BULGARIAN NUCLEAR ENERGY – NATIONAL, REGIONAL AND WORLD ENERGY SECURITY

BulAtom 2024 Traditional International Conference

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Introduction

- Thank you for the invitation. It is my honour to present EU perspective on nuclear energy in one of the most prominent nuclear events in Bulgaria celebrating its 21st edition today. I am glad to see that this year's edition, once again, brought together all relevant stakeholders in a key moment for the Bulgarian nuclear programme. So, I am happy to participate and contribute to the debate.
- Bulgaria, is a key actor in the EU and global nuclear ecosystem, with the Kozloduy nuclear power plant currently generating one-third of the electricity of the country and the plans for extending its nuclear capacities even further.
- I would also like to recognize here Bulgaria's remarkable efforts towards diversification of nuclear fuel supply, the progress on the implementation of the NDAP and more recently the interest of national actors in the SMRs IA.

EU energy policy objectives

- The EU energy policy is driven by decarbonisation, competitiveness, and security of supply objectives. In this context: The European Green Deal, Fit for 55 policy package, and REPowerEU play a central role in driving energy transition and industry decarbonisation in Europe.
- Our projections [*based on the National Energy and Climate Plans submitted in 2019 and further reflecting the status until March 2023*] presented in the recent 2040 Commission's Communication show that decarbonised sources will generate over 90% of EU's electricity in 2040. While the bulk will come from renewable energy, nuclear will be complementing renewables in Member States that decide to include it their energy mix. This nuclear energy will come from existing installations with extended lifetimes as well as from new investments.

- Emerging technologies, like small modular reactors (SMRs), are making significant progress and could also play a crucial role in integrated energy systems, providing low-carbon energy with a relatively small environmental impact. They represent an opportunity for the EU to remain a front-runner in innovative nuclear technologies, while contributing to the decarbonisation of the EU economy also in the hard-to-decarbonized sectors. **Bulgaria is one of the Member States that sees this opportunity and the momentum**.

- Conscious of the momentum, Commission launched on 6 February the **EU SMR Industrial Alliance** to gather and support stakeholders in the deployment of first SMR projects in the EU by the early 2030s. Only by **leveraging efforts across the EU** we can stay competitive in the current context and knowing that Russia and China already connected their first SMRs to the grid respectively in 2019 and 2021.

- **More than 300 entities, including 4 from Bulgaria** [BulAtom, Blue Bird Energy, Centre of Nuclear Competences Kozloduy and Worley Nuclear Services, all of them accepted as members of the IA] responded the call for membership. This number of applications shows the tremendous interest for SMRs development in the EU.

- On **29 and 30 May, the European Industrial Alliance (IA) on SMRs convened in Brussels its first (inaugural) General Assembly** gathering representatives from all 277 selected Members of the Alliance. The 2-day meeting, co-chaired by Commissioners Simson, Breton and Ivanova, was attended by more than 250 participants coming from a broad range of entities from European and non-European industry, start-ups, research organisations, training centres and academia, financial sector, public administration, civil society organisations, etc. **The General Assembly validated the strategic orientation and political objectives of the Industrial Alliance** and emphasised the project character of the IA activities.
- Let me **stress** that **the use of nuclear energy remains a national choice**, and EU Member States remain fully sovereign in deciding on their own energy mix.

- Indeed, the landscape in the EU is diverse. Some EU Member States are slowing the phase-out of nuclear (BE), others plan to rely on it more than before (SE, NL, CZ), or have decided to start using it (PL). New reactors are being commissioned[1], and others are planned, such as the **two new units at the Kozloduy NPP.**

- It goes without saying that the development and use of nuclear must respond to the **highest levels of nuclear safety** in all stages of the life cycle of nuclear installations. This is a key pre-requisite for the use of nuclear power in the EU now and will remain so for the future.

- As President von der Leyen stressed at the Nuclear Energy Summit on 21 March in Brussels, the future of nuclear also depends on the industry's ability to deliver on time and on the budget granted to this end. President also mentioned that "**support is needed from governments** to ensure that financing is available and that nuclear's contribution to electricity security is properly valued and remunerated."

- To support development of nuclear energy in Member States who opt for it, recent EU policy and legal initiatives **acknowledge a technology neutral approach to nuclear:**

    - The **EU Electricity Market Reform** treats nuclear on equal footing with other decarbonised forms of electricity.
    - Nuclear technologies **feature in the EU Net-Zero Industry Act** to strengthen our manufacturing capacity.
    - The **Taxonomy Framework** qualifies several nuclear activities as taxonomy-compliant under certain stringent conditions.

Supply chains and diversification

- The nuclear industry needs also **reliable supply chains**. In line with the EU **REPower plan, we must continue our efforts and reduce**

[1] Two reactors have been commissioned recently in Finland (Olkiluoto 3) and Slovakia (Mochovce 3) and two more are expected to come online in the near future (Flamanville in France, Mochovce 4 in Slovakia) while others are either under construction (Paks II in Hungary) or at the planning stage.

western dependency - notably on Russia, but not only - for nuclear materials, nuclear fuel and related services, as well as technologies, spare parts and maintenance services.

- In this regard, allow me to congratulate the Bulgarian authorities for the remarkable achievement of materialising the nuclear fuel diversification programme **by securing two alternative fuel suppliers for Units 5 and 6 of Kozloduy Nuclear Power Plant (KNPP)** and having the first 43 alternative fuel assemblies loaded in Unit 5 reactor core.

Skills

- The need for nuclear skills and expertise is becoming critical. The increased appetite for new nuclear prospects makes the availability of sufficient and properly trained personnel a priority.

- The Commission has set up several initiatives to support Member States to develop skills for the nuclear sector, such as the **EU European Human Resources Observatory for the Nuclear Energy Sector** and **The Net Zero Industry Act**.

- Ultimately however, action at Member State level is needed. **And here, the BG National Strategy on Human Resources Development** in the Nuclear Sector accompanied by the 3-year Action Plan, is an **example to follow**. **Also, cooperation between Member States – such as between Bulgaria and France** – **can be very beneficial**.

Sustainability

- Lastly, there are important considerations about the back-end of the nuclear life cycle.

- **Responsible decommissioning and safe management of radioactive waste** are key for nuclear energy to be used in environmentally responsible ways and for public acceptance. We need to ensure that Member States wishing to use nuclear show commitment to long-term waste solutions.

- **Bulgaria can share extensive expertise gathered in the decommissioning of Kozloduy units 1-4**, supported from EU funds. I can name for example the application of highly efficient waste treatment processes such as volume reduction with plasma melting, or the decontamination of the reactors' primary circuitry as well as the dismantling of large reactor components such as steam generators. Many of these achievements were facilitated by a strong cooperation with other programmes co-funded by the Union, in particular the Ignalina programme (in LT) and the Bohunice programme in (SK). It is paramount for Bulgaria to continue pursuing such knowledge sharing and exploitation of synergies with other programmes.

Closing remark

- **Thank you very much** for your attention. I'm looking forward now to listening to the rest of presentations and learn your views on the prospects of nuclear power in BG, the EU and globally. I would like to conclude by thanking the organisers and **wishing you a very successful event!**