A European Strategy for Energy System Integration

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The Committee on Industry, Research and Energy adopted an own-initiative report by Christophe GRUDLER (Renew Europe, FR) on a European strategy for energy system integration.

The report stressed that the integration of energy systems can bring a response to many of the challenges stemming from energy transition, and particularly the challenge of decarbonisation, optimisation and balancing of the energy networks, therefore guaranteeing security of supply and fostering the EU's strategic autonomy. Furthermore, energy system integration can accelerate the transition towards a climate neutral economy while aiming at keeping the costs for European citizens, authorities and businesses within realistic limits.

Overall, the strategy for energy system integration should include a cascading priority for energy efficiency and savings, decarbonisation of end-uses through direct electrification, renewable-based and low-carbon fuels for applications that do not have another alternative.

Optimising and decarbonising energy systems

Members recalled that circularity and direct electrification, where possible, present an important pathway towards decarbonisation. Given the high energy consumption in the water sector, the Commission is called on to consider energy-efficient measures for the EU water sector and the possibility of using treated waste water as an on-site source of renewable energy in energy system integration.

The report welcomed the new EU Methane Strategy and called on the Commission to propose measures to further reduce methane emissions in the energy sector.

Regarding the challenge of decarbonising heating and cooling, Members called for the further implementation of the heating and cooling strategy. District heating and cooling networks should be eligible for funding under the revised Connecting Europe Facility Regulation.

Members advocated speeding up decarbonisation in some sectors such as construction, where energy efficiency efforts are still insufficient. They also highlighted the potential for re-using waste, in particular energy and thermal waste from industrial processes, bio-waste, buildings and data centres.

The Commission is called on to extend the principle of energy efficiency to the whole value chain and to all end-uses as a cost-efficient way to reduce emissions.

Balancing energy systems

Maintaining the balance of electricity grids and managing demand and production peaks will be more complex with an increasingly decentralised and renewable generation mix. In this respect, Members underlined the role of demand-side response, storage and smart energy management. They stressed that moving towards decentralised energy production has many benefits/

The report regretted that a number of Member States have not yet reached their 10 % electric interconnection target by 2020. It welcomed the Commission's proposal to raise the 2030 electricity interconnection target to 15 %, provided that it better supports national investments through the list of projects of common interest.

Stressing the role that electric mobility can play as a form of smart integration of the power and transport sectors by unlocking flexibility capacities, Members noted that the electrification of the transport sector has the potential to increase the EU's energy strategic autonomy by reducing the need for imported fossil fuels. They underlined the storage and flexibility potential of the deployment of 'vehicle-to-grid' technologies and noted that it will require the interoperability of energy systems and electric vehicles.

On the other hand, the report noted with concern the large dependence of the EU on imports of lithium-ion batteries.

Ensuring energy accessibility for all citizens and businesses

Members stressed the importance of guiding customers towards the most energy-efficient and cost-effective decarbonisation option, on the basis of prices that properly reflect all the costs of the energy carrier used.

They highlighted the consumer empowerment potential in the integrated renewable energy systems to generate, consume, store, and sell energy. The report reiterated the potential of energy communities and micro grids to develop access to more sustainable energy, especially for remote areas, islands and the outermost regions.

Ensuring European leadership on sustainable and renewable energy technologies

Members stressed the importance of increasing the competitiveness of European technologies to foster the autonomy of the Union in the strategic energy sector. They called on the Commission to support research and innovation through the various structural and sectoral funds.

Lastly, the report highlighted the need for a just transition and called on the Commission and Member States to address structural changes in the energy sector in all relevant legislative proposals in order to help facilitate the transition towards climate neutrality.