

Position paper

Clean energy for all Europeans: Smarter electricity grids a must to make low carbon economy a reality by 2050

T&D Europe, the European Association of the Electricity Transmission and Distribution Equipment and Services Industry welcomes the ambitious Clean Energy for All Europeans legislative initiative, adopted on 30 November 2016 by the European Commission.

The electric transmission and distribution equipment and service industry is supportive of having a market-based energy system market and a common coordinated European implementation approach, that are key to make the Energy Transition a success story and the EU a global leader.

The Energy Transition is a process driven by the aim for more sustainable energy sources and enabled by technological progress, and T&D Europe members are fully committed to bring Europe to a low carbon economy in 2050. Our technologies can enable power systems accommodating the integration of the increasing share of renewable and distributed energy sources. To drive the decarbonisation of our power system in a cost-effective way and ensure the competitiveness of the European energy industry sector, we believe the four following priorities need to be addressed in the legislative process on the Clean Energy Package:

1. Regulatory incentives can drive the deployment of efficient, resilient and smarter grids

- DSOs and TSOs need the right regulatory incentives to invest in the network

The integration of a high share of renewable energy sources is changing the way grids are operated. The 27% RES target means that the share of renewable energy in the electricity sector will increase to at least 45% in 2030. The variable nature of renewables, the longer transmission lines from generation to distribution, and the fact that 90% of these sources are connected directly to the distribution network, require technical adaptations on the grid with technologies, which are to a far extend already available from T&D Europe companies. In parallel - empowering consumers to produce their own clean energy either individually or through local energy communities - also require an upgrade in the grid system. In addition, a decentralised grid infrastructure is more resilient against external risks such as cyberattacks or security threats.

The right regulatory framework for grid technology is needed to deploy innovative grid systems, making the electric grid smarter, more resilient, more energy efficient and more

capable to accommodate renewable energies. In this respect, we welcome the market based approach in the electricity market design proposals. We believe ensuring a level playing field between all solutions will stimulate innovation as well as strengthen the European industry.

To modernise the grid, distribution system operators (DSOs) should be incentivised to invest in innovative solutions, as stated in Article 16 paragraph 8 of the new Electricity Regulation. DSOs need smarter ways of remuneration that are efficiency performance and by that TOTEX-rather than CAPEX-based. In particular, a RIIO¹ model would be interesting to explore as a solution to encourage investment. Paragraph 8 should be preserved, and include a reference to a similar system for transmission system operators (TSOs).

- Data is needed to track smart grids deployment

We do support the deployment of smart metering and energy management systems as well as the introduction of a “smartness indicator” in the Energy Performance of Buildings Directive, all highlighting the contribution of buildings to making power systems more flexible. In a similar fashion, more data is needed to assess electricity networks’ “smartness”. We would therefore like Member States, TSOs and DSOs to regularly deliver information on grids’ readiness to integrate a high share of distributed energy resources, for instance by monitoring the share of substations being remotely controlled and monitored.

- Article 7.2.c in the Energy Efficiency Directive should remain as it is, but concrete tools to measure implementation are needed

We welcome the legislative proposals’ ambitious energy efficiency goals and we highlight the fact that the energy efficient electric grid plays an essential role in energy savings. In this respect, it is critical that Member States keep the option of counting savings in electricity transmission and distribution towards their national energy savings targets (art7.2.c of the Proposal for a revised Energy Efficiency Directive). To fully benefit from this option, we recommend to ask Member States to specifically refer to savings in electricity transmission and distribution networks as well as to the detection of non-technical losses in their energy and climate progress reports.

- We support the new Article 59 (k) in the Electricity directive on duties and powers of the regulatory authority as a concrete incentive to modernize the electricity grid, but detailed indicators are needed.

Regarding the performance measuring (Article 59 (k) “... *measuring the performance of the TSOs and DSOs in relation to the development of a smart grid that promotes energy efficiency*”

¹ RIIO: Revenue = Incentives + Innovation + Outputs: an incentive-based regulation model introduced by UK Regulator OFGEM: <https://www.ofgem.gov.uk/network-regulation-riio-model>

and the integration of RES based on a limited set of Union-wide indicators, and publish a national report every 2 years, including recommendations for improvement where necessary;”), we believe the “Union-Wide indicators” should include among others:

- ✓ Volume of curtailed energy in MWh, listed per type of energy source;
- ✓ Percentage of substations remotely monitored and controlled in real-time, itemised as transmission, high-voltage/medium-voltage and medium-voltage/low-voltage substations;
- ✓ Percentage of kilometers of lines operated under dynamic line ratings;
- ✓ Losses in high, medium and low-voltage grids;
- ✓ The frequency and duration of power interruptions on the grid.

2. Technical regulation requires extensive stakeholder involvement

- A Single European DSO body is needed & is a key proposal in the Package

T&D Europe supports the creation of a European distribution system operators’ organisation. We believe it is important to have an adequate representation of distribution network operators in the political discussion on how to further develop this key infrastructure. However, as distribution networks have big local variations, it is also important to maintain the broad knowledge represented by the various associations representing DSOs today.

As the energy transformation is to a far extend a technological challenge, we believe that all relevant stakeholders representing operational and technological knowledge should be involved. With that background involving the DSOs is an important step, but we believe that it is equally important to involve technology providers.

About the risk preparedness regulation, we recommend to involve the distribution level into the coordination of risk-preparedness in the energy sector, as more and more of generation capacity is connected there and - if properly equipped - may help to overcome critical situations.

- Stakeholders must be involved in the network codes development process

As a European industry participating in the building of European systems, we support regulatory coordination at European level for both distribution network operators and regulators. In this respect, we believe engaging European TSOs and DSOs as well as regulators are important steps. However, as the energy transformation among others requires technologies and solutions, regulation must ensure exploration and deployment of innovative and future-proof solutions. With its unique expertise, the European T&D industry is willing to support the work of this new organisation and be closely associated as advisers on infrastructure needs, solutions and processes as the elaboration of network codes.

In this respect, we need a commitment from Member States to implement grid codes in a coordinated way. The current discrepancies are threatening the future of the interconnected grid. We plead for aligning grid codes with international standards and for an enhanced coordination from all stakeholders with a drafting committee including members on equal footing with ENTSO-E.

3. Free flow of energy and data is needed to manage a decentralised power system

Digitalisation is an essential enabler of the electricity market transition. Optimizing grid operations is only possible with accurate and easily accessible data. We believe the free flow of non-personal energy data requires an appropriate infrastructure and a neutral body in charge of providing the data. We support creating a common European data format as proposed in the article 24 of the Electricity Market Directive, usable across the common electricity market.

4. Debottlenecking the grid should remain a priority

Transmission grid bottlenecks are constraining the European Single Market for electricity and are limiting the capability to accommodate renewable energies. We are welcoming the proposal for Electricity Market Regulation's focus on de-bottlenecking the grids by establishing effective congestion mechanisms. In this respect we believe it is important to establish a higher transparency on the use of the congestion rent by TSOs.

About T&D Europe

T&D Europe 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. Further information on T&D Europe can be found here: www.tdeurope.eu

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