sector

The European Energy Research Alliance (EERA), Europe's largest energy research community, strongly supports the European Commission's proposal to establish an Action Plan on the digitalisation of the energy sector as it is a key domain to attain the EU climate objectives.

The Roadmap touches on many important points, giving an overview of the value of Information and Communication Technologies (ICT) in the energy sector and their impact on energy management and energy systems integration. In this context, EERA considers that the Roadmap fails to grant enough emphasis to the direct benefits of digitalisation of energy sources, which among others include a boost to the efficiency of the system. Digital technologies can in fact be used in the modelling phase of energy installations and improve the calculation of peak cycles.

Among the challenges the current Roadmap aims at tackling, EERA proposes the inclusion of the FAIR principles (Findability, Accessibility, Interoperability, and Reuse of digital assets). These are crucial in addressing the capacity of computational systems to interact with data reducing human intervention to its minimum, a key development in the deployment of digitalisation for the energy system.

The environmental and societal impacts deriving from digitalisation are also essential to consider. They may be the spill over effects resulting from an increased use of energy and carbon-intensive resources and the potential widening of social inequalities associated with the access to and use of digital technologies. As such, EERA welcomes the Roadmap's focus on citizens and their active participation in the energy system and considers as fundamental the inclusion of Social Sciences and Humanities (SSH) in drafting the final Action Plan. FAIR principles can play a role in this effort, increasing the levels of transparency and trust toward the digitalisation of the energy sector.

In particular, when it comes to the involvement of citizens, the Action Plan can build on the provision contained in the EU Directives [2018/2001](#) and [2019/944](#), which strengthen the role of individual and collective prosumers, e.g. through establishing energy communities. A way of organising collective energy activities through an open and democratic system, they seek to combine sustainability by the triple bottom-line – economic, environmental and social – and foster a culture of innovation which should be acknowledged and promoted in the Action Plan.

Dealing with the decarbonisation of the energy system, the Action Plan puts the emphasis on the energy efficiency of ICT processes to ensure the transition to greener practices. However, several studies have demonstrated that simply considering the energy and carbon efficiency alone is not compatible with a two-degree goal. To achieve a wider objective, material efficiency and replacement of current supplies with low-carbon materials will be essential in the energy sector.

Ultimately, the Roadmap mentions the focus on hydrogen, natural gas, and renewable energies in general. The developments in these sectors will still require an improvement in the energy storage capacity of the EU, as an essential link towards the maximum efficiency of the whole energy supply chain. Therefore, EERA strongly calls to take energy storage into account as one of the main areas for intervention in the final Action Plan.

To conclude, digitalisation is a major transformative force that will enable a range of pervasive innovations across all economic sectors and activities. EERA is convinced that the digitalisation of the energy system will be fundamental to reaching the ultimate goal of climate neutrality by 2050, and



time is ripe to step up action in this most topical field. As such, EERA will be ready to take a proactive approach in securing a smooth deployment of the Action Plan among the low-carbon energy research community.

EERA is an association of European public research centres and universities with the mission to catalyse European energy research for a climate-neutral society by 2050. Bringing together more than 250 organisations from 30 countries, EERA is Europe's largest energy research community. It is a key player in the European Union's Strategic Energy Technology (SET) Plan and the Clean Energy Transition. EERA Transparency Register number is: 339037837173-73.

