

**Nuclear Decommissioning Assistance Programme**

**Kozloduy Programme**

**Work Programme 2021-2022**

**Annex 1**

## **1. INTRODUCTION**

On the basis of the objectives given in the Council Regulation (Euratom) 2021/100, this work programme contains the actions to be financed and the budget breakdown for years 2021-2022 as follows:

- a) for grants (implemented under direct management) (point 2),
- b) for prizes (implemented under direct management (point 3),
- c) for procurement (implemented under direct management) (point 4),
- d) for actions implemented under indirect management (point 5),
- e) for contributions to trust funds (point 6),
- f) for financial instruments (point 7),
- g) for contributions to blending facilities (point 8),
- h) for other actions or expenditure (point 9).

### **1.1. Legal basis**

Article 9 of Council Regulation (Euratom) 2021/100

### **1.2. Budget lines**

Budget line 12.040100

### **1.3. Objectives pursued**

The Programme aims to assist Bulgaria in implementing the Kozloduy decommissioning programme, including management and storage of radioactive waste in line with the identified needs of the respective decommissioning plan, with specific emphasis on managing the safety challenges thereof; whilst the Programme is creating knowledge in the nuclear decommissioning process and in the radioactive waste management resulting from the decommissioning activities.

The major safety challenges to be addressed by the Kozloduy programme are:

- (a) Dismantling and decontamination in the reactors' buildings in accordance with the decommissioning plans;
- (b) Safe management of the decommissioning and radioactive waste in line with the identified needs of the respective decommissioning plan, activated materials and dismantling materials including their decontamination up to interim storage or to disposal (depending on the waste category), completion of the waste and material management infrastructure where necessary. This objective has to be accomplished in accordance with the decommissioning plan and necessary RAW management;
- (c) Continue downgrading of radiological hazards.

## 1.4. Expected results

### Specific objective:

Dismantling and decontamination in the reactors' buildings in accordance with the decommissioning plan.

Performance indicators (figures are cumulative)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Metal dismantled (tonne)	539	1 239	2 039	3 139	4 428	5 807	7 340	8 962	10 207	10 868
Concrete removed (tonne)	0	0	60	120	180	240	0	0	0	0
EVM* Planned Value** (MEUR)	14.087	28.338	33.209	38.125	42.149	45.842	50.717	54.716	58.484	61.070

\*Earned Value Management / \*\*The “Planned Value” is the target for “Earned Value” indicator.

KIDSF projects, related to the specific objective (contingencies not included):

- **44:** Preparation of Detail Design for Dismantling of Equipment in the Controlled Areas of KNPP Units 1-4;
- **55-2:** Transfer of DfD equipment from Bohunice to Kozloduy;
- **55-3:** Implementation of decontamination.

Note: The figures include also labour costs, covered by KIDSF and additional activities, covered by national sources.

### Specific objective:

Safe management of the decommissioning and radioactive waste and of activated materials and dismantling materials, including their decontamination up to interim storage or to disposal (depending on the waste category), as well as the completion of the waste and material management infrastructure where necessary. This objective has to be accomplished in accordance with the decommissioning plan.

Performance indicators (figures are cumulative)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Free release of materials (tonne)	3 000	5 000	6 000	7 000	8 000	9 000	10 000	11 000	12 000	13 000
Rad. waste stored or disposed (tonne)	320	2 170	4 160	6 150	8 140	8 640	9 040	9 440	9 840	10 240
EVM Planned Value (MEUR)	28.32	72.55	94.27	116.13	137.59	147.40	157.48	167.67	178.14	185.76

Note: The “Planned Value” is the target for “Earned Value” indicator.

KIDSF projects, related to the specific objective (contingencies not included):

- **R-3a-a:** Pre-disposal Monitoring of the Radiana Site. Geodesic Monitoring;
- **R-3e-a:** Pre-disposal Monitoring of the Radiana Site. Hydrogeological monitoring and geochemical analyses;
- **R-3f-a:** Pre-disposal Monitoring of the Radiana Site. Radiological Monitoring;
- **R-8:** Designer's supervision of NDF Phase 1 construction;
- **R-9:** Independent supervision of construction of the NDF, Phase 1;
- **R-10:** Construction of NDF Phase 1;
- **9b-2:** Facility for Retrieval and Processing of Historical Wet Solid Waste;
- **40:** Characterisation, retrieval, treatment of RAW from "Mogilnik" storages in Units 1-4 of KNPP and procurement of equipment for their temporary storing;
- **48-1:** TD and update of SAR for Modernization of SD "RAW-Kozloduy" to receive and process decommissioning RAW;
- **48-2:** Modernization of SD "RAW-Kozloduy" to receive and process decommissioning RAW;
- **49:** Supply of containers for storage of activated materials;
- **50:** Reconstruction of the RB for temporary storage of containers with activated materials.

Note: The figures include also labour costs, covered by KIDSF and additional activities, covered by national sources.

**Specific objective:**

Downgrading of radiological hazards. The release of the facilities from regulatory control up to corresponding regulatory free-release levels is due to take place by the end of 2030.

Performance indicators (figures are not cumulative)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Residual activity (Bq)	2.08 $10^{17}$	2.08 $10^{17}$	2.08 $10^{17}$	2.08 $10^{17}$	1.07 $10^{17}$	9.76 $10^{16}$	9.53 $10^{16}$	7.72 $10^{16}$	5.1 $10^{10}$	3.2 $10^9$

**Specific objective:**

Decommissioning of Nuclear Facilities and Management of Radioactive Waste Knowledge dissemination.

Performance indicators (figures are cumulative)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Knowledge products created	1	2	3	4	5	6	7	8	9	10

The process of creation of the knowledge products is described in Annex 3, Section 3 “Dissemination of Knowledge”.

## **METHODS OF IMPLEMENTATION**

### **2. GRANTS**

The budgetary envelope reserved for grants under this work programme is EUR 0.

### **3. PRIZES**

The budgetary envelope reserved for contests under this work programme is EUR 0.

### **4. PROCUREMENT**

The budgetary envelope reserved for procurement contracts under this work programme is:

- EUR 0 in 2021
- EUR 130 000 in 2022

The contracts envisaged are related to the technical and administrative assistance for the implementation of the Programme, such as preparatory, monitoring, control, audit and evaluation activities including corporate information technology systems.

### **5. ACTIONS IMPLEMENTED IN INDIRECT MANAGEMENT**

#### **Entity entrusted with the implementation**

The budgetary envelope reserved for indirect management by the European Bank for Reconstruction and Development (EBRD) through the Kozloduy International Decommissioning Support Fund under this work programme is:

- EUR 9 000 000 in 2021
- EUR 8 870 000 in 2022

#### **Description**

A detailed description of the **decommissioning programme** was submitted by the Programme Coordinator of the Kozloduy Programme and is provided in Annex 3.

Activities included within the decommissioning programme in Annex 3 should be identified within the boundaries defined by the decommissioning plan submitted by Bulgaria in accordance with Council Regulation (EU) 1368/2013.

The entrusted tasks are framed into the work programme hereby adopted. The budgetary envelope for the implementation of the entrusted tasks tops up previously allocated funds to cover longer-term commitments in the framework of the decommissioning plans of Kozloduy Nuclear Power Plant Units 1-4.

### **6. TRUST FUNDS**

The budgetary envelope reserved for trust funds under this work programme is EUR 0.

## **7. FINANCIAL INSTRUMENTS IMPLEMENTED IN DIRECT OR INDIRECT MANAGEMENT**

The budgetary envelope reserved for financial instruments under this work programme is EUR 0.

## **8. CONTRIBUTIONS TO BLENDING FACILITIES**

The budgetary envelope reserved for contributions to blending facilities under this work programme is EUR 0.

## **9. OTHER ACTIONS OR EXPENDITURE**

The budgetary envelope reserved for other actions or expenditure under this work programme is EUR 0.