

Development of a comprehensive, integrated Research, Innovation, and Competitiveness Strategy for the Energy Union

T&D Europe¹ Position Paper

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Introduction

Building on its response to the Commission public consultation on the Development of a comprehensive, integrated Research, Innovation, and Competitiveness Strategy for the Energy Union, T&D Europe would like to develop a few ideas, based on its strong belief that energy technology providers play a fundamental role in the shaping of any R&D&I policy for the energy networks and are critical for its success.

We support the development of a comprehensive research, innovation and competitiveness strategy for the Energy as the fifth pillar of the Energy Union. This process also constitutes an important element of the EU's contribution to the implementation of the Paris Agreement of December 2015 on Climate Change.

In our view, any strategy in this field should cover three levels:

- Investments in proven technologies
- Investments in non-conventional but proven technologies, requiring some incentives for innovation
- Research in new technologies, with the support of academia.

Such a strategy should also focus on developing the pull side of research, even if it may imply less - and more costly - projects, whereas the push side is already effective.

Finally, the ultimate goal should always be to deploy innovations as fast as possible, moving beyond pilot projects and providing effective market demand solutions.

2. Energy efficiency and decarbonisation.

Focus should be put on the energy and the transport areas, where energy efficiency and decarbonisation are a priority.

In this respect, as underlined in the 2050 decarbonisation roadmap, the electrification of end-energy use contributes strongly to these priorities, implying a significant increase in the share of electricity in the total energy use. In parallel, electricity

¹ T&D Europe (www.tdeurope.eu) is the European Association of the Electricity Transmission & Distribution Equipment and Services Industry, which members are the European National Associations representing the interests of the electricity transmission and distribution equipment manufacturing and derived solutions. The companies represented by T&D Europe account for a production worth over € 25 billion EUR, and employ over 200,000 people in Europe

generation from decentralised/dispersed generation will also significantly increase, up to around 50% in 2030.

Coexistence of centralised/top down generation with a bottom up system where the energy user will not only consume but self-generate, store and trade its demand flexibility will need new innovative ways of planning, operating and maintaining, ICT, T&D networks and new business models: R&D efforts are needed in this field.

Another priority should be to find solutions decreasing the cost of renewable energy generation and integration.

3. Digitisation

Digitisation in energy is not only a technical evolution but also an enabler of the new energy system: key issues need to be tackled (e.g. data privacy, cybersecurity, value for energy data, ICT solutions for optimal operation and predictive maintenance...), requiring refining energy digitisation building blocks and roadmaps, and significant R&D.

Digitisation and automation are key to accommodate a high share of renewable energy and integrate highly distributed resources on the generation and consumption sides while maintaining flexibility and reliability in the network.

4. Regulatory framework and standardisation

The regulatory framework should stimulate innovation by supporting the roll out of effective market solutions, and not only pilot projects, thus contributing to the development of a strong home market and promote European solution worldwide.

It should also be regularly reviewed to match new findings on the way to a low-carbon economy.

Integration of standardisation needs during the R&D phase can foster the important role of standardisation in the deployment of solutions, notably in the areas of active energy efficiency management at the infrastructures and at the end user levels.

Coherence must be ensured between EU and international standards.

5. Financing R&D

R&D must be financed and developed with the aims of building on existing - and of developing new - European industry world champions, bearing in mind that the European electrical industry is a European asset. This requires to select and focus on a limited number of topics and not to spread efforts everywhere.

The polluter-pays principle may be applied for financing part of the R&D (other financing sources are public budgets and private R&D); In this case the CO2 revenues (either ETS auctions or carbon tax-contribution) should be earmarked towards R&D

financing. In any case, carbon content should be the indicator to pay and all energy carriers should be equally treated based on this criterion.

In general, high up front investments and long payback time can be significant barriers. Although priority must be given to deployment of low up front investments and short payback (e.g. building automation and control or distribution network losses reduction) innovative financing methods and vehicles will be needed.

6. Role of the users

Users (infrastructure operators and end users) have to be provided with solutions easier to operate. This includes not only efficient appliances but all solutions for home/building management and grid efficiency helping them to understand and optimise their carbon footprint.

Conclusion

In order to stimulate innovation, the EU needs appropriate financial and regulatory framework, customers' behaviour and standards. The Strategy should aim at rolling out effective solutions, not only pilot projects, and at reinforcing the EU home market in order to demonstrate the benefits of European solutions. It is the only way to help the EU industry to develop its leadership in energy technologies and to invent new business models to compete worldwide.

T&D Europe will contribute to the development of the EU R&I and Competitiveness Strategy notably via its participation in the ETIP “smart networks for energy transition”, and would also highly appreciate the opportunity to discuss the ideas developed above with the Commission services in DG ENER.