



Conference Brief– Innovation as a Catalyst for Energy Markets?

In her welcome address, Ms. Marie-Claire Aoun, Director of Ifri Center for Energy, stressed that today progress in technologies (wind, solar) is bringing new perspectives to the energy sector. But this development is not enough and we have to do much more to achieve our decarbonisation targets. The development of unconventional resources in the US was the latest innovation that changed the energy landscape. The key question now is where the next game changer is going to emerge. For the EU to be a credible candidate, it will need to set out its priorities and build a wide mobilisation around innovation.

Our Keynote speaker, Mr. Andris Piebalgs, former EU Commissioner for Energy and now Member of the Global Agenda Council on Decarbonizing Energy, reflected on the recent work carried out by the World Economic Forum with regards to promising technologies in the energy field. From Mr. Piebalgs' point of view, tackling climate change is the biggest challenge, but also a necessary challenge in order to guarantee the EU's security of supply and to remain competitive in the long-run. Power production is one of the main issues that need to be addressed in terms of GES emissions. Many technologies will need to be pushed forward but, in the medium term, storage will be a game changer. These technologies do have a cost, but the populations need to be clearly informed about these costs and willing to bear it. Costs are not enormous; they need to be better explained.

Our next speaker, Daniele Poponi, Senior Energy Technology Policy Analyst at the IEA, insisted on the importance of COP21 for clean energy development and suggested that governments' commitments for accelerated technology deployment and innovation could reinforce each other. However, despite promising signs, current RD&D investment volumes on low-carbon energy technologies need to be increased to have higher chances of limiting global warming below 2°C. There is no optimal mix, but the right policy depends on the degree of maturity of the technology supported. In any case, international cooperation is crucial to enable emerging economies to tap into their own potential and policy stability remains the key factor for private investment in innovation.

Further on, Mr. Manuel Szapiro, Member of Cabinet for European Commission Vice-President Maroš Šefčovič, emphasized that innovation was also a driver for growth, jobs and competitiveness. Rough estimates show that around 9 million jobs are directly or indirectly concerned by innovation in the EU. There is also now a global market for low carbon solutions, with 90% of demand to be generated outside Europe in the years ahead. Mr. Szapiro identified six challenges for the energy union: democratisation, decentralisation, decarbonisation, diversification, digitisation and disruption. We will need to build a citizen centric approach, to promote local energy systems, to push renewables forward, to reconsider supplies and uses of energy, to make the most of digital technologies and finally to create new markets for disruptive technologies.

Mr. Diego Pavia, CEO of KIC InnoEnergy, clarified that innovation was not only about technology but about business modelling, supply chain, societal appropriation, regulation and also involved the human capital. Looking to 2030, the biggest step to be done in these six dimensions is regulation; innovation should be pulled by the demand and also pushed by research. The real innovation is to bring new products and services to the market. We also need regulation homogeneity, to create sufficient market volume for companies to invest. Storage is at the moment 20% above the cost that customers are willing to pay, so we are close. The market is still tiny (some €2-3 billion) and will certainly expand.

Our last speaker, Yann Padova, Commissioner at the French Energy Regulatory Commission (CRE), focused on the ways Big Data could be applied in electricity systems. He stressed that Big Data could be summarized with four Vs: volume, variety, velocity and value. In terms of benefits for the electricity systems, data management have a great potential for lowering the costs. It could decrease cable investments, favour predictive maintenance and facilitate demand response. In addition, regulators will be facing other important issues such as addressing growing cybersecurity threats or ensuring grid investments are made while network usage is about to change significantly.

Answering questions from the room, speakers referred to the undervalued potential of excess heat and cool. They notably discussed whether storage should be considered a service or an infrastructure and whether incumbents had the financial means to innovate.

Finally, Mr. Oliver Appert, Senior Advisor for Ifri's Center for Energy, concluded the session by emphasising that digitalization was challenging all businesses in a way they did not expect. While the debate focused mainly on electricity, it is only 20% of the problem. Energy efficiency would probably need to be given more attention. No silver bullet is in sight but there are some certainties around game changers, digitalization being an important one. In terms of public support, maturity levels and costs have to be key parameters. Investments should target technologies that customers will be able to buy. Innovation in technologies does not come without sound business models for stakeholders.