EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY

Note from the European Commission for the information of the 47th meeting IAEA Commission on Safety Standards

Summary and status of impacts of current COVID-19 pandemic on the nuclear sector and supply of medical isotopes in the EU

The current COVID-19 pandemic represents a significant test of the resilience of the whole European energy supply and distribution systems, including the nuclear sector, as well as of the infrastructure that provides hospitals and clinics with medical radioisotopes. The EU Member States and the European Commission, within their respective fields of competence, have taken the necessary measures to monitor the evolution of the situation, anticipating and mitigating possible impacts.

In response to the operational challenges associated with this pandemic, nuclear installation operators and national regulatory authorities in Europe have implemented business continuity plans to protect the health of staff, adapt working practices, and ensure adequate staffing levels in order to maintain essential operations whilst prioritising the nuclear safety of installations. As a result, there are currently no reports of disruption of nuclear power plant operations in Europe, nor any safety concerns.

The European Commission's services have been closely monitoring the situation in cooperation with European Nuclear Safety Regulators Group (ENSREG) and nuclear industry associations, and have facilitated information exchanges amongst national authorities.

This note summarises the European Commission's activities, highlighting a number of documents that have been or due to be issued on the COVID-19 impact on the energy sector, as well as summarising the experiences reported by EU Member States.

European Commission activities

Through a combination of telework, limited on-site presence, and specially authorised travel, the European Commission has been able to ensure the full functioning of its activities, including maintaining Euratom nuclear safeguards verifications, the ECURIE and EURDEP emergency response capability, and associated support activities. Where necessary, procedures have been adopted to maintain physical distancing and apply health protection measures. Preparations are in place for a gradual phased return to normal office working.

The European Commission services are continuing to facilitate the exchange of information and coordination of preparedness and responses actions between national nuclear regulatory authorities. A website discussion forum has been set-up to enable quicker and targeted information update and exchange amongst the ENSREG community. In addition, the Commission services, through JRC, have published situation status reports on the measures taken in Europe and beyond based on information from international organisations, regulatory and industry.

The European Commission, through the Euratom Supply Agency, also monitors the level of nuclear fuel inventories held by EU utilities annually. As far as critical material (uranium) is concerned, there are sufficient quantities of the material on the market and in inventories held by nuclear utilities. The two major EU industrial nuclear suppliers for the EU and global supply chain have taken precautionary COVID measures in view of honouring their supply contracts.

EU Energy Ministers held informal discussions by video-link on 28 April 2020 to discuss pandemic response and recovery. They noted the resilience of the energy sector, and the central role it would play during the post-crisis economic recovery. As a follow up to the discussions, the European Commission has issued a **'Commission Staff Working Document, Energy Security: good practices to address pandemic risks'**[1] - this document aims to describe a series of good practices to address risks in the energy sector that are associated with a pandemic, such as COVID-19. It highlights risks and challenges, including cyber and hybrid threat preparedness, movement and availability of specialised energy workers, access to protective equipment and medical testing for energy workers, ensuring emergency response capability at all times. Ministers will have another informal meeting on 15 June.

The Commission has also adopted **guidelines aiming to facilitate the free cross-border movement of critical workers** and to ensure the availability of goods during COVID-19 outbreak, which help to ensure smooth cross-border movement of critical staff and critical materials in the nuclear sector[2].

European nuclear sector

At the beginning of the health crisis, the European Commission surveyed ENSREG members and observers on the national steps being taken for preparedness planning to ensure the safety of nuclear installations, any potential impacts on security of electricity supply. The consolidated replies and collected information[3] show that:

- All countries have activated business continuity plans covering both electricity production and installation safety-related activities at national, regulator and licensee levels to support safe and reliable operation of nuclear installations.
- Many countries indicate refocusing of efforts to prioritise facilities essential to the production of electricity. Nuclear installations whose functioning is not vital to electricity production, such as decommissioning sites, have been shut down and placed in a safe state. Activities necessary for the functioning of nuclear power plants (NPP) for fuel supply and removal are being maintained.
- Regulatory oversight is continuing, including through teleworking, where appropriate, and some authorities are maintaining some inspector presence on sites, focusing on NPPs.
- Installation operating rules require defined minimum staff presence for operations and maintenance as set out in licence conditions established by the national competent regulatory authorities, otherwise the installation must be brought to safe shutdown conditions. There are currently no reported difficulties to comply with this requirement.

[1] https://ec.europa.eu/energy/topics/energy-security/energy-supply-and-pandemic_en

[2] Communication from the Commission, 'Guidelines concerning the exercise of the free movement of workers during COVID-19 outbreak', 30.3.2020 C(2020) 2051 final

[3] Information has also been collated from public sources in the JRC reports ("Continued safe operation of nuclear power generation plants during the Covid-19 pandemic") have been published (JRC120361 and JRC120551 on https://ec.europa.eu/jrc), which details the situation in different nuclear power countries in Europe and beyond, collecting information from publicly available sources

- Some countries reported that in certain plants, scheduled outages for refuelling and maintenance which require a large site presence of itinerant workers were likely to pose logistical challenges to accommodate the planned activities whilst respecting physical distancing and infection control practices. It was reported that some licensees in conjunction with the electricity grid operator had either rescheduled, shortened or postponed some of the outages activities to minimise impacts.
- It was highlighted that outages are also necessary for tests, inspections of critical safety systems and replacement of components with a safety significance according to license requirements. Potential changes to maintenance schedules as well altered work processes will require careful regulatory scrutiny, as previous experience shows that organisational factors such as changed communication channels, and rapidly modified work processes can be contributors to events and incidents.
- Some countries reported that emergency preparedness and response plans in case of radiological or nuclear emergency are being reviewed and updated to integrate potential difficulties of gaining access to the sites, although continuity of radiological emergency response is being assured.

Medical radioisotope supply in Europe

Radioisotope production for the medical sector relies on specialised supply chains, which extend to countries outside the EU. Although demand was reduced in the lockdown situations, this is now beginning to return to pre-COVID pandemic levels The supply of radioisotopes due to potential production disruptions as well as interruptions to transport logistics continue to be monitored.

- The Security of Supply Emergency Response Team (ERT) of the industry association of nuclear medicine – Nuclear Medicine Europe4 is meeting regularly to discuss the impact of the COVID-19 pandemic on Mo-99 and other radioisotope production.

- At their recent sessions, they reported that medical radioisotopes production is continuing, that there have not been any disruptions due to COVID-19 impact on personnel, and that production is expected to return to pre-COVID patterns within the month of June. Medical radioisotope supply is expected to be sufficient to meet increases in demand.

- Efforts were made to find alternative transport solutions due to earlier difficulties with air transportation in Europe, but the situation has steadily improved to allow reliance on scheduled airlines. Although last-minute logistics changes can still create short-term difficulties and a risk to security of supply of both bulk Mo-99 and Tc-99m generators, no specific shortages are reported.

- Air transportation options for most geographic regions have also continued to improve, including from South Africa, although it was reported that there are difficulties transporting to Mexico and South America.

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[4] NMEu, co-chair of the European Observatory on the supply of Medical Radioisotope