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ANNEXES 1 to 2

## **ANNEXES**

**to the**

### **Proposal for a Council Regulation**

**establishing the nuclear decommissioning assistance programme of the Ignalina nuclear power plant in Lithuania (Ignalina programme); and repealing Council Regulation (EU) No 1369/2013**

{SWD(2018) 342 final}

## ANNEX I

1. The general objective of the Programme is to assist Lithuania in implementing Ignalina nuclear power plant decommissioning, with specific emphasis on managing the radiological safety challenges of the decommissioning of the Ignalina nuclear power plant. With the removal of spent fuel assemblies from the reactor buildings completed, the next major safety challenges to be tackled by the Programme are the dismantling of the reactors' core and the continued management of decommissioning and legacy waste.
2. In the financing period starting as of 2021, the programme will assist the following:
  - (a) dismantling and decontamination of the reactor shafts top and bottom zones in accordance with the decommissioning plan; progress has to be measured by the quantity and type of materials removed as well as through earned value;
  - (b) the design for the dismantling and decontamination of the reactor shafts central zones (graphite cores); progress has to be measured through earned value; this objective shall be accomplished before 2027 when the relevant authorisations will be granted to carry out the actual dismantling and decontamination that is scheduled after 2027;
  - (c) safe management of the decommissioning and legacy waste up to interim storage or to disposal (depending on the waste category), including the completion of the waste management infrastructure where necessary. This objective has to be accomplished in accordance with the decommissioning plan; progress has to be measured by the quantity and type of waste safely stored or disposed of, as well as through earned value;
  - (d) downgrading of radiological hazards; this objective has to be measured through the safety assessments of the activities and the facility, identifying ways in which potential exposures could occur and estimating the probabilities and magnitude of potential exposures.
3. The decommissioning plan of the Ignalina nuclear power plant established the Programme work breakdown structure (so called Ignalina NPP Decommissioning Activity and Projects Decomposition Hierarchical Structure). The first level of the work breakdown structure is made of the following six items:
  - (i) P.0 'Enterprise activity organisation';
  - (ii) P.1 'Decommissioning preparation';
  - (iii) P.2 'Facility dismantling/demolition and site restoration';
  - (iv) P.3 'Spent Nuclear Fuel handling';
  - (v) P.4 'Waste handling';
  - (vi) P.5 'Post-operation programme'.

Item P.0 'Enterprise activity organisation' covers the enterprise management, surveillance and quality assurance, radiation and ecological monitoring, physical security, engineering support for enterprise activities.

Item P.1 'Decommissioning preparation' covers provision of preliminary conditions for decommissioning (such as equipment inventory and radiological

characterisation), modification of infrastructure, isolation of systems and equipment, decontamination of process systems, equipment and facilities.

Item P.2 'Facility dismantling/demolition and site restoration' covers dismantling of reactors, dismantling of process equipment/systems and waste pre-treatment, demolition of facilities, and site restoration.

Item P.3 'Spent Nuclear Fuel handling' covers spent nuclear fuel handling and storage.

Item P.4 'Waste handling' covers treatment and conditioning of radioactive waste.

Item P.5 'Post-operation programme' covers operation and maintenance of facilities, energy resources, water supply, sewage and water purification.

4. Key radiological safety challenges in the financing period 2021-2027 are tackled through activities under items P.1, P.2 and P.4. In particular the dismantling of the reactors' cores is covered under item P.2. Lesser challenges are tackled under item P.3, while items P.0 and P.5 cover decommissioning support activities.
5. Accordingly, when preparing the multiannual work programme, the Commission will consider distributing the available amounts as per the priorities identified in Table 1, without prejudice to Article 7.

**Table 1**

#	Item	Priority
P.0	Enterprise activity organisation	II
P.1	Decommissioning preparation	I
P.2	Facility dismantling/demolition and site restoration	I
P.3	Spent Nuclear Fuel handling	II
P.4	Waste handling	I
P.5	Post-operation programme	III

6. The main objective of the Programme is complemented by the aim of enhancing the Union added value of the Programme through dissemination of knowledge (thereby generated) to all Member States on the decommissioning process. In the financing period starting as of 2021, the Programme has to deliver the following:
  - develop ties and exchanges among Union stakeholders (e.g. Member States, safety authorities, utilities and decommissioning operators);
  - document explicit knowledge and make it available through multi-lateral knowledge transfers on decommissioning and waste management governance issues, managerial best practices, and technological challenges, with a view to develop potential Union synergies.

Those activities are Union funded at 100% of eligible costs.

Progress is to be measured by the number of knowledge products created and their outreach.

7. The disposal of spent fuel and radioactive waste in a deep geological repository is excluded from the scope of the Programme, and has to be developed by Lithuania in its national programme for the management of spent fuel and radioactive waste as required by Council Directive 2011/70/Euratom.

## **ANNEX II**

### Indicators

#### 1. Dismantling and decontamination:

- quantity and type of materials removed.

#### 2. Radioactive waste management:

- quantity and type of waste safely stored or disposed of.

#### 3. Knowledge dissemination:

- number of knowledge products created and their outreach.