

## ROMANIAN ENERGY DAY 2018 – PANEL 2

### INFRASTRUCTURE AND RESOURCES / DIVERSIFICATION OF SOURCES AND SUPPLY ROUTES / INTERCONNECTORS

The 2<sup>nd</sup> panel of this year's Romanian Energy Day addressed the topics of Securing the Smart Grid through Innovation and Digitalization. Moderated by Mr. Mihai PAUN, Vice-president of CRE, the session benefited from the keynote speeches of Mrs. Andreea STRACHINESCU, Head of Unit New Energy Technologies and Innovation at DG ENERGY, Mr. Antonio SANCHEZ-APARICIO on behalf of Mrs. Merce GRIERA I FISA, Head of Research and Innovation Sector at DG CONNECT and from the active discussions from relevant speakers: Mr. Georgios STASSIS, Country Manager at ENEL Romania, Mr. Manuel SANCHEZ-JIMENEZ, Team Leader Smart Grids at DG ENERGY, Mr. Adrian BOROTEA, Director of Strategy at CEZ Romania, Mr. Karoly BORBELY, Director Public Affairs at Telekom Romania, Mr. Valeriu BINIG, Business Advisory Partner, EY Romania, Mr. Massimo BERTONCINI, Director at Engineering Ingegneria Informatica Italy, Mr. Antonio MARQUES, Director of Technology at Grupo ETRA Spain, Mrs. Madalina Mirela POPA, Group Sales and Marketing Director at Automobile Bavaria Group and Mr. Ronan MURPHY, Smart Network Specialist at ESB Ireland.

Mihai PAUN introduced the objectives of the discussions within the Panel on “Securing the Smart Grid through Innovation and Digitalization”. He emphasized the objectives are: **to facilitate the dialog with Industry representatives** on how to better address **innovation and digitalization**, by putting the **right infrastructure in place**, to address the next decade's **challenges for the electricity grids, regulation and governance** and **provide insights and solutions** through **innovative projects and demonstrators** and **to analyse sectorial integration**, as well as integrated **energy market with focus on the Central and South-Eastern European region**.



The Moderator continued with the description of the format of the Panel and defined the complementary role of the key note speakers, panellists and audience in this strategic discussion.

The main topics for discussion proposed by Mihai PAUN include: Interconnection of **Smart Grids** operating in different Member States which is already happening at TSO level but there is a need of more coordination between the **TSOs and DSOs** and also amongst DSOs; **Energy Package**; the need for more integration of the electricity distribution grid and the transmission systems for **enabling more future digital and physical interconnections at the distribution level** and cross-borders; **synergies to be exploited amongst the Telecoms, Energy and Transport sectors** in terms of **ICT, digitalization and infrastructures**; **close collaboration amongst these sectors is needed** in order to use resources efficiently and effectively. He indicated a **Networking Exhibition** on showcase RD&I Projects with a European scope addressing implementation and results has been organized this year and invited the audience to ask details to the representatives of the RD&I Department of CRE attending the event.

The Moderator briefly introduced the main innovation topics managed by CRE as direct partner with its members in five European Commission-funded projects starting in 2016: **SUCCESS** - Securing Critical Energy Infrastructures, together with ELECTRICA,



**RE-SERVE** - Renewables in a Stable Electric Grid, and **CROSSBOW** - CROSS BORDER management of variable renewable energies and storage units enabling a transnational Wholesale market, together with TRANSELECTRICA, **WISEGRID** - Wide scale demonstration of Integrated Solutions and business models for European Smart Grid, **NRG5** - Enabling Smart Energy as a Service via 5G Mobile Network advances along with ROMGAZ and **SOGNO** together with CEZ Romania and Telekom Romania.

Mihai PAUN announced that WiseGRID consortium recently received '**Good Practice of the Year**' awards from Commissioner for Energy, Miguel Arias Cañete at the Energy Infrastructure Forum on 24 May in Copenhagen.

The WiseGRID project, which belongs to INEA's Horizon 2020 energy portfolio, celebrated success today at the European Sustainable Energy Week (EUSEW). It's been named the best project in the **Business and Citizen's choice categories**, winning two EU Sustainable Energy Awards. The prizes recognise outstanding innovation in energy efficiency and renewables.

The Moderator invites Mrs. Andreea Strachinescu to deliver the Keynote Presentation.

Furthermore, Mrs. Andreea Strachinescu addresses the European challenges, namely the modernisation of the economy by lowering GHGs while creating jobs and growth, the drive for the EU to become the global leader in RES, energy efficiency and industrial leadership and ensuring a socially fair transition for regions, cities and consumers. According to Mrs. Strachinescu, the transformation of the energy

system starts with innovation, citing several initiatives such as the Energy Union, the Strategic Energy Technology - Set Plan, the European Technology and Innovation Platform for Smart Networks for the Energy Transition - ETIP SNEP, the Clean Energy for all Europeans Package, Smart cities and the Horizon 2020 and Bridge programs. Concluding on the above mentioned programs, Mrs. Strachinescu stated that technology can be standardised but the business models are specific cases and that services need to be defined along with the fair share of remuneration between stakeholders.



Mr. Antonio Sanchez Aparicio introduced the digital challenges, the gigabit European society based on high capacity networks, uninterrupted 5G coverage for all urban areas and major terrestrial transport roads, connectivity access offering at least 100 Mbps for all European households and last but not least cybersecurity. Regarding the digitalization of the energy value chain, Mr.



Aparicio highlighted two key findings of a workshop held earlier in 2018, namely (1) building cross border e-platforms to provide information and energy related services and (2) implementing digital infrastructures to optimise energy interconnections between member states. Concerning the issue of funding this transition, the keynote speaker introduced Commission's proposal for the future budget, namely the Connecting Europe Facility valued at 25 billion EURO and the Digital Europe Program valued at over 9 billion EURO.

Furthermore, Mr. Manuel Sanchez – Jimenez addressed the trends for the next two decades and the foreseen global investments in energy digitalization valued at 1,3 trillion EURO. Between 2016 and 2020, the EU has allocated 50 billion EURO towards smart meters, smart grids, smart home, yet we are at the beginning of the transformation phase from SCADA and automation in 1990s concerning systems using data transfer,



transparent and non-discriminatory access to data and the creation of business and services platforms, within which synergies between sectors (i.e. energy and transport) are possible. According to Mr. Jimenez, the new European energy market and policy framework is supported by cybersecurity, interoperability and synergies.



Furthermore, Mr. Georgios Stassis agrees that digitalization will change the way we consume energy. With the application of digital technology in the energy sector, a new ecosystem of services will develop, including decentralized generation, electric vehicles, grid flexibility and energy efficiency, contributing to a modern, low-carbon and cost effective energy market. Digitalization is a



process that will enable several desirable evolutions for the energy sector, such as the emergence of prosumers, the better use of renewable energy, energy efficiency, better quality and lowering costs for the distribution service, integrating electric mobility and vehicle to grid, improving flexibility of the grid and others. Regarding Romania, Mr. Stassis argues that the country can use its competitive advantage and become a leader in the field of digital energy services, generating economic growth and high-value jobs throughout the manufacturing and services value chain: equipment, software, electric vehicles, devices, services. According to ENEL Romania's country manager, the most effective way to encourage digitalization and the ensuring benefits is to implement the smart meters as a key enabling technology for energy efficiency and customized consumption experience, to improve regulation to encourage the adoption of digital technology and therefore remove any threshold for ICT and digital investments.

Mr. Adrian Borotea points out the importance of how regulation is drafted, approved and implemented, in order for the DSO to deliver the best possible services to its consumers. Moreover, under the current climate, cybersecurity is a necessity, as well the new framework of the General Data Protection Regulation. Also, Mr.



Borotea stresses the fact that the industry needs a medium to long term vision, as the regulator should understand the priorities of the network operator and of consumers.

Furthermore, Ronan Murphy highlights the elements of the new energy sector, digitalization and distributed generation, enabled by mass digitalization (digital assets), advanced communication, new thinking and new ideas. The impact of digitalization and the new technologies and business models upon the energy sector is yet to be fully grasped, Mr. Murphy questioning the potential impact of full scale integration of electric vehicles, electric cookers, or other electric equipment.

Mr. Karoly Borbely affirms that the world is transforming and that, ultimately, everything will be digital and interconnected and that Romania should accelerate the digitalization process. Moreover, Mrs. Madalina Popa foresees big investments in innovation and digitalization, including the car of the future which will be electric, autonomous and shared. Mrs. Popa points out the paradigm shift regarding electric vehicles owning and operating, namely the shift in focus to the total cost of mobility instead of just the cost of ownership.

Mr. Valeriu Binig argues that the regulators must adapt themselves to the dynamic nature of the energy sector (i.e. the data unbundling process provided by CE's 3<sup>rd</sup> energy package and regulator's ability to follow up on



its requirements) and that should be independent of various industry interests and state administration, yet no text exist on the relationship between the regulators and the consumer. Moreover, Mr. Binig points out certain regulation alterations such as the reduction of regulated rate on return of regulated asset based to a level that would discourage further investments by the distributor, which would prefer to redistribute profits and keep it in the bank instead of investing in network assets. This would generate a challenge for the DSOs being trapped in a triangle formed of CAPEX, OPEX and quality of service that would need to go into asset management and data analytics which manages to transform big data into smart data. Another threat identified by Mr. Binig is the aging of the human factor (averaging 50 years old or more) and the knowhow which needs to be transferred to machine learning, as human training is missing or inadequately deployed.

In his intervention, Mr. Antonio Marques reasons that the competitiveness of European industry is at stake when discussing about digitalization and the transition to the low-carbon economy. According to the Head of Technology at Grupo ETRA, digitalization provides flexibility and transparency in the energy sector, as in any sector, flexibility being a viable alternative to increasing production capacity, by deploying storage, synergies and vertical cross-sectorial integration. Also, Mr. Marques argues that regulation is directly impacting businesses and the overall European competitiveness and regulation should protect consumers and drive innovation.

Last but not least, Mr. Massimo Bertoncini is also supporting pro data analytics, asset management, the Internet of Things and



other new and innovative technology such as block chain. However, ICT and digitalization, as also expressed by the previous speakers, bring exposure to risk at both cyber and physical levels of which security should be taken into account at the planning stage. According to Mr. Bertoncini, in order for ICT and digitalization to work and act as natural interconnectors, we must allow cross cooperation, synergies and integration among sectors. Moreover, the new technology is also contributing to the social welfare system, the fair energy for everybody and security of supply.

