

Press Release

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EU needs all low-carbon sources to achieve its 2050 decarbonisation goals

Reflecting on how low-carbon technologies can help the European Union achieve its 2050 decarbonisation objectives and what the needs of the industrial sector are when it comes to increased electrification were the main topics discussed during an event hosted in Brussels by the Permanent Representation of Romania to the EU and organised in the context of the country's Presidency of the Council.

The event "Solutions for a 2050 Carbon-free Europe", organised by the Romanian Ministry of Energy in cooperation with FORATOM and the Romanian Atomic Forum (ROMATOM), gathered together more than 100 representatives of EU Member States, EU institutions and power industries. The conference provided participants with a platform to exchange views on how low-carbon technologies can together contribute to reaching EU climate goals.

During his keynote speech, EU Commissioner for Climate Action & Energy Miguel Arias Cañete stated that by 2050 the deployment of renewables and a stable share of nuclear energy is the solution to make the European power sector carbon-free. He also underlined that the role of low-carbon technologies is essential in reaching carbon-neutrality.

This approach was echoed by the Romanian Minister of Energy Anton Anton, who – in his introductory speech – reiterated that all low-carbon energy sources need to be explored in the future in order to ensure a sustainable development of economy. He also stated that Europe has already managed to achieve a lot in this field, also thanks to the contribution of nuclear energy.

Fabien Roques, Executive Vice President of FTI Compass Lexecon Energy presented in detail a recent study entitled ["Pathways to 2050: role of nuclear in a low-carbon Europe"](#), commissioned by FORATOM providing the vision for the nuclear sector by mid-century. According to the study, nuclear energy provides an important contribution to an efficient transition towards a decarbonised European power system as it can help ensure compliance with EU emissions targets, avoid temporary increase of emissions and locking in fossil fuels investments. The complementarity role of nuclear for renewables was also emphasised.

This last notion was addressed by Giles Dickson, CEO of WindEurope, who referred to the recent analysis published by the International Energy Agency. According to the IEA, the share of electricity generated by wind power will reach more than 30% globally by 2039. However, as pointed out by Mr Dickson, the power sector is not the only sector which needs to be significantly decarbonised in the coming years. The same challenges will need to be addressed by the transport and heating sectors.

One of the possible solutions to achieve this goal is increased electrification which will play a key role in achieving a low-carbon future. eurelectric Secretary General Kristian Ruby presented a recent study carried out by the organisation, which focuses on decarbonising the European Union through strong electrification, energy efficiency, and support from other non-emitting fuels. Each of the scenarios developed by the association will allow the EU power

sector to be fully decarbonised by 2045 and in each of them the bulk of electricity will be provided by renewables and nuclear energy. Mr Ruby mentioned also the importance of system reliability and flexibility, which need to be provided by multiple sources in the power sector, including hydro, nuclear and gas, but also emerging sources such as hydrogen or battery storage.

The issue of storage was discussed by Peter Claes, Vice President of the International Federation of Industrial Energy Consumers. During his speech, Mr Claes pointed to the importance of security of supply for efficient, reliable and safe operation. In this context, the current capability of battery storage as a backup to renewables does not guarantee the continuous supply of the electricity needed by the industry. Other potential pathways to decarbonise the power sector, listed by Mr Claes, were renewables with gas, nuclear energy and geothermal energy.

The potential nuclear pathway and the role nuclear energy has to play in decarbonising Europe was underlined during a speech given by Nuclearelectrica CEO and ROMATOM President Cosmin Ghita. Mr Ghita stressed that there is no decarbonisation without nuclear energy, and all low-carbon energy sources should be treated equally as they are all needed to reach the decarbonisation goal and help the EU achieve its climate objectives.

During his closing remarks, FORATOM Director General Yves Desbazeille briefly presented the key takeaways of the FTI study commissioned by FORATOM, noting that keeping a share of nuclear provides clear environmental, social and economic benefits. The long-term operation of existing reactors is a must and more needs to be done to trigger investment in new nuclear reactors. He also identified some actions which must be undertaken by both the EU and industry in order to ensure nuclear remains part of the mix and can help Europe achieve its decarbonisation targets.

He was followed by Gerassimos Thomas, Deputy Director-General of DG Energy, who stressed the fact that energy mix included in the long-term greenhouse gas emissions reductions strategy is based on the feedback received from the Member States. According to the information received, two low-carbon sources will make up the EU electricity mix: renewables (80%) and nuclear (15-20%). These two energy sources should work together and not against each other as all low-carbon energy sources are needed in order to achieve the EU's climate objectives. Other innovative technologies should be developed and therefore increased attention to the R&D sector should be paid. Competitiveness should be improved, as this has an impact on all technologies. Waste, decommissioning and encouraging young people to join the nuclear industry were also points highlighted by Mr Thomas.

At the end of the event, Elena Popescu, Director General, DG Energy and Climate Change, Romanian Ministry of Energy, drew attention to the specificities of each country in terms of availability of energy sources and the need to adapt to specific conditions. Electrification will play an important role in achieving the mid-century decarbonisation targets, as long as it is based on low-carbon electricity sources.

The event was organised in the context of the European Commission's recently-released strategy for long-term EU greenhouse gas emissions reduction "[Clean Planet for All](#)", which aims to bring forward a vision of a low carbon economy that protects the planet and empowers the economy.

For more information, please contact Jessica Johnson: jessica.johnson@foratom.org.