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From: General Secretariat of the Council
To: Permanent Representatives Committee (Part 2)/Council
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Subject: Non-power nuclear and radiological technologies and applications
- Council conclusions (6 June 2019)

Delegations will find in the annex the Council conclusions on non-power nuclear and radiological technologies and applications, adopted by the Justice and Home Affairs Council held on 6 June 2019.

COUNCIL CONCLUSIONS**on non-power nuclear and radiological technologies and applications****Acknowledging**

- that nuclear and radiological technologies play an important role outside the nuclear energy sector in vital areas, such as medicine, industry, research and environment, providing numerous benefits to the EU citizens and AWARE OF the significant contribution that nuclear science can make to addressing societal challenges;
- that Euratom legislation requires that non-power use of nuclear and radiation technologies is appropriately justified, the radiation protection of the public, patients and staff is adequately optimised and that non-power radioactive waste and spent fuel are safely disposed;
- the Council conclusions of 2009¹, 2010² and in 2012³ on the secure supply of medical radioisotopes in the European Union and NOTING the Euratom Supply Agency report of 2015 and the Presidency paper of 2016⁴ on the same subject;
- that, since 2012, the European Observatory on the Supply of Medical Radioisotopes has monitored the overall supply of medical radioisotopes and in particular the coordination of reactor schedules and made important contributions to avoiding significant shortages of medical radioisotopes in the EU;
- the role of the Euratom Supply Agency in ensuring the supply of nuclear source material needed for research reactor fuels and targets for production of medical radioisotopes and NOTING the revised Report⁵ on securing the European supply of 19.75% enriched Uranium Fuel for research reactors and the production of medical radioisotopes;

1 17025/09

2 16358/10

3 17453/12

4 8403/16

5 http://ec.europa.eu/euratom/docs/ESA_HALEU_report_2019.pdf

- the progress made recently in several Member States in converting from HEU to High-Assay LEU⁶, ensuring additional radioisotopes production capacity and launching or advancing projects for new production facilities, including research reactors and alternative technologies;
- that the production of source materials for the supply chain of medical radioisotopes is important to increase the resilience of the European supply chain and to reduce the dependence on foreign actors;
- the Council conclusions of 2015⁷ on the justification of medical imaging involving exposure to ionising radiation which called for improved implementation of Council Directive 2013/59/Euratom⁸ in several areas;
- the Conference on Addressing Societal Challenges through Advancing the Medical, Industrial and Research Applications of Nuclear and Radiation Technology, organised by the Commission on 20-21 March 2018 and the technical workshop in Brussels on Medical Radioisotopes in the Future organized by the Commission on 7 February 2019, as well as the European Study on Medical, Industrial and Research Applications of Nuclear and Radiation Technology⁹;
- that the role of non-power nuclear and radiological technologies in achieving the 2030 Agenda are internationally recognised and that the importance of these activities are explicitly highlighted in 7 of the UN Sustainable Development Goals as well as the active role of the International Atomic Energy Agency (IAEA), in supporting countries in using non-power nuclear and radiation technologies to contribute to the achievement of the Sustainable Development Goals,

⁶ High-Assay LEU (HALEU) is uranium enriched to between 5 and 20% uranium-235. In practice, 19.75% enrichment is used for research reactor HALEU fuels and targets for production of radioisotopes.

⁷ 14617/15

⁸ Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom, OJ L 13, 17.1.2014, p. 1–73

⁹ <https://ec.europa.eu/energy/en/studies/european-study-medical-industrial-and-research-applications-nuclear-and-radiation-technology>

The Council of the European Union,

1. WELCOMES the preparatory work undertaken by the Commission with the view of developing a Strategic Agenda for Medical, Industrial and Research Applications (SAMIRA) of nuclear and radiation technology.
2. STRESSES the importance of finalising the studies undertaken by the Commission in order to improve the understanding of the EU market of medical radioisotopes in cooperation with Member States¹⁰.
3. INVITES the Commission to support research on topics related to non-power applications of nuclear and radiological technologies, such as medical applications of ionising radiation, improved fuels for production of medical radioisotopes and optimised use of European research reactors and STRESSES the importance of delivering the research roadmap for medical applications¹¹ in a timely manner.
4. SUPPORTS the continuing monitoring of the production chain of medical radioisotopes through the European Observatory on the Supply of Medical Radioisotopes and the Euratom Supply Agency's efforts and actions in ensuring the secure supply of source materials.
5. INVITES the Commission to develop an Action Plan highlighting areas that should be addressed as a priority and foreseeing specific actions to be undertaken in these areas. The Action Plan should, in particular, aim to secure the supply of radioisotopes for medical uses in the EU, improve radiation protection and safety for European patients and medical staff, in accordance with the objectives set out in the Directive 2013/59/Euratom⁸, and facilitate innovation in the medical applications of radioisotopes, radiopharmaceuticals and ionising radiation.

¹⁰ JRC SMeR studies, SMeR-1 into diagnostic radioisotopes completed in 2018, and SMeR-2 into therapeutic radioisotopes to be launched in 2019

¹¹ COMMISSION IMPLEMENTING DECISION of 14.12.2018 on the financing of indirect actions within the framework of Council Regulation (Euratom) No 2018/1563 and on the adoption of the work programme for 2019-2020

6. STRESSES that nuclear and radiological science, technology and applications address and contribute to a wide variety of socio-economic needs of all Member States, in areas such as medicine, food and agriculture, environment, industry, materials, space and cultural heritage and NOTES that all Member States benefit from the application of radiation and nuclear technologies in the above areas.
7. UNDERLINES the important contribution of European nuclear research reactors and facilities when developing non-power applications of nuclear and radiological technologies and STRESSES that securing fuel supplies and implementing safe and sustainable solutions for the management of used fuels and radioactive waste from those reactors and facilities are important responsibilities of Member States and license holders.
8. INVITES the Commission in cooperation with Member States to communicate on the benefits and risks of various non-power applications of nuclear and radiological technologies.
9. UNDERLINES the importance of further strengthening the capacity building of Member States, particularly through interregional, regional and national training courses and other activities in areas of non-power nuclear and radiological science, technology and applications.
10. CALLS upon the Commission and the Member States to continue to address identified priority needs and requirements in the areas of non-power nuclear science, technology and applications.
11. ENCOURAGES the Commission and Member States to proceed with the work on non-power uses of nuclear and radiation technologies in cooperation with IAEA¹² and other relevant international organisations, such as FAO and WHO - while avoiding duplication of work, including their activities to transfer non-power nuclear and radiological technologies, particularly to developing countries, to help them meet key development priorities in areas such as health and nutrition, food and agriculture, water and the environment or industrial applications.

¹² IAEA/EC practical arrangements on Nuclear Sciences Applications signed in 2017