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2018/0252 (NLE)

Proposal for a

**COUNCIL REGULATION**

**establishing a dedicated financial programme for decommissioning of nuclear facilities  
and management of radioactive waste, and repealing Council Regulation (Euratom) No  
1368/2013**

{SWD(2018) 343 final}

## EXPLANATORY MEMORANDUM

### 1. CONTEXT OF THE PROPOSAL

This proposal provides for a date of application as of 1 January 2021 and is presented for a Union of 27 Member States, in line with the notification by the United Kingdom of its intention to withdraw from the European Union and Euratom based on Article 50 of the Treaty on European Union received by the European Council on 29 March 2017.

#### • **Reasons and objectives**

The funding programme for financial assistance for "Decommissioning of Nuclear Facilities and Management of Radioactive Waste", (the 'programme') presented under this draft Regulation addresses the decommissioning of nuclear facilities and the management of the arising waste under a common instrument to optimise synergies and knowledge sharing in order to secure meeting of relevant obligations. This dedicated funding programme can bring additional EU added value through becoming a benchmark within the EU for safely managing technological issues in nuclear decommissioning and disseminating knowledge to Member States. Such financial assistance is provided on the basis of an ex ante evaluation identifying the specific needs and demonstrating the EU added value.

Currently, the Programme focuses on specifically identified needs:

The Kozloduy nuclear power plant units 1-4 (Kozloduy, Bulgaria) and the Bohunice V1 nuclear power plant (Jaslovské Bohunice, Slovakia) consist of six pressurized water reactors originally developed in the Soviet Union (VVER 440). The decommissioning of these plants contributes towards increased nuclear safety in the region and in the EU as a whole.

The Commission's Joint Research Centre (JRC) owns nuclear research installations in four sites: JRC-Geel in Belgium, JRC-Karlsruhe in Germany, JRC-Ispra in Italy and JRC-Petten in the Netherlands. Some of these installations are still in use today while others have been stopped, in some instances more than 20 years ago. As nuclear operator and/or owner<sup>1</sup> under Belgian, Dutch, German and Italian laws, the JRC is responsible for the decommissioning of these installations and for the safe management from generation to disposal of the resulting spent fuel and radioactive waste.

Given this making, the programme is naturally subdivided into:

- (i) the two actions providing financial support to Bulgaria and Slovakia to safely decommission six nuclear reactors at the Kozloduy nuclear power plant units 1-4 and the Bohunice V1 nuclear power plant (respectively the 'Kozloduy programme' and the 'Bohunice programme');
- (ii) the actions of JRC, implementing safely the decommissioning process and the management of resulting radioactive waste of the Commission's own nuclear installations at the JRC sites (the 'JRC decommissioning and waste management programme', D&WM).

The Kozloduy programme and the Bohunice programme have the main objective to assist Bulgaria and Slovakia in managing the radiological safety challenges of the decommissioning of the Kozloduy nuclear power plant Units 1-4 and of the Bohunice V1 nuclear power plant respectively.

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<sup>1</sup> The current license holder for the operation of the nuclear facility in Petten is the private company NRG (medical radioisotope production), but as owner of the facility the Commission is liable for decommissioning and waste management.

JRC D&WM programme pursues the safe decommissioning of the Commission's JRC sites, and explores and develops options for anticipated transfer of decommissioning and waste management liabilities to the JRC host Member States.

The programme has a high potential to create and share knowledge and support this way EU Member States with their own decommissioning.

The Kozloduy and the Bohunice programmes have been conducted through several financial periods and are expected to be finalised by 2030 and by 2025 respectively. The programmes are expected to meet already important milestones with the funding provided in the current multiannual financial framework (i.e. 2014-2020), nonetheless amounts are still required in order to address the remaining key radiological safety issues related to the decommissioning of these installations.

The Kozloduy and Bohunice programmes originated in the context of the negotiations for accession to the EU of Bulgaria and Slovakia, which took the commitment to close and subsequently decommission their old Soviet-designed nuclear reactors by a commonly agreed date. The closure commitment of the two Member States as well as the commitment of the EU to provide financial support was foreseen in the corresponding Accession Treaties<sup>2,3</sup> (Slovakia acceded in 2004; Bulgaria in 2007). The two Member States and the EU have fulfilled their respective Accession Treaty commitment.

On the basis of Article 203 of the Euratom Treaty<sup>4</sup> and to ensure continuity of safety related measures, the EU provided financial assistance<sup>5,6</sup> to the decommissioning of the Bohunice V1 nuclear power plant beyond the timeframe that was stipulated in Slovakia's Accession Treaty<sup>7</sup>. Similarly, following the period covered by Bulgaria's Accession Treaty<sup>8</sup> the EU continued providing financial assistance<sup>6,9</sup> for the safe decommissioning of the Kozloduy nuclear power plant Units 1-4.

The JRC was established under Article 8 of the Euratom Treaty<sup>10</sup>. In application of this Article, site agreements were signed during the period 1960-62 between the European Atomic

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<sup>2</sup> OJ L236, 23.9.2003, p. 33 and p. 954

<sup>3</sup> OJ L157, 21.6.2005, p.11 and p.38

<sup>4</sup> "If action by the Community should prove necessary to attain one of the objectives of the Community and this Treaty has not provided the necessary powers, the Council shall, acting unanimously on a proposal from the Commission and after consulting the European Parliament, take the appropriate measures." (Article 203 Treaty establishing the European Atomic Energy Community)

<sup>5</sup> Council Regulation (Euratom) No 549/2007 of 14 May 2007 on the implementation of Protocol No 9 on Unit 1 and Unit 2 of the Bohunice V1 nuclear power plant in Slovakia to the Act concerning the conditions of accession to the European Union of the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia (OJ L 131, 23.5.2007, p. 1)

<sup>6</sup> Council Regulation (Euratom) No 1368/2013 of 13 December 2013 on Union support for the nuclear decommissioning assistance programmes in Bulgaria and Slovakia (OJ L 346, 20.12.2013, p. 1)

<sup>7</sup> Article 2.1 "During the period 2004-2006, the Community shall provide Slovakia with financial assistance in support of its efforts to decommission and to address the consequences of the closure and decommissioning of Unit 1 and Unit 2 of the Bohunice V1 Nuclear Power Plant." (Act of accession, Protocol No 9 - OJ L236, 23.9.2003, p. 954)

<sup>8</sup> Article 30.2 "During the period 2007-2009, the Community shall provide Bulgaria with financial assistance in support of its efforts to decommission and to address the consequences of the closure and decommissioning of Units 1 to 4 of the Kozloduy Nuclear Power Plant." (2005 Act of accession, Protocol Concerning the conditions and arrangements for admission of the republic of Bulgaria and Romania to the European Union (OJ L157, 21.6.2005, p. 38)

<sup>9</sup> Regulation (Euratom) No 647/2010 of the Council of 13 July 2010 on financial assistance of the Union with respect to the decommissioning of Units 1 to 4 of the Kozloduy Nuclear Power Plant in Bulgaria (Kozloduy Programme) (OJ L 189, 22.7.2010, p. 9)

<sup>10</sup> "(1) After consulting the Scientific and Technical Committee, the Commission shall establish a Joint Nuclear Research Centre. This Centre shall ensure that the research programmes and other tasks

Energy Community and Germany, Belgium, Italy and The Netherlands respectively. In the two latter cases, national nuclear research facilities were transferred to the Community. Since that, other infrastructure dedicated to nuclear research and development and comprising new installations was put in place at the four sites. Some of the installations are still in use today as they are crucial for pursuing the implementation of the current and future Euratom research and training programmes. Others have been stopped, in some instances more than 20 years ago, and have mostly become obsolete.

On the basis of the Euratom Treaty, JRC has to manage its historical nuclear liabilities and to decommission its shut-down nuclear installations. To this end and based on the 1999 Communication from the Commission<sup>11</sup>, the D&WM programme was initiated and a specific ad hoc budget line was created in agreement with the European Parliament and the Council<sup>12</sup>. Since then the Commission reported regularly to the Council and European Parliament on the progress of the D&WM programme, thereby providing an updated budget forecast (2004, 2008, and 2013<sup>13</sup>).

Initially, the D&WM programme focused on the so-called "historic liabilities", mainly constituted by Ispra's nuclear facilities that had ceased to operate in the previous decades. This also includes the historical waste present at the JRC sites. Currently the programme covers also the nuclear installations which will become obsolete in the future at all four JRC sites, including the management of nuclear materials.

- **Consistency with existing policy provisions**

The Kozloduy and Bohunice programmes' aim has evolved through the years in order to better address the needs and ensure the safe decommissioning of the facilities: originally and until 2013, the EU assistance was designed to support Bulgaria and Slovakia both in their efforts to shut down and decommission the concerned reactors, but also to address the consequences of early closure of these nuclear power plant installations; later, in 2014, the programmes scope was restricted to decommissioning activities, i.e. to safety related measures; while for the next stage it is suggested that the programmes further focus on decommissioning activities that involve radiological safety challenges.

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assigned to it by the Commission are carried out. It shall also ensure that a uniform nuclear terminology and a standard system of measurements are established. It shall set up a central bureau for nuclear measurements

(2) The activities of the Centre may, for geographical or functional reasons, be carried out in separate establishments." (Article 8 Treaty establishing the European Atomic Energy Community)

<sup>11</sup> Historical liabilities resulting from nuclear activities carried out at the JRC under the Euratom Treaty – Decommissioning of obsolete Nuclear Installations and Waste Management, COM(1999)114 final

<sup>12</sup> European Parliament resolution on the communication from the Commission to the European Parliament and the Council on historical liabilities resulting from nuclear activities carried out at the JRC under the Euratom Treaty (COM(1999) 114 + C5-0214/1999 + 1999/2169(COS)) (OJ C 67, L3.2001, p. 167)

<sup>13</sup> Communication from the Commission to the Council and the European Parliament - Decommissioning of nuclear installations and waste management - Nuclear liabilities arising out of the activities of the Joint Research Centre (JRC) carried out under the Euratom Treaty, SEC(2004)621 final

Communication from the Commission to the Council and the European Parliament - Decommissioning of Nuclear Installations and Management of Radioactive Waste: Management of Nuclear Liabilities arising out of the Activities of the Joint Research Centre (JRC) carried out under the Euratom Treaty, COM(2008)903 final

Communication from the Commission to the Council and the European Parliament - Decommissioning of Nuclear Installations and Management of Radioactive Waste: Management of Nuclear Liabilities arising out of the Activities of the Joint Research Centre (JRC) carried out under the Euratom Treaty, COM(2013)734 final

The disposal of spent fuel and radioactive waste in a deep geological repository is not in the scope of these programmes and remains the responsibility of Bulgaria and Slovakia as per Council Directive 2011/70/Euratom on the responsible and safe management of spent fuel and radioactive waste.

As the JRC nuclear facilities in Karlsruhe, Geel and Petten are still crucial for JRC research and training activities, the D&WM programme has so far mainly affected the Ispra site, where most of the nuclear facilities ceased to operate before 1999. In the future (between 2020 and 2060), significant decommissioning activities will need to be implemented also at the JRC sites in Karlsruhe, Geel and Petten. The D&WM programme shall contribute to the JRC host Member States national programmes on their implementation of the Council Directive 2011/70/Euratom on the responsible and safe management of spent fuel and radioactive waste.

- **Consistency with other Union policies**

In line with the Rome Declaration<sup>14</sup>, the EU budget should enable a Europe that is safe and secure; this is a dimension where the nuclear decommissioning programmes have contributed so far and may further contribute. After shut-down of a nuclear facility, the main positive impact to be achieved is the progressive decrease of the level of radiological hazard for the workers, the public and the environment in the concerned Member States but also in the EU as a whole.

The programme fits into the EU nuclear safety regulatory framework; particularly relevant for the programme are: (i) Council Directive 2011/70/Euratom establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste; (ii) Council Directive 2009/71/Euratom and its amendment Council Directive 2014/87/Euratom establishing a Community framework for the nuclear safety of nuclear installations; (iii) Council Directive 2013/59/Euratom laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation.

As long as the JRC remains the licence holder, it has the prime responsibility (Article 7 of Council Directive 2011/70/Euratom) for the safe management of its own spent fuel and radioactive waste (in the four host Member States) and in this regard the JRC D&WM programme remains indispensable for the fulfilment of the Commission's obligations as licence holder of these facilities. By releasing as soon as possible any obsolete nuclear research facilities free of radiological constraint, it contributes to a Europe that is safe and secure and sets a good benchmark across the Union for the safe and responsible management of radioactive waste and spent fuel. The timely completion of this process though is highly dependent on the host Member State; therefore the Commission services have extensively worked with JRC to identify options for better governance to enhance the effectiveness of the programme implementation.

## **2. LEGAL BASIS, SUBSIDIARITY AND PROPORTIONALITY**

- **Legal basis**

The legal basis for the programme is the Euratom Treaty, in particular Article 203 thereof.

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<sup>14</sup> Declaration of the leaders of 27 member states and of the European Council, the European Parliament and the European Commission (25 March 2017)  
<http://www.consilium.europa.eu/en/press/press-releases/2017/03/25/rome-declaration/pdf>

- **Subsidiarity (for non-exclusive competence)**

The origin of the Kozloduy and Bohunice programmes stems from Bulgaria's and Slovakia's Accession Treaties respectively and was a commitment from the EU to both countries. The EU added value of these programmes from their beginning has been always defined in terms of nuclear safety. Absence of EU co-financing would likely have a negative impact on the decommissioning process as such, which in turn could result in direct impact on safety for the workers and the general public. The programmes' contribution to radioactive safety challenges naturally declines as the decommissioning progresses<sup>15</sup>.

The decommissioning of the JRC facilities and management of arising waste is an exclusive competence of the Commission (JRC) as license holder.

The overall programme can bring additional EU added value through increased focus on knowledge sharing which is important for addressing similar challenges faced by other Member States in progressing with their decommissioning plans. Currently more than 90 nuclear reactors have been permanently shut down in Europe, but only three have been fully decommissioned. The level of experience in the dismantling of nuclear reactors in Europe (as well as internationally) is thus limited. Likewise the further gain of experience is needed for the decommissioning of other nuclear installations. Therefore, the highly relevant experience and know-how generated by the programme can be of benefit to other decommissioning projects and will result in increased levels of safety within the EU.

- **Proportionality**

The programme will focus in the next multiannual financial framework on radiological safety challenges of the decommissioning where the greatest EU added value can be achieved (i.e. progressive decrease of the level of radiological hazard for the workers, the public and the environment in the concerned Member States but also in the EU as a whole, and finalisation of the Bohunice and Kozloduy programmes).

- **Choice of the instrument**

As a result of the mid-term evaluation of the nuclear decommissioning assistance programmes in Bulgaria, Slovakia (and Lithuania) the current setup, i.e. the use of a dedicated spending programme, has proven to ensure effective and efficient implementation of the programme. Main factors of success are the clear definition of roles and responsibilities as well as the strengthened monitoring framework. Given that all three programmes concern decommissioning, an industrial activity of big scale, it was decided that pooling the three programmes together would result in better knowledge sharing while programmes could benefit from experience between each other.

Over the years the seamless independent expert review of the JRC D&WM programme has shown that its management can be more effective if budgetary and staff flexibility are put in place. The programme also generates an important knowledge on decommissioning research facilitates and contributes to training programmes in the field. Therefore, the internal reflection carried out by the Commission services concluded on the suitability of having the JRC decommissioning programme as part of such an instrument. This will give on one hand JRC the necessary resources to carry out its programme, benefiting from the flexibility offered by the instrument (i.e. management of the budget over a 7 years period compared to the current annual programming cycle where budget is attributed on an annual basis under request).

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<sup>15</sup> Bohunice programme is scheduled to be finished in 2025; Kozloduy programme in 2030

Moreover, this would also enhance synergies and knowledge sharing of JRC programme with other more advanced decommissioning programmes. The EU Member States will benefit from the knowledge generated by the two programmes while the programmes can benefit from each other.

The Commission proposes therefore to continue under one instrument: (i) the implementation of the Kozloduy and Bohunice programmes via indirect management through the pillar assessed implementing body (i.e. the European Bank for Reconstruction and Development (EBRD) in Bulgaria and the Slovak Innovation and Energy Agency (SIEA) in Slovakia); and (ii) the implementation of the JRC D&WM programme via direct management.

This solution should facilitate also the opening of negotiations with the JRC host Member States for an anticipated transfer of the Commission's nuclear liabilities. Such transfers occurred in the past in some of the concerned Member States. Any such financial settlement can take different forms, for example, it could be paid over several multiannual financial framework periods, given the length of the decommissioning process.

It is important to bear in mind that currently the situation needs to be differentiated: in Belgium, Germany, and the Netherlands waste acceptance criteria are defined and therefore, the situation is relatively more stable than in Italy where the waste routes are not clear in the national programme. The higher uncertainties related to the JRC Ispra decommissioning plan is mainly due to the current absence of waste acceptance criteria and the absence of the final disposal facility.

### **3. RESULTS OF EX-POST EVALUATIONS, STAKEHOLDER CONSULTATIONS AND IMPACT ASSESSMENTS**

- **Retrospective evaluations/fitness checks of existing legislation**

*Kozloduy programme (BG) and Bohunice programme (SK)*

The programmes' mid-term evaluation concluded that the current programmes are coherent with EU policies aiming at ensuring the highest level of nuclear safety. The EU support ensures that the immediate dismantling strategy is steadily pursued in Bulgaria and Slovakia, and prevents that undue burden is transferred to future generations, while it partially derogates for historical reasons to the ultimate responsibility of the Member States to ensure adequate financial resources for nuclear decommissioning and radioactive waste management.

Bulgaria and Slovakia have progressed effectively and efficiently in the decommissioning of their reactors in line with the baseline agreed in 2014 (i.e. decommissioning plans). There have been challenges and setbacks due to the programme's complexity, but the management system has proven increasing ability to cope with such challenges. The Kozloduy programme and the Bohunice programme have led already to a significant decrease in radiological hazard to the general public given that the most important sources of radiological hazards are tackled in the multiannual financial framework 2014-2020 (e.g. decontamination and dismantling of the reactor primary cooling circuits and cores, and completion of waste management routes).

The post-2020 multiannual financial framework budget estimates for the continuation and finalisation of the Kozloduy programme and the Bohunice programme correspond to less than one fourth compared to the multiannual financial framework 2014-2020 and will ensure the achievement of the agreed end state of the decommissioning process.

The mid-term evaluation showed that the increasing level of national contribution is supporting stronger accountability and inducing economy-seeking behaviour on the part of beneficiaries. The analysis also concluded that increasing levels of national contribution are a

necessary but not a sufficient condition to set the right incentives for timely and efficient decommissioning. However, the lack of defining in the past the co-financing rates in the legal basis created uncertainties that will be removed in the draft legal basis for the next multiannual financial framework (2021-2027).

The governance setup has ensured effective and efficient implementation of the programmes and compensated for the uncertainties mentioned above on the co-financing aspects. Main factors of success were clear definitions of roles and responsibilities as well as a strengthened monitoring framework. The analysis has also identified areas for further improvement such as:

- (i) deeper involvement of the Member State (programme coordinator and financial coordinator) for increased ownership together with stronger accountability of the decommissioning operator (final beneficiary);
- (ii) streamlining of procedures to enhance the timeliness and effectiveness of the management cycle;
- (iii) increased inter-comparability with other decommissioning programmes' performance.

The EU financial assistance has been implemented by indirect management<sup>16</sup> since its inception. The Commission proposes to continue entrusting the implementation of the programme's budget to a pillar assessed implementing body (indirect management), i.e. to EBRD in Bulgaria and SIEA in Slovakia.

#### JRC decommissioning and waste management programme

The JRC is regularly reviewing the progress and performance of the D&WM programme, using independent external advice (D&WM programme Expert Group, external consultants).

The programme has made important progress and achievement since its launch on preparing the ground for effective decommissioning and reducing the amounts of nuclear and radioactive materials present in the sites.

The programme is being also audited by the Commission's Internal Audit Service. Following the recommendations from the last audit carried out by IAS<sup>17</sup> for improving the cost estimates, and in light of the expected increase of decommissioning activities at the different sites, JRC supported by external consultants has reassessed the waste inventory and revised the decommissioning planning. A harmonised approach, based on recent international recommendations for estimation of decommissioning costs, has been applied to determine expected costs for each JRC site. The new budget forecast (as of December 2017) includes contingencies, depending on the level of uncertainty associated with the respective activities and the external conditions at the different locations. The new strategy and budget forecast was reviewed by the D&WM Programme Expert Group and received a positive opinion in 2017 at the end of the process. Still, significant uncertainties affect the timelines and the cost estimate for the different sites, inherent to the long-lead times for nuclear decommissioning and delays caused by the host Member State.

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<sup>16</sup> Art 60 Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union

<sup>17</sup> Audit on Nuclear Decommissioning and Waste Management Programme at the JRC – Financial Aspects, IA – 14 – 06 (224); Final Report



- **Stakeholder consultations**

A public consultation on EU funds in the area of security was launched by the Commission on 10 January 2018 and run until 9 March 2018.

For the mid-term evaluation of Kozloduy and Bohunice programmes, an open public consultation was launched by the Commission in June 2017 for an extended duration of 14 weeks. The consultation received limited interest (20 responses). In addition to this consultation, a targeted e-survey consultation was launched in July 2017; it gathered an additional 17 responses (1 from Bulgaria, 4 from Lithuania and 12 from Slovakia) from 90 stakeholders contacted in total. The replies received were overall positive about the programme but did not provide any additional new input on the programme. These two consultations were complemented with targeted consultations through around 100 interviews with decommissioning operators and relevant stakeholders.

- **External expertise**

The following documents have been used as input for the preparation of the programme for the next multiannual financial framework:

- "Support to the mid-term evaluation of the Nuclear Decommissioning Assistance Programmes", EY, An evaluation for the European Commission DG Energy, 2018
- "Nuclear Decommissioning Assistance Programme (NDAP) – Assessment of the robustness of the financing plans considering the economic-financial-budgetary situation in each concerned Member State and of the relevance and feasibility of the detailed decommissioning plans", Deloitte, NucAdvisor, VVA Europe, A study prepared for the European Commission DG Energy, 2016
- ECA Special Report 22/2016 "EU nuclear decommissioning assistance programmes in Lithuania, Bulgaria and Slovakia: some progress made since 2011, but critical challenges ahead"

In managing the D&WM programme, the JRC is regularly advised by a group of independent European decommissioning experts (biannual meetings and additional ad-hoc meetings). Their advice relates to the decommissioning and radioactive waste treatment strategy, the available technology, technical aspects of the organisation and any other aspects relating to the programme.

- **Impact assessment**

In line with the Financial Regulation and the requirements of the Commission's better regulation policy, the current programme has been subject to an ex-ante assessment (in the form of a Staff Working Document).

- **Simplification**

The Kozloduy programme and the Bohunice programme are currently implemented via indirect management using pillar-assessed implementing bodies in the concerned Member States (i.e. the European Bank for Reconstruction and Development in Bulgaria and Slovakia; the Slovak Innovation and Energy Agency in Slovakia). The programme's mid-term evaluation confirmed that the current setup has proven to ensure effective and efficient implementation of the programme and will be therefore continued in the next multiannual financial framework, with some simplifications drawing on lessons learned from the mid-term evaluation.

For example, the programme will take advantage of the multi-annual programming foreseen under the revised Financial Regulation. This will make the best use of the multi-annual

detailed decommissioning plan as a baseline for programming and monitoring and enhance the efficiency and timeliness of the programming cycle. Another example, relates to the introduction of a clearer framework for co-financing that will reduce uncertainty concerning the source of financing, remove the need for negotiating and agreeing on an annual basis the national contribution, and increase the ownership of the programme by the Member State.

In addition, in Bulgaria and Slovakia, the European Regional Development Fund (ERDF), the European Social Fund Plus (ESF+) and the Cohesion Fund could support measures to accompany the related social and economic transition, including also energy efficiency and renewable energy measures as well as certain other activities not linked to radiological safety processes. As such, these Funds can help to create additional activities in the concerned regions and utilise the locally available expertise as a major driver of job creation, sustainable growth and innovation. Similarly synergies should be explored with FP9 and / or the Euratom Research and Training Programme in areas such as technology development and testing, as well as training and education.

Moreover, the single rule book will be used while additional synergies and complementarities between programmes will be exploited wherever possible.

JRC will continue to implement the programme under the direct management scheme, taking full advantage of JRC's expertise in the nuclear field, until the handing-over of the facilities and responsibilities to the host Member States is completed. The JRC D&WM programme will be fully implemented under the new instrument. JRC will further improve and streamline its existing programming, monitoring and control system, and enhance its project management by introducing the earned value management and defining the baseline (final decommissioning plan) based on which progress will be monitored. This includes also the adoption of a multiannual work programme and financing decision, an interim evaluation (after four years), and a final evaluation after 2027. This should also enhance transparency of the programme in line with the Commission's general objective.

- **Fundamental rights**

The programme has no impact on fundamental rights.

#### **4. BUDGETARY IMPLICATIONS**

Pooling the budgets under a single funding programme would allow for increased financial flexibility between the actions, i.e. a tool to transfer budget where and when needed in line with progress.

Since 1999, the JRC has covered the costs of decommissioning activities through a dedicated budget line that can be used for outsourced services and works. The costs of the in house human resources necessary for the implementation of the programme (for management and supervision) are not eligible under that budget line, therefore these are funded through the Euratom Research and Training framework programme.

##### *Kozloduy programme (BG) and Bohunice programme (SK)*

Actions co-financed under the proposed financial programme are based on the respective decommissioning plan established as per the Council Regulation 2013/1368/Euratom. These plans have already defined the scope of the programmes, the decommissioning end-state and end-dates. They cover the decommissioning activities, their associated schedule, costs and required human resources.

Budget allocations for 2021-2027 are defined on the basis of the yearly disbursements provided for in the decommissioning plans, taking into account the proposed thresholds for

EU co-financing. For the Bohunice programme the residual funding should be scheduled in the initial stages of the multiannual financial framework in order to complete the programme by 2025. For the Kozloduy programme the baseline defines a nearly linear progress curve hence almost constant yearly commitments and payment plans are envisaged as presented in the Legislative Financial Statement.

The human and administrative resources required for the programme management by the Commission remain unchanged from the predecessor programme.

#### JRC decommissioning and waste management programme

The variable and unpredictable level of expenditures in a given year (currently related to the lengthy authorisation procedures by national authorities and complex procurement and contract management) makes it difficult to manage the programme in line with the current budgetary and financial setup that is based on the annuality principle as it is not always possible to predict which payments will have to be made in a particular year. For example, in recent years, payments have been lower than expected.

In light of the uncertainties around the D&WM programme that may result in increasing volume and uncertainty of budgetary needs more budgetary flexibility is needed.

## **5. OTHER ELEMENTS**

### **• Implementation plans and monitoring, evaluation and reporting arrangements**

The programming, monitoring and control system will be further improved and streamlined with respect to the existing one. Lessons learnt from the evaluations will be used in order to ensure simplification and continuous improvement.

In 2014, particularly for the Kozloduy and Bohunice programmes the Commission modified the governance of the programme for the multiannual financial framework 2014-2020 in order to set out clearer roles and responsibilities, and introduce increased planning, monitoring and reporting requirements for the beneficiaries. In line with this revised governance approach, each of the concerned Member States appointed a Programme Coordinator (deputy minister or state secretary) to be responsible for the programming, coordination and monitoring of the decommissioning programme at national level. A committee with monitoring and reporting functions is in place, co-chaired by a Commission representative and the Programme Coordinator.

For the Kozloduy and Bohunice programmes, the Commission plans to continue entrusting the implementation of the programmes' budget to a pillar assessed implementing body (indirect management), i.e. to the European Bank for Reconstruction and Development (EBRD) in Bulgaria and the Slovak Innovation and Energy Agency (SIEA) in Slovakia. In addition, the Commission services will continue the practice of closely following up project implementation through desk and on-the-spot reviews on a biannual basis, and to supplement the regular programming, monitoring and control cycle with thematic verifications based on a risk review basis."

These evaluations will be carried out in line with paragraphs 22 and 23 of the Interinstitutional Agreement of 13 April 2016<sup>18</sup>, where the three institutions confirmed that evaluations of existing legislation and policy should provide the basis for impact assessments of options for further action. The evaluations will assess the programme's effects on the ground based on the programme indicators/targets and a detailed analysis of the degree to

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<sup>18</sup> Interinstitutional Agreement between the European Parliament, the Council of the European union and the European commission on Better Law-Making of 13 April 2016 (OJ L123, 12.5.2016, p. 1-14)

which the programme can be deemed relevant, effective, efficient, provides enough EU added value and is coherent with other EU policies. They will include lessons learnt to identify any lacks/problems or any potential to further improve the actions or their results and to help maximise their exploitation/impact.

The JRC D&WM programme is executed under the direct management mode and is governed by JRC senior management through a high level steering committee (chaired by JRC Director-General)<sup>19</sup>. This high-level steering committee meets three times per year to take strategic decisions, set up objectives and monitor the progress of the programme. The strategic decisions include e.g. the scheduling of shut-down of JRC nuclear facilities, taking due account of the infrastructure needs of the JRC Research and Training Work Programme.

The high-level steering committee is supported by the operational-level steering committee, composed of site representatives of the D&WM programme, and the responsible officers for legal, financial and procurement support of the D&WM programme. This committee meets three times per year and aims to coordinate and monitor the D&WM programme activities at the different sites. It discusses technical, legal, financial and procurement issues of the D&WM programme and monitors both technical progress as well as budget implementation.

In line with the European Parliament resolution in 1999<sup>20</sup>, the JRC is since the beginning of the D&WM programme regularly advised by a group of independent European decommissioning experts (biannual meetings, and additional ad-hoc meetings), the D&WM programme Expert Group. Their advice relates to the decommissioning and waste treatment strategy, the available technology, technical aspects of the organisation and any other aspects relating to the programme. Until 2016, experts were appointed by the Commission on the basis of proposals made by the Members of the JRC Board of Governors or by the JRC itself. In choosing these experts, the Commission took care to avoid any conflict of interest and to ensure independence of analysis and foster gender and geographical diversity. Following the new Commissions Decision on the creation of Commission Expert Groups<sup>21</sup>, the JRC has launched a new Call for Experts and established the Expert Group fully compliant to the new Commission rules.

Since the beginning of the D&WM programme, the Commission is regularly reporting to the Council and the European Parliament on its progress and status, thereby providing an updated budget forecast (2004, 2008, and 2013)<sup>13</sup>.

Moreover, JRC reports on an annual basis on the mid-term targets and the progress achieved (JRC Management Plan, JRC Activity Report).<sup>22</sup>

In the next financing period, for both the Kozloduy and Bohunice programmes and the JRC D&WM programme, the multiannual nature of the decommissioning process will be reflected in the adoption of a multiannual work programme and financing decision, in line with the envisaged new financial regulation. This programming process will be evidently synchronised

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<sup>19</sup> D&WM High-Level Steering Committee (HLSC) composed of JRC Deputy Director-Generals as well as JRC Directorates currently affected by the D&WM programme (the Directorate for Nuclear Safety & Security, responsible for the implementation of the D&WM programme; Directorate Strategy and Work Programme Coordination, and Directors responsible for Health & Safety, i.e. Site Directors in Karlsruhe, Geel, Petten and Ispra). Legal support is provided by the JRC unit for Legal Advice.

<sup>20</sup> European Parliament resolution COM(1999) – 114 – C5-0214/1999 – 1999/2169(COS): "...ensure that the members of the committee of experts from the Member States that is to assist the JRC in its work are independent and properly qualified" (OJ C 67, 1.3.2001, p. 167)

<sup>21</sup> Commission Decision of 30.5.2016 establishing horizontal rules on the creation and operation of Commission expert group, C(2016) 3301 final

<sup>22</sup> Most recent publications: Management Plan 2017, Ares(2017)118361; 2016 Annual Activity Report, Ares(2017)1877780

with the evaluation steps (an interim one after four years, and a final one after 2027 when the completion of tasks in field is expected).

The current practice of annual reporting to the European Parliament and the Council will be maintained.

- **Detailed explanation of the specific provisions of the proposal**

Article 3 of the proposed basic act defines the objectives of the programme for the multiannual financial framework 2021-2027. The article reflects the twofold nature of the programme's general objective, which translates EU added value on the one hand into enhanced nuclear safety and, on the other hand, into increased knowledge for the EU Member State on the nuclear decommissioning process.

Articles 3, 6, and 7 altogether define a framework to ensure that the EU funding is focussed on actions truly delivering the programmes' objective. They clarify the level of shared effort between the EU and the concerned Member States in decommissioning the Kozloduy nuclear power plant Units 1-4 and Bohunice V1 nuclear power plant respectively. This provision and the cost estimates of the detailed decommissioning plan as per Council Regulation 2013/1368/Euratom frame the EU contribution for the decommissioning the Kozloduy nuclear power plant Units 1-4 and Bohunice V1 nuclear power plant respectively.

Article 8 introduces a major simplification with respect to the current programmes, i.e. the use of a multiannual work programme, which reflects the nature of decommissioning programmes. Although a multiannual approach is adopted on the programming level, the practice of annual reporting to the European Parliament and the Council is maintained as described in Article 9.

Article 10 defines the process for the multiannual work programme revision over a period which is commensurate to the programme nature and provides the Commission with adequate tools to introduce corrective measures if necessary.

Proposal for a

## COUNCIL REGULATION

### **establishing a dedicated financial programme for decommissioning of nuclear facilities and management of radioactive waste, and repealing Council Regulation (Euratom) No 1368/2013**

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 203 thereof,

Having regard to the proposal from the European Commission,

Having regard to the opinion of the European Parliament,

Whereas:

- (1) In line with the Rome Declaration<sup>23</sup>, the Union budget should enable a Europe that is safe and secure; this is a dimension where the nuclear decommissioning programmes have contributed so far and may further contribute. After shut-down of a nuclear facility, the main positive impact to be achieved is the progressive decrease of the level of radiological hazard for the workers, the public and the environment in the concerned Member States but also in the Union as a whole.
- (2) A dedicated spending financial programme can bring additional Union added value through becoming a benchmark within the Union for safely managing technological issues in nuclear decommissioning and disseminating knowledge. Such financial assistance should be provided on the basis of an ex ante evaluation identifying the specific needs and demonstrating the Union added value with the aim to support decommissioning of nuclear facilities and management of radioactive waste.
- (3) The activities covered by this Regulation should comply with applicable Union and national law. Such financial assistance should remain exceptional, without prejudice to the principles and objectives stemming from the legislation on nuclear safety, namely Council Directive 2009/71/Euratom<sup>24</sup>, waste management, namely Council Directive 2011/70/Euratom<sup>25</sup>. The ultimate responsibility for nuclear safety and for the safety of spent fuel and radioactive waste management remains with the Member States.
- (4) According to the Protocol concerning the conditions and arrangements for admission of the Republic of Bulgaria and Romania to the European Union<sup>26</sup>, Bulgaria

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<sup>23</sup> Declaration of the leaders of 27 member states and of the European Council, the European Parliament and the European Commission (25 March 2017)

<http://www.consilium.europa.eu/en/press/press-releases/2017/03/25/rome-declaration/pdf>

<sup>24</sup> Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations (OJ L 172, 2.7.2009, p. 18)

<sup>25</sup> Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste (OJ L 199, 2.8.2011, p. 48)

<sup>26</sup> OJ L 157, 21.6.2005, p. 29

committed itself to the closure of units 1 and 2 and units 3 and 4 of the Kozloduy nuclear power plant by 31 December 2002 and 31 December 2006 respectively, and to the subsequent decommissioning of those units. In line with its obligations, Bulgaria shut down all units concerned within the respective deadlines.

- (5) According to Protocol No 9 on unit 1 and unit 2 of the Bohunice V1 nuclear power plant in Slovakia<sup>27</sup> attached to the 2003 Act of Accession, Slovakia committed itself to the closure of unit 1 and unit 2 of the Bohunice V1 nuclear power plant by 31 December 2006 and 31 December 2008 respectively, and to the subsequent decommissioning of those units. In line with its obligations, Slovakia shut down all units concerned within the respective deadlines.
- (6) In line with their obligations under the Accession Treaty and with Union assistance, Bulgaria and Slovakia have made significant progress towards the decommissioning of the Kozloduy and Bohunice V1 nuclear power plants. Further work is necessary in order to safely achieve the decommissioning end state. Based on the current decommissioning plans, completion of the decommissioning work is scheduled by the end of 2030 for Kozloduy nuclear power plant and by 2025 for the Bohunice V1 nuclear power plant.
- (7) The Joint Research Centre (JRC) of the European Commission was established by Article 8 of the Euratom Treaty. In application of this Article, Site agreements were signed during the period 1960-62 between the Community, Germany, Belgium, Italy and the Netherlands. In the two latter cases, national nuclear installations were transferred to the Community. An infrastructure geared to nuclear research and comprising new installations was put in place at the four sites. Some of these installations are still in use today while others have been shut down, in some instances more than 20 years ago, and have mostly become obsolete.
- (8) On the basis of Article 8 of the Euratom Treaty, and in line with Article 7 of Council Directive 2011/70/Euratom<sup>24</sup> the JRC should manage its historical nuclear liabilities and decommission its shut-down nuclear installations. Accordingly, the JRC decommissioning and waste management programme was launched in 1999 with a Communication to the European Parliament and the Council<sup>28</sup>, and since then the Commission has provided a regular update of the programme progress<sup>29</sup>.
- (9) The European Commission has assessed that the best option to satisfy requirements as per Articles 5(1)(f) and Article 7 of Council Directive 2011/70/Euratom, whereby JRC should provide for and maintain adequate resources to fulfil its obligations with respect to the safety of spent fuel and radioactive waste management, is to pursue a two-track strategy combining decommissioning and waste management activities

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<sup>27</sup> OJ L 236, 23.9.2003, p. 954

<sup>28</sup> Historical liabilities resulting from nuclear activities carried out at the JRC under the Euratom Treaty – Decommissioning of obsolete Nuclear Installations and Waste Management, COM(1999)114 final

<sup>29</sup> Communication from the Commission to the Council and the European Parliament - Decommissioning of nuclear installations and waste management - Nuclear liabilities arising out of the activities of the Joint Research Centre (JRC) carried out under the Euratom Treaty, SEC(2004)621 final

Communication from the Commission to the Council and the European Parliament - Decommissioning of Nuclear Installations and Management of Radioactive Waste: Management of Nuclear Liabilities arising out of the Activities of the Joint Research Centre (JRC) carried out under the Euratom Treaty, COM(2008)903 final

Communication from the Commission to the Council and the European Parliament - Decommissioning of Nuclear Installations and Management of Radioactive Waste: Management of Nuclear Liabilities arising out of the Activities of the Joint Research Centre (JRC) carried out under the Euratom Treaty, COM(2013)734 final

together with negotiations with the JRC host Member States to anticipate transfer of the decommissioning and spent fuel and radioactive waste management liabilities.

- (10) This Regulation responds to the needs identified for the Multiannual Financial Framework period of 2021-2027 and it lays down a financial envelope for the nuclear decommissioning assistance programmes of the Kozloduy nuclear power plant units 1 to 4 in Bulgaria (Kozloduy programme) and of Bohunice V1 nuclear power plant in Slovakia (Bohunice Programme), and for the decommissioning and spent fuel and radioactive waste management of the Commission's own nuclear facilities, which is to constitute the prime reference amount, within the meaning of point 17 of the Interinstitutional Agreement of 2 December 2013 between the European Parliament, the Council and the Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management<sup>30</sup>, for the European Parliament and the Council during the annual budgetary procedure.
- (11) Regulation (EU, Euratom) No [the new FR]<sup>31</sup> (the 'Financial Regulation') applies to this Programme. It lays down rules on the implementation of the Union budget, including the rules on grants, prizes, procurement, indirect implementation, financial assistance, financial instruments and budgetary guarantees.
- (12) In accordance with the Financial Regulation, Regulation (EU, Euratom) No 883/2013 of the European Parliament and of the Council<sup>32</sup>, Council Regulations (Euratom, EC) No 2988/95<sup>33</sup>, Regulation (Euratom, EC) No 2185/96<sup>34</sup> and Regulation (EU) 2017/1939<sup>35</sup>, the financial interests of the Union are to be protected through proportionate measures, including the prevention, detection, correction and investigation of irregularities and fraud, the recovery of funds lost, wrongly paid or incorrectly used and, where appropriate, the imposition of administrative sanctions. In particular, in accordance with Regulations (EU, Euratom) No 883/2013 and (Euratom, EC) No 2185/96 the European Anti-Fraud Office (OLAF) may carry out investigations, including on-the-spot checks and inspections, with a view to establishing whether there has been fraud, corruption or any other illegal activity affecting the financial interests of the Union. In accordance with Regulation (EU) 2017/1939, the European Public Prosecutor's Office (EPPO) may investigate and prosecute fraud and other illegal activities affecting the financial interests of the Union as provided for in Directive (EU) 2017/1371 of the European Parliament and of the Council<sup>36</sup>. In accordance with the Financial Regulation, any person or entity receiving Union funds is to fully cooperate in the protection of the Union's financial interests, to

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<sup>30</sup> Interinstitutional Agreement of 2 December 2013 between the European Parliament, the Council and the Commission on budgetary discipline, on cooperation in budgetary matters and on sound financial management (OJ C 373, 20.12.2013, p. 1)

<sup>31</sup> [full title; OJ reference].

<sup>32</sup> Regulation (EU, Euratom) No 883/2013 of the European Parliament and of the Council of 11 September 2013 concerning investigations conducted by the European Anti-Fraud Office (OLAF) and repealing Regulation (EC) No 1073/1999 of the European Parliament and of the Council and Council Regulation (Euratom) No 1074/1999 (OJ L 248, 18.9.2013, p. 1)

<sup>33</sup> Council Regulation (EC, Euratom) No 2988/95 of 18 December 1995 on the protection of the European Communities financial interests (OJ L 312, 23.12.95, p. 1)

<sup>34</sup> Council Regulation (Euratom, EC) No 2185/96 of 11 November 1996 concerning on-the-spot checks and inspections carried out by the Commission in order to protect the European Communities' financial interests against fraud and other irregularities (OJ L 292, 15.11.96, p. 2)

<sup>35</sup> Council Regulation (EU) 2017/1939 of 12 October 2017 implementing enhanced cooperation on the establishment of the European Public Prosecutor's Office ('the EPPO') (OJ L 283, 31.10.2017, p. 1)

<sup>36</sup> Directive (EU) 2017/1371 of the European Parliament and of the Council of 5 July 2017 on the fight against fraud to the Union's financial interests by means of criminal law (OJ L 198, 28.7.2017, p. 29)



grant the necessary rights and access to the Commission, OLAF, the EPPO and the European Court of Auditors (ECA) and to ensure that any third parties involved in the implementation of Union funds grant equivalent rights.

- (13) This Regulation does not prejudice the outcome of any future State aid procedures that may be undertaken in accordance with Articles 107 and 108 of the Treaty on the Functioning of the European Union.
- (14) The amount of the appropriations allocated to the programme, as well as the programming period and the distribution of funds amongst the actions, may be reviewed based on the results of the mid-term and the final evaluation reports. Additional budgetary flexibility may be obtained by re-distributing funds amongst the actions where and when needed in line with the actions' progress.
- (15) The Programme should also ensure dissemination of knowledge on the decommissioning process in the Union, as such measures bring the greatest Union added value and contribute to the safety of the workers and the general public.
- (16) The decommissioning of the nuclear facilities covered by this Regulation should be carried out with recourse to the best available technical expertise, and with due regard to the nature and technological specifications of the installations to be decommissioned, in order to ensure safety and the highest possible efficiency, thus taking into account international best practices.
- (17) An effective monitoring and control of the evolution of the decommissioning process should be ensured by Bulgaria, Slovakia and the Commission in order to assure the highest Union added value of the funding allocated under this Regulation, although the ultimate responsibility for the decommissioning rests with the two Member States concerned. This includes effective measurement of performance and the enacting of corrective measures where necessary.
- (18) Pursuant to paragraphs 22 and 23 of the Inter-institutional agreement for Better Law-Making of 13 April 2016, there is a need to evaluate this Programme on the basis of the information collected through specific monitoring requirements, while avoiding overregulation and administrative burdens, in particular on Member States. These requirements, where appropriate, can include measurable indicators, as a basis for evaluating the effects of the Programme on the ground.
- (19) The actions under the Kozloduy and Bohunice programmes should be identified within the boundaries defined by the decommissioning plans submitted by Bulgaria and Slovakia under the Council Regulation 2013/1368/Euratom. These plans defined the scope of these programmes, the decommissioning end-states and end-dates; they cover the decommissioning activities, their associated schedule, costs and required human resources.
- (20) Actions under the Kozloduy and Bohunice programmes should be conducted with a joint financial effort of the Union and Bulgaria and Slovakia respectively. A maximum Union co-financing threshold should be established in line with the co-financing practice established under the predecessor programmes.
- (21) Council Regulation (Euratom) No 1368/2013<sup>37</sup> should be repealed.

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<sup>37</sup> Council Regulation (Euratom) No 1368/2013 of 13 December 2013 on Union support for the nuclear decommissioning assistance programmes in Bulgaria and Slovakia, and repealing Regulations (Euratom) No 549/2007 and (Euratom) No 647/2010 (OJ L 346, 20.12.2013, p. 1)

- (22) Due account was taken of the Court of Auditors' Special report No 22/2016 on Union financial assistance for the decommissioning of nuclear plants in Bulgaria, Lithuania and Slovakia, its recommendations and the reply from the Commission.
- (23) In order to ensure uniform conditions for the implementation of Article 3 of this Regulation, implementing powers should be conferred on the Commission. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council<sup>38</sup>.
- (24) Horizontal financial rules adopted by the European Parliament and the Council on the basis of Article 322 of the Treaty on the Functioning of the European Union apply to this Regulation. These rules are laid down in the Financial Regulation and determine in particular the procedure for establishing and implementing the budget through grants, procurement, prizes, indirect implementation, and provide for checks on the responsibility of financial actors. Rules adopted on the basis of Article 322 of the Treaty on the Functioning of the European Union also concern the protection of the Union's budget in case of generalised deficiencies as regards the rule of law in the Member States, as the respect for the rule of law is an essential precondition for sound financial management and effective Union funding.
- (25) Reflecting the importance of tackling climate change in line with the Union's commitments to implement the Paris Agreement and the United Nations Sustainable Development Goals, this Programme will contribute to mainstream climate action in the Union's policies and to the achievement of an overall target of 25 % of the Union budget expenditures supporting climate objectives. Relevant actions will be identified during the Programme's preparation and implementation, and reassessed in the context of its mid-term evaluation.
- (26) The types of financing and the methods of implementation under this Regulation should be chosen on the basis of their ability to achieve the specific objectives of the actions and to deliver results, taking into account, in particular, the costs of controls, the administrative burden, and the expected risk of non-compliance. This should include consideration of the use of lump sums, flat rates and unit costs, as well as financing not linked to costs as referred to in Article 125(1) of the Financial Regulation.

HAS ADOPTED THIS REGULATION:

*Article 1*  
*Subject matter*

This Regulation establishes the Dedicated Financial Programme for the 'Decommissioning of Nuclear Facilities and Management of Radioactive Waste' (the 'Programme'), with the focus on needs identified on a current basis. For the period of the Multiannual Financial Framework 2021-2027, it will support Bulgaria and Slovakia to safely decommission their first generation nuclear reactors, and the implementation of the decommissioning process and management of radioactive waste of the Commission's own nuclear installations at the Joint Research Centre (JRC) sites.

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<sup>38</sup> Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by the Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13)

It lays down the objectives of the Programme, the budget for the period 2021 – 2027, the forms of the European Atomic Energy Community (the 'Community') funding and the rules for providing such funding.

## *Article 2* *Definitions*

For the purposes of this Regulation, the following definitions apply:

- (1) 'decommissioning' means administrative and technical measures which allow the removal of some or all of the regulatory controls from a nuclear facility and which aim at ensuring the long term protection of the public and the environment including the reduction of the levels of residual radionuclides in the materials and on the site of the facility;
- (2) 'decommissioning plan' means the document containing detailed information on the proposed decommissioning and covering the following: the selected decommissioning strategy; the schedule, type and sequence of decommissioning activities; the waste management strategy applied, including clearance; the proposed end state; the storage and disposal of the waste from decommissioning; the timeframe for decommissioning; the cost estimates for the completion of decommissioning; and the objectives, expected results, milestones, target dates, as well as the corresponding key performance indicators, including earned value based indicators. The plan is prepared by the nuclear facility license holder and is reflected in the multiannual work programmes of the Programme;
- (3) 'Bohunice programme' means the part of the Programme that concerns the nuclear decommissioning of reactor units 1 and 2 of the Bohunice V1 nuclear power plant, located in Jaslovské Bohunice, Slovakia;
- (4) 'Kozloduy programme' means the part of the Programme that concerns the nuclear decommissioning of reactor units 1, 2, 3 and 4 of the Kozloduy nuclear power plant, located in Kozloduy, Bulgaria;
- (5) 'JRC decommissioning and waste management programme' means the part of the Programme that concerns the nuclear decommissioning and radioactive waste management of the Commission sites operated by its Directorate General Joint Research Centre (JRC).

## *Article 3* *Programme objectives*

1. The Programme has the general objective to provide funding for decommissioning of nuclear facilities and management of radioactive waste, in line with the identified needs.
2. On the basis of the current needs for the period of 2021-2027 the Programme aims in particular to assist Bulgaria and Slovakia in implementing the Kozloduy decommissioning programme and the Bohunice decommissioning programme respectively, with specific emphasis on managing the radiological safety challenges thereof and to support the JRC decommissioning and waste management programme, whilst ensuring broad dissemination to all EU Member States of knowledge thereby generated on nuclear decommissioning.

The specific objectives are as follows:

- (a) to carry out the dismantling and decontamination of the Kozloduy and Bohunice reactors and to pursue their release from regulatory controls, in accordance with the respective decommissioning plan;
  - (b) to support the decommissioning plan to dismantle and decontaminate nuclear installations located at the Commission's nuclear sites and transfer related nuclear liabilities to the JRC host Member States;
  - (c) to develop ties and exchanges among Union stakeholders on nuclear decommissioning, with a view to develop potential Union synergies.
3. The detailed description of the specific objectives is set out in the Annexes I, II and III. Based on the result of the evaluation referred to in Article 10, the Commission may modify, by means of implementing acts, the Annexes I or II, in accordance with the examination procedure referred to in Article 12(2).

#### *Article 4*

##### *Budget*

1. The financial envelope for the implementation of the Programme for the period 2021 - 2027 shall be EUR 466 000 000 in current prices.
2. The indicative distribution of the amount referred to in paragraph 1 shall be:
  - (a) EUR 63 000 000 for actions under the Kozloduy programme;
  - (b) EUR 55 000 000 for actions under the Bohunice programme;
  - (c) EUR 348 000 000 for actions under the JRC decommissioning and waste management programme.
3. The amount referred to in paragraph 1 may cover expenses related to technical and administrative assistance for the implementation of the Programme, such as preparatory, monitoring, control, audit and evaluation activities including corporate information technology systems.
4. Budgetary commitments for actions extending over more than one financial year may be broken down over several years into annual instalments.

#### *Article 5*

##### *Implementation and forms of Union funding*

1. The Programme shall be implemented in direct management in accordance with the Financial Regulation or in indirect management with bodies referred to in Article 62(1)(c) of the Financial Regulation.
2. The Programme may provide funding in any of the forms laid down in the Financial Regulation.

#### *Article 6*

##### *Eligible actions*

Only actions implementing the objectives referred to in Article 3 and described in Annexes I, II and III shall be eligible for funding.

*Article 7*  
*Co-financing rates*

The Programme may finance eligible costs of an action up to the maximum rate as set out in Annexes I and II. The maximum Union co-financing rate applicable under the Kozloduy programme or the Bohunice programme shall be no higher than 50%. The remaining co-financing shall be provided by Bulgaria and Slovakia respectively.

*Article 8*  
*Work programmes*

1. The Bohunice programme and the Kozloduy programme shall be implemented by multiannual work programmes in accordance with Article 110 of the Financial Regulation. These multiannual work programmes shall reflect the decommissioning plans that shall serve as baseline for programme monitoring and evaluation.
2. The JRC decommissioning and waste management programme shall be implemented by multi-annual work programmes in accordance with the procedure set out in Article 4 of Commission Decision 96/282/Euratom on the reorganization of the Joint Research Centre.

*Article 9*  
*Monitoring and reporting*

1. Indicators to report on progress of the Programme towards the achievement of the objectives set out in Article 3 are set in the Annex IV.
2. The performance reporting system shall ensure that data for monitoring programme implementation and results are collected efficiently, effectively, and in a timely manner. To that end, proportionate reporting requirements shall be imposed on recipients of Union funds and (where relevant) Member States.
3. At the end of each year, the Commission shall elaborate a progress report on the implementation of the work carried out in the previous years and present it to the European Parliament and to the Council.

*Article 10*  
*Evaluation*

1. Evaluations shall be carried out in a timely manner to feed into the decision-making process.
2. The interim evaluation of the Programme shall be performed once there is sufficient information available about the implementation of the Programme, but no later than four years after the start of the period specified in Article 1. The interim evaluation shall also address the scope for modification of the multiannual work programme referred to in Article 8.
3. At the end of the implementation of the Programme, but no later than five years after the end of the period specified in Article 1 of this Regulation, a final evaluation of the Programme shall be carried out by the Commission.
4. The Commission shall communicate the conclusions of the evaluations accompanied by its observations, to the European Parliament and the Council.

### *Article 11*

#### *Audits*

Audits on the use of the Union and national contribution carried out by persons or entities, including others than those mandated by the Union Institutions or bodies, shall form the basis of the overall assurance pursuant to Article 127 of the Financial Regulation.

### *Article 12*

#### *Committee*

1. The Commission shall be assisted by a committee. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.
2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Where the opinion of the committee is to be obtained by written procedure, that procedure shall be terminated without result when, within the time-limit for delivery of the opinion, the chair of the committee so decides or a simple majority of committee members so requests.

### *Article 13*

#### *Information, communication and publicity*

1. The recipients of Union funding shall acknowledge the origin and ensure the visibility of the Union funding (in particular when promoting the actions and their results) by providing coherent, effective and proportionate targeted information to multiple audiences, including the media and the public.
2. The Commission shall implement information and communication actions relating to the Programme, and its actions and results. Financial resources allocated to the Programme shall also contribute to the corporate communication of the political priorities of the Union, as far as they are related to the objectives referred to in Article 3.

### *Article 14*

#### *Repeal*

Regulation (Euratom) No 1368/2013 is repealed.

### *Article 15*

#### *Transitional provisions*

1. This Regulation shall not affect the continuation or modification of the actions under Regulation (Euratom) No 1368/2013, which shall continue to apply to the actions concerned until their closure.
2. The financial envelope for the Programme may also cover technical and administrative assistance expenses necessary to ensure the transition between the Kozloduy and Bohunice programmes and the measures adopted under their predecessor, the Regulation (Euratom) No 1368/2013.
3. If necessary, appropriations may be entered in the budget beyond 2027 to cover the expenses provided for in Article 4(3) of this Regulation, to enable the management of actions not completed by 31 December 2027.

*Article 16*

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 1 January 2021.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

*For the Council*  
*The President*

## LEGISLATIVE FINANCIAL STATEMENT

### **1. FRAMEWORK OF THE PROPOSAL/INITIATIVE**

- 1.1. Title of the proposal/initiative
- 1.2. Policy area(s) concerned (*programme cluster*)
- 1.3. Nature of the proposal/initiative
- 1.4. Grounds for the proposal/initiative
- 1.5. Duration and financial impact
- 1.6. Management mode(s) planned

### **2. MANAGEMENT MEASURES**

- 2.1. Monitoring and reporting rules
- 2.2. Management and control system
- 2.3. Measures to prevent fraud and irregularities

### **3. ESTIMATED FINANCIAL IMPACT OF THE PROPOSAL/INITIATIVE**

- 3.1. Heading(s) of the multiannual financial framework and expenditure budget line(s) affected
- 3.2. Estimated impact on expenditure
  - 3.2.1. *Summary of estimated impact on expenditure*
  - 3.2.2. *Estimated impact on appropriations of an administrative nature*
  - 3.2.3. *Third-party contributions*
- 3.3. Estimated impact on revenue



## LEGISLATIVE FINANCIAL STATEMENT

### 1. FRAMEWORK OF THE PROPOSAL/INITIATIVE

#### 1.1. Title of the proposal/initiative

Regulation of the Council establishing a dedicated financial programme for decommissioning of nuclear facilities and management of radioactive waste, and repealing Council Regulation (Euratom) No 1368/2013

#### 1.2. Policy area(s) concerned (*Programme cluster*)

Nuclear Safety

#### 1.3. Nature of the proposal/initiative

a new action

a new action following a pilot project/preparatory action<sup>39</sup>

the extension of an existing action

a merger or redirection of one or more actions towards another/a new action

#### 1.4. Grounds for the proposal/initiative

##### 1.4.1. Requirement(s) to be met in the short or long term including a detailed timeline for roll-out of the implementation of the initiative

The programme addresses the nuclear safety requirements of the Euratom Treaty.

##### 1.4.2. Added value of Union involvement (it may result from different factors, e.g. coordination gains, legal certainty, greater effectiveness or complementarities). For the purposes of this point 'added value of Union involvement' is the value resulting from Union intervention which is additional to the value that would have been otherwise created by Member States alone.

As a condition for their accession to the EU Bulgaria and Slovakia took the commitment to close and to subsequently decommission six Soviet designed first generation nuclear reactors. Correspondingly the EU committed itself in the frame of Article 203 of the Euratom Treaty to financially support the decommissioning. The decommissioning activity is progressing but not terminated with an end foreseen in 2025 for Bohunice, Slovakia and 2030 for Kozloduy, Bulgaria. It is in the interest of the Union to continue to provide financial support for decommissioning, contributing to ensuring the highest level of safety of the operation. The programme provides substantial and durable support for the health of workers and the general public, preventing environmental degradation and ensuring real progress in nuclear safety and security.

Separately, as owner of nuclear facilities, the Commission through the JRC is obligated to decommission its obsolete nuclear facilities as well as those currently in operation at all four JRC sites that will become obsolete in the future. This includes the management of nuclear materials.

The JRC decommissioning process started with the 1999 "Decommissioning and Waste Management Programme". In addition to fulfilling its obligation as owner of the nuclear facilities and complying with the relevant national and EU legal

<sup>39</sup> As referred to in Article 58(2)(a) or (b) of the Financial Regulation

framework, the continuation of the programme is important in terms of knowledge gains at the EU level. JRC will share with Member States the knowledge gained during the decommissioning of a wide range of experimental nuclear facilities (e.g. research reactors, Hot Cells, radiochemical laboratories). It will include the application of innovative technologies for the safe management of "exotic" nuclear material and the retrieval and treatment of historical waste, thereby promoting standardisation and best practises. JRC will continue its training & education programme, which includes site visits of the nuclear installations under decommissioning.

The programme has a high potential for becoming a benchmark within the EU for governance and managerial challenges as well as technological issues in nuclear decommissioning.

#### 1.4.3. *Lessons learned from similar experiences in the past*

##### Kozloduy programme and Bohunice programme

A mid-term evaluation of the Nuclear Decommissioning Assistance Programmes (NDAP) was conducted. The mid-term evaluation considered and assessed the results and impacts, the efficiency of the use of resources and its Union added value. For the mid-term evaluation the Commission gathered relevant information and data by extensively involving key stakeholders (i.e. Ministries, implementing bodies, decommissioning operators, members of the NDAP Committee).

The conclusions of the NDAP mid-term evaluation can be summarised as follows:

**Coherence with EU policies.** The EU support ensures that the immediate dismantling strategy in Bulgaria and Slovakia is steadily pursued and prevents that undue burden is transferred to future generations, while it partially derogates for historical reasons to the ultimate responsibility of the Member States to ensure adequate financial resources for nuclear decommissioning and radioactive waste management. The decommissioning strategy in Bulgaria was modified in 2013 in preparation for the current MFF: the resulting plan advanced the end date of the programme by seven years from 2037 to 2030.

**Progress.** Bulgaria and Slovakia have progressed effectively and efficiently in the decommissioning of their reactors in line with the agreed baseline (decommissioning plans).

**Safety.** Substantially improved levels of safety are going to be achieved at the sites as a result of the Union funding in this MFF.

**Financial scope.** In both Bulgaria and Slovakia, the residual financing gap beyond 2020 is in the range of EUR 80-90 million per Member State.

**National contribution.** The achieved levels of national contribution appear fit to sustain proper efficiency; nonetheless co-financing is not established in the legal basis, thus creating uncertainties that should be removed. Moreover, the analysis showed that increasing levels of national contribution are a necessary but not sufficient condition to set the right incentives for timely and efficient decommissioning. To this end, the explicit transfer of risks (cost overruns, delays) to the concerned Member States would have a greater impact. This practice has been already introduced to a certain extent under the current MFF where possible.

Governance. The governance setup has ensured effective and efficient implementation of the programmes and compensated for the uncertainties mentioned on the national contribution aspects.

Objectives. Any post-2020 funding should focus on explicit safety objectives monitored by means of dedicated performance indicators.

Knowledge gain. Finally the experience gained so far from the projects implemented under the Kozloduy programme and the Bohunice programme provide a solid base of knowledge in the EU for conducting future decommissioning programmes of VVER type reactors (e.g. Czech Republic, Hungary, Germany, Finland). These EU co-funded programmes (including the Ignalina programme in Lithuania) may aim at becoming a solid benchmark for governance related issues and management practices such as cost estimation methodologies or planning.

#### JRC D&WM Programme

The JRC is regularly reviewing its progress and performance, using independent external advice (D&WMP Expert Group, external consultants). Due to the high inherent risks of the D&WM programme, such as the risk of delays and resourcing risks, the programme has been selected for two audits by the Internal Audit Service (IAS) during the current MFF, one of which has been launched recently.

The main outcomes and recommendations, as well as their follow-up by JRC, are summarised below.

#### Continuous technical advice by the D&WM Expert Group

In managing the D&WM programme, the JRC is regularly advised by a group of independent European decommissioning experts (biannual meetings and additional ad-hoc meetings). Their advice relates to the decommissioning and radioactive waste treatment strategy, the available technology, technical aspects of the organisation and any other aspects relating to the programme.

#### Findings from external reviews and past audits

The progress of the programme and its budget is periodically reviewed by external experts. The experts emphasised the importance of assessing in detail the expected amounts of waste, and encouraged JRC to investigate managerial and technical measures which should be taken in order to limit waste volumes and to reduce to the extent possible any uncertainties on the costs related to their future disposal.

In 2014/2015, the IAS audited the financial aspects of the D&WM programme. It concluded that the current operational set-up provides reasonable short-term assurance for achieving the JRC's objectives. However, such a short-term assurance is not enough for covering the needs of such a long-term complex programme. Among other recommendations, IAS confirmed the necessity of regular in-depth assessments, with focussed review of the decommissioning budget, paying special attention to the assessment of fixed costs and to the improvement of current estimates. IAS also looked at the mid-term planning needs in the field of human resources.

In 2018, a new audit was launched. According to the preliminary results, one of the main risks identified is in relation to the evolution of the planned activities in the period 2021-2060, which does not appear compatible with flat budget allocations. The increase of operational D&WM programme activity covering multiple JRC sites will also impact the overall management strategy and need of internal JRC resources.

The variable and unpredictable level of expenditures makes it difficult to manage the budget.

#### Recent improvements

Following recommendations on cost estimates, and in light of the upcoming decommissioning activities at JRC-Karlsruhe and JRC-Petten, JRC sites with the support of external consultants re-assessed in more detail their waste inventory and revised their decommissioning planning. A harmonised approach, based on recent international recommendations for estimation of decommissioning costs, has been applied to determine expected costs on each site. The new budget forecast (as of December 2017) includes contingencies, depending on the level of uncertainty associated with the respective activities and the external conditions at the different locations. The new strategy and budget forecast was reviewed by the D&WM Programme Expert Group and received a positive opinion at the end of the process (2017).

Still, significant uncertainties affect the timelines and the cost estimate for the different sites. The timely completion of this process is highly dependent on the host Member State; therefore, the Commission services have extensively worked with JRC to identify options to further improve the management and governance in implementing the programme.

#### *1.4.4. Compatibility and possible synergy with other appropriate instruments*

Other available EU instruments like the European Regional Development Fund (ERDF), the European Social Fund Plus (ESF+) and the Cohesion Fund may be deployed in the regions of Kozloduy and Bohunice ensuring complementarities with the two nuclear decommissioning programmes. For example, these Funds could support measures to accompany the related social and economic transition, including also energy efficiency and renewable energy measures as well as certain other activities not linked to radiological safety processes. As such these Funds can create additional activities in the concerned regions and utilise the locally available expertise as a major driver of job creation, sustainable growth and innovation. Similarly synergies should be explored with FP9 and / or the Euratom Research and Training programme in areas such as technology development and testing, as well as training and education.

## 1.5. Duration and financial impact

### limited duration

- in effect from 2021 to 2027
- Financial impact from 2021 to 2027 for commitment appropriations and from 2021 to 2033 for payment appropriations.

### unlimited duration

- Implementation with a start-up period from YYYY to YYYY,
- followed by full-scale operation

## 1.6. Management mode(s) planned<sup>40</sup>

### Direct management by the Commission

- by its departments, including by its staff in the Union delegations;
- by the executive agencies

### Shared management with the Member States

Indirect management for Kozloduy programme and Bohunice programme by entrusting budget implementation tasks to:

- third countries or the bodies they have designated;
  - international organisations and their agencies (to be specified);
  - the EIB and the European Investment Fund;
  - bodies referred to in Articles 208 and 209 of the Financial Regulation;
  - public law bodies;
  - bodies governed by private law with a public service mission to the extent that they provide adequate financial guarantees;
  - bodies governed by the private law of a Member State that are entrusted with the implementation of a public-private partnership and that provide adequate financial guarantees;
  - persons entrusted with the implementation of specific actions in the CFSP pursuant to Title V of the TEU, and identified in the relevant basic act.
- *If more than one management mode is indicated, please provide details in the 'Comments' section.*

### Comments

The JRC D&WM programme will be implemented through direct management.

The European Bank for Reconstruction and Development (EBRD) is the historical implementing body for both the Kozloduy programme and the Bohunice programme. The EBRD will be the implementing body for the Kozlodoy programme.

The Slovak Innovation and Energy Agency (SIEA) has been established in the MFF 2014-2020 as new pillar assessed implementing body of the Bohunice programme and will be the implementing body for the Bohunice programme under the 2021-2027 MFF.

<sup>40</sup> Details of management modes and references to the Financial Regulation may be found on the BudgWeb site:

<https://myintracomm.ec.europa.eu/budgweb/EN/man/budgmanag/Pages/budgmanag.aspx>

## 2. MANAGEMENT MEASURES

### 2.1. Monitoring and reporting rules

*Specify frequency and conditions.*

#### Kozloduy programme and Bohunice programme

The implementation of the programmes is monitored by the Commission through the delegation agreements established with pillar assessed implementing bodies and through desk reviews. Periodically and based on risk reviews, the Commission carries out independent thematic verifications.

The earned value management tool is also used for tracking actual progress and performance.

The Member State is involved in the monitoring actions through the Monitoring Committees, which are co-chaired by a Commission's representative and the Programme Coordinator (deputy Minister or State Secretary). A major task of these committees is the revision and approval of biannual monitoring reports.

Twice a year officials of the Commission carry out site visits to verify physical progress.

An interim evaluation shall be carried out not later than in 2024.

A final evaluation shall be carried out not later than in 2032.

#### JRC D&WM Programme

The D&WM programme is implemented by the Commission. JRC is managing and governing the programme through a high level steering committee, composed of JRC senior management and meeting three times per year to take strategic decisions, revise objectives and monitor the progress of the programme.

The high level steering committee is supported by the operational level steering committee, composed of technical site representatives of the D&WM programme and representatives from the legal and financial directorates. The committee meets three times per year to ensure that technical, legal, financial and procurement tasks are streamlined. It monitors both technical progress as well as budget implementation.

In line with the European Parliament resolution in 1999 (COM(1999)–114–C5-0214/1999–1999/2169(COS)), the JRC is since the beginning of the D&WM programme regularly advised by a group of independent European decommissioning experts, the D&WM programme Expert Group. Their advice relates to the decommissioning and waste treatment strategy, the available technology, technical aspects of the organisation and any other aspects relating to the programme.

Since the beginning of the D&WM programme, the Commission is regularly reporting to the Council and the European Parliament the progress and status of the D&WM, thereby providing an updated budget forecast (2004, 2008, and 2013).

Moreover, JRC reports on an annual basis on the mid-term targets and the progress achieved (JRC Management Plan, JRC Activity Report).

## 2.2. Management and control system

### 2.2.1. *Justification of the management mode(s), the funding implementation mechanism(s), the payment modalities and the control strategy proposed*

#### Kozloduy programme and Bohunice programme

As a result of the Nuclear Decommissioning Assistance Programme (NDAP) mid-term evaluation the current governance setup has proven to ensure effective and efficient implementation of the programmes. Main factors of success are the clear definitions of roles and responsibilities as well as the strengthened monitoring framework.

#### JRC D&WM Programme

External reviews and audits have acknowledged that the programme has made important progress and achievement since its launch within the given external and internal constraints. The internal reflection carried out by the Commission services concluded on the suitability of having the JRC decommissioning programme under a decommissioning financial programme covering also the Kozloduy and Bohunice programmes, benefiting this way from synergies and knowledge sharing with other more advanced decommissioning programmes.

### 2.2.2. *Information concerning the risks identified and the internal control system(s) set up to mitigate them*

#### Kozloduy programme and Bohunice programme

The risks related to the implementation of the programmes are inventoried based on desk reviews, bi-annual on the spot monitoring missions, external audits and the use of EVM that allows for early detection of delays and overcost. Risks are then assessed following a procedure favouring a quantitative approach. The risk register and associated actions are reviewed and recorded at least twice per year. The most important projects implementation risks are followed up in parallel with the existing risk management systems of the implementing bodies and of the beneficiaries.

The risk review provides the information to develop a risk-based monitoring and control approach, including updating reporting requirement to focus on risk areas, defining the priorities for monitoring missions and launching additional thematic verifications.

#### JRC D&WM Programme

The main risk identified and documented in the JRC risk register is related to delays in the implementation of projects.

The risk can be reduced or mitigated through the following measures:

- use of Earned Value Management (EVM) that allows for early detection of delays and therefore allow for more timely action;
- continuing with tri-annual monitoring at high level and operational level steering committee meetings combined with on-site visits, with close follow up of the programme implementation;
- continuing to use the JRC risk register with a quarterly risk review process with close follow up of the most important risks and the possibility to carry out thematic verifications if need be.

2.2.3. *Estimation and justification of the cost-effectiveness of the controls (ratio of "control costs ÷ value of the related funds managed"), and assessment of the expected levels of risk of error (at payment & at closure)*

**Kozloduy programme and Bohunice programme**

Based on an assessment of the most relevant key indicators and control results, DG ENER has assessed the cost-effectiveness and the efficiency of the control system and reached a positive conclusion for the year 2017. Similar conditions will be obtained in the next MFF.

The cost effectiveness indicator takes into account the Commission level cost of supervision (covering the staff working time allocated to these tasks and the specific contracts directly related to supervisory tasks when relevant) of the different entities.

In 2017, the estimated consolidated cost-effectiveness indicator (i.e. for all entrusted entities together) remain overall stable.

The variations observed in the cost of control of the nuclear decommissioning assistance bodies (EBRD, SIEA) mirror the gradual shift to national implementation channels in Slovakia and the increased level of supervision and monitoring of the programme that resulted.

The 2016 and earlier estimates included the fees paid to the NDAP entrusted entities. These fees are now included in the cost at entity level reported below but have also been taken into account, for consistency reason in calculation of the cost of control ratio.

<b>Entity</b>	<b>Cost of Control at Commission level</b>	<b>Controlled amount</b>
EBRD	EUR 0.32 million (+ fees paid EUR 2.14 million)	EUR 239.8 million
SIEA	EUR 0.13 million (+ fees paid EUR 0.84 million)	EUR 26.72 million

As for the expected levels of risk of errors these are estimated at 0,5%. In 2017 DG ENER carried out a thematic verification on procurement procedures conducted by the implementing bodies with positive results.

**JRC D&WM Programme**

The JRC has produced an estimation of the costs of control of the three main stages related to "procurement in direct management mode". The JRC has defined efficiency measures for the controls. For procurements, an estimated EUR 5,3 million were invested in controlling 338 procurement procedures for contracts with a total value of EUR 166,1 million. Thus 3.21 % of the total contract value was dedicated to control. This covers all types of procurement, ranging from low-value contracts to high value extremely complicated contracts.

**2.3. Measures to prevent fraud and irregularities**

*Specify existing or envisaged prevention and protection measures, e.g. from the Anti-Fraud Strategy..*

**Kozloduy programme and Bohunice programme**



DG ENER has developed and implemented its own anti-fraud strategy since November 2013, in accordance with the guidance laid out in the OLAF methodology. Subsequent updates occurred in October 2015 (covering 2016-2017) and December 2017 (covering 2018-2019). The strategy is in line with the revised Internal Control Framework (C(2017) 23730). DG ENER is committed to update its Anti-Fraud Strategy every two years.

The current strategy is built on the fraud risk vulnerability analysis, in order to ascertain fraud risks specific to DG ENER and to understand them in the wider context. This assessment concluded that DG ENER is subject to no more than moderate or low level fraud related risks, i.e. no significant or critical risks were established.

The controls intended to ensure the legality and regularity of the transactions are complemented by an action plan that is attached to the strategy.

This action plan ensures notably:

That internal rules for fraud suspicion handling and reporting are in place;

A clear assignment of responsibilities for antifraud actions between the units and functions;

That potential fraud risks are considered within the annual risk assessment exercise for the Management Plan.

- A regular attendance to the Fraud Prevention and Detection network and to the Fraud and Irregularity Committee meetings as well as contacts with other DGs and services;
- That the Local Anti-Fraud Correspondent function is operated, in line with the common action plan for the Research family;
- That an appropriate level of cooperation is ensured with OLAF.

The previous antifraud action plan for 2017 was implemented successfully. The successive antifraud strategies of DG ENER have recognized the importance of staff awareness and the importance of relations with implementing bodies as well as the evolution of the cooperation framework between OLAF and the Commission, and between DG ENER and the other Research family DGs. The implementation of the strategy is monitored and reported at least twice a year to DG ENER's management.

The indicators, related to the maintenance and update of the strategy, to regularity of reporting to management and to the improvement of staff awareness, show that the strategy is an effective tool to prevent and detect fraud, but that further efforts regarding staff awareness should be pursued as a continuous effort. In 2016-2017, a programme of awareness-raising actions was developed with tailor-made initiatives related to DG ENER's core activities and policy objectives. In 2017, the initiatives focussed on targeted meetings and vulnerability assessment workshops. Fraud prevention was also regularly discussed in the internal control newsletter. An information package was available on a dedicated intranet page.

JRC D&WM Programme

In line with the Financial Regulation and the Rules of Application to perform ex ante and ex post verifications, JRC has put in place the Public Procurement Advisory Group under the Deputy General Director. It performs ex ante controls on the legal

and regulatory aspects of the procurement procedures and gives advice to the Authorising Officer by sub-delegation (AOS) before the award decision is taken. The controls carried out by the Group are aimed at reducing legal and reputational risk for the Commission. These controls are complementary to the other ex ante controls executed by the Finance and Procurement Unit and the Resource Management Units.

The JRC's ex-post controls strategy is implemented using a representative stratified sampling methodology at site/sector level. In 2017, ex-post controls were carried out on 120 sampled payments and 59 associated procurement files related to legal commitments entered in the course of the year. Recommendations from audits are followed-up and implemented in timely manner.

The JRC Anti-Fraud Strategy has been updated in December 2017 in order to contribute to the update of the Commission Anti-Fraud Strategy to take into account the latest OLAF methodology.

### 3. ESTIMATED FINANCIAL IMPACT OF THE PROPOSAL/INITIATIVE

#### 3.1. Heading(s) of the multiannual financial framework and new expenditure budget line(s) proposed

Heading of multiannual financial framework	Budget line	Type of expenditure	Contribution			
	Number 1 'Decommissioning of Nuclear Facilities and Management of Radioactive Waste'	Diff./Non-diff. <sup>41</sup>	from EFTA countries <sup>42</sup>	from candidate countries <sup>43</sup>	from third countries	within the meaning of Article 21(2)(b) of the Financial Regulation
5	Kozloduy programme [12.04.01]	Diff.	NO	NO	NO	NO
5	Bohunice programme [12.04.02]	Diff.	NO	NO	NO	NO
5	JRC D&WM programme [12.04.03]	Diff.	NO	NO	NO	NO
5	JRC D&WM programme [12.01.02]	Non-diff.	NO	NO	NO	NO

<sup>41</sup> Diff. = Differentiated appropriations / Non-diff. = Non-differentiated appropriations

<sup>42</sup> EFTA: European Free Trade Association

<sup>43</sup> Candidate countries and, where applicable, potential candidates from the Western Balkans

### 3.2. Estimated impact on expenditure

#### 3.2.1. Summary of estimated impact on expenditure<sup>44</sup>

EUR million (to three decimal places)

<b>Heading of multiannual financial framework</b>	<b>5</b>	'Decommissioning of Nuclear Facilities and Management of Radioactive Waste'
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			2021	2022	2023	2024	2025	2026	2027	Post 2027	TOTAL
Operational appropriations 12.04.01 {Kozloduy programme}	Commitments	(1)	9.000	9.000	9.000	9.000	9.000	9.000	9.000	-	63.000
	Payments	(2)	-	-	-	-	-	-	21.000	42.000	63.000
Operational appropriations 12.04.02 {Bohunice programme}	Commitments	(3)	27.500	27.500	-	-	-	-	-	-	55.000
	Payments	(4)	-	-	27.500	27.500	-	-	-	-	55.000
Operational appropriations 12.04.03 {JRC D&WM programme}	Commitments	(5)	44.545	45.436	46.345	47.272	48.217	49.181	50.167	-	331.163
	Payments	(6)	8.909	23.342	34.054	40.526	44.900	47.580	48.532	83.321	331.163
Operational appropriations TOTAL	Commitments	(7) = 1+3+5	81.045	81.936	55.345	56.272	57.217	58.181	59.167	-	<b>449.163</b>
	Payments	(8) = 2+4+6	8.909	23.342	61.554	68.026	44.900	47.580	69.532	125.321	<b>449.163</b>
Appropriations of an administrative nature financed from the envelope of the programme <sup>45</sup> 12.01.02	Commitments = Payments	(9)	2.265	2.310	2.356	2.404	2.451	2.500	2.551		<b>16.837</b>
<b>TOTAL appropriations for the envelope of the programme</b>	Commitments	=7+9	83.310	84.246	57.701	58.676	59.668	60.681	61.718		<b>466.000</b>
	Payments	=8+9	11.174	25.652	63.910	70.430	47.351	50.080	72.083	125.321	<b>466.000</b>

<sup>44</sup> Totals may not tally due to rounding

<sup>45</sup> Technical and/or administrative assistance and expenditure in support of the implementation of EU programmes and/or actions (former 'BA' lines), indirect research, direct research

<b>Heading of multiannual financial framework</b>	7	‘Administrative expenditure’
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This section should be filled in using the 'budget data of an administrative nature' to be firstly introduced in the Annex to the Legislative Financial Statement (Annex V to the internal rules), which is uploaded to DECIDE for interservice consultation purposes.

EUR million (to three decimal places)

		2021	2022	2023	2024	2025	2026	2027	<i>Post 2027</i>	TOTAL
Human resources		1.001	1.001	1.001	1.573	2.574	3.289	4.004		<b>14.443</b>
Other administrative expenditure		0.105	0.105	0.105	0.105	0.105	0.105	0.105		<b>0.735</b>
<b>TOTAL appropriations under HEADING 7 of the multiannual financial framework</b>	(Total commitments = Total payments)	<b>1.106</b>	<b>1.106</b>	<b>1.106</b>	<b>1.678</b>	<b>2.679</b>	<b>3.394</b>	<b>4.509</b>		<b>15.178</b>

EUR million (to three decimal places)

		2021	2022	2023	2024	2025	2026	2027	<i>Post 2027</i>	TOTAL
<b>TOTAL appropriations across HEADINGS of the multiannual financial framework</b>	Commitments	84.416	85.352	58.807	60.354	62.347	64.075	66.227		<b>481.578</b>
	Payments	12.280	26.758	65.016	72.108	50.030	53.474	76.592	125.321	<b>481.578</b>

### 3.2.2. Summary of estimated impact on appropriations of an administrative nature

- The proposal/initiative does not require the use of appropriations of an administrative nature
- The proposal/initiative requires the use of appropriations of an administrative nature, as explained below:

EUR million (to three decimal places)

Years	2021	2022	2023	2024	2025	2026	2027	TOTAL
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HEADING 7 of the multiannual financial framework	DG ENER/ JRC							
Human resources	1.001	1.001	1.001	1.573	2.574	3.289	4.004	14.443
Other administrative expenditure	0.105	0.105	0.105	0.105	0.105	0.105	0.105	<b>0.735</b>
<b>Subtotal HEADING 7 of the multiannual financial framework</b>	<b>1.106</b>	<b>1.106</b>	<b>1.106</b>	<b>1.678</b>	<b>2.679</b>	<b>3.394</b>	<b>4.109</b>	<b>15.178</b>

Outside HEADING 7 <sup>46</sup> of the multiannual financial framework	JRC							
Human resources								
Other expenditure of an administrative nature	2.265	2.310	2.356	2.404	2.451	2.500	2.551	<b>16.837</b>
<b>Subtotal outside HEADING 7 of the multiannual financial framework</b>	<b>2.265</b>	<b>2.310</b>	<b>2.356</b>	<b>2.404</b>	<b>2.451</b>	<b>2.500</b>	<b>2.551</b>	<b>16.837</b>

<b>TOTAL</b>	<b>3.371</b>	<b>3.416</b>	<b>3.462</b>	<b>4.082</b>	<b>5.130</b>	<b>5.894</b>	<b>7.060</b>	<b>32.015</b>
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The appropriations required for human resources and other expenditure of an administrative nature will be met by appropriations from the DG that are already assigned to management of the action and/or have been redeployed within the DG, together if necessary with any additional allocation which may be granted to the managing DG under the annual allocation procedure and in the light of budgetary constraints.

In case of the JRC the posts in the establishment plan in the administrative heading will be offset by an equal reduction in the establishment plan and related appropriations for the research direct actions.

<sup>46</sup> Technical and/or administrative assistance and expenditure in support of the implementation of EU programmes and/or actions (former 'BA' lines), indirect research, direct research

### 3.2.2.1. Estimated requirements of human resources

- The proposal/initiative does not require the use of human resources.
- The proposal/initiative requires the use of human resources, as explained below:

*Estimate to be expressed in full time equivalent units*

Years	2021	2022	2023	2024	2025	2026	2027
<b>• Establishment plan posts (officials and temporary staff)</b>							
Headquarters and Commission's Representation Offices	7	7	7	11	18	23	28
Delegations							
Research							
<b>• External staff (in Full Time Equivalent unit: FTE) - AC, AL, END, INT and JED</b> <sup>47</sup>							
Heading 7							
Financed from HEADING 7 of the multiannual financial framework	- at Headquarters						
	- in Delegations						
Financed from the envelope of the programme <sup>48</sup>	- at Headquarters						
	- in Delegations						
Research							
Other (specify)							
<b>TOTAL</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>11</b>	<b>18</b>	<b>23</b>	<b>28</b>

The human resources required will be met by staff from the DG who are already assigned to management of the action and/or have been redeployed within the DG, together if necessary with any additional allocation which may be granted to the managing DG under the annual allocation procedure and in the light of budgetary constraints.

In case of the JRC the posts in the establishment plan in the administrative heading will be offset by an equal reduction in the establishment plan and related appropriations for the research direct actions.

Description of tasks to be carried out:

Officials and temporary staff	<p><b><u>Kozloduy and Bohunice programmes</u></b></p> <p>Monitoring of the implementation of two programmes.</p> <p><u>JRC decommissioning and waste management programme</u></p> <p>Monitoring and implementation of the programme</p>
External staff	

### 3.2.3. Third-party contributions

The proposal/initiative:

- - does not provide for co-financing by third parties
- - provides for the co-financing by third parties estimated below:

Appropriations in EUR million (to three decimal places)

<sup>47</sup> AC= Contract Staff; AL = Local Staff; END = Seconded National Expert; INT = agency staff; JPD= Junior Professionals in Delegations

<sup>48</sup> Sub-ceiling for external staff covered by operational appropriations (former 'BA' lines)



Years	2021	2022	2023	2024	2025	2026	2027	TOTAL
Specify the co-financing body								
TOTAL appropriations co-financed								

### 3.3. Estimated impact on revenue

- - The proposal/initiative has no financial impact on revenue.
- - The proposal/initiative has the following financial impact:
  - on own resources
  - on other revenue

please indicate, if the revenue is assigned to expenditure lines

EUR million (to three decimal places)

Budget revenue line:	Impact of the proposal/initiative <sup>49</sup>						
	2021	2022	2023	2024	2025	2026	2027
Article .....							

For assigned revenue, specify the budget expenditure line(s) affected.

[...]

Other remarks (e.g. method/formula used for calculating the impact on revenue or any other information).

[...]

<sup>49</sup> As regards traditional own resources (customs duties, sugar levies), the amounts indicated must be net amounts, i.e. gross amounts after deduction of 20 % for collection costs