



GOVERNMENT DECREE ON NUCLEAR FACILITIES – PLAN FOR CARRYING OUT AN ENVIRONMENTAL ASSESSMENT

The legislation on nuclear energy in Finland is undergoing a reform. In the comprehensive reform, the current Nuclear Energy Act (990/1987) will be overhauled in its entirety to take into account changes in the operating environment, technological developments, changes in the energy market, and the reform of other Finnish legislation as well as international and EU regulation.

In connection with the reform, the Ministry of Economic Affairs and Employment is preparing a Government Decree on Nuclear Facilities. The Decree would be issued under the new Nuclear Energy Act and would lay down provisions on restricting radiation exposure and emissions of radioactive materials, which are currently laid down in the Nuclear Energy Decree (161/1988).

The regulation concerning environmental assessment under the Act on the Assessment of the Effects of Certain Plans and Programmes on the Environment (200/2005, hereinafter the SEA Act) is based on the Directive of the European Parliament and of the Council on the assessment of the effects of certain plans and programmes on the environment (2001/42/EC; the SEA Directive). As a rule, decrees have not been considered plans and programmes that require environmental assessment under the SEA Directive and, consequently, the SEA Act. However, the Court of Justice of the European Union has interpreted the concept of plans and programmes broadly and has held that that concept may also include decrees if they fulfil the conditions for the environmental assessment obligation.

The Government Decree on Nuclear Facilities is considered to set a framework for licence or approval decisions for projects under section 4 of the SEA Act. As the Decree applies to the energy supply sector referred to in paragraph 1 of the same section, the preparation of the Decree can be considered to fulfil the conditions for the environmental assessment obligation under the SEA Act. An environmental assessment and an environmental report will be drawn up in connection with the preparation of the Decree.

This plan for carrying out an environmental assessment under the SEA Act describes the background, preparation and timetable of the Decree and the plan for the environmental assessment.

The public and the authorities will have the opportunity to express their opinions and submit statements on the assessment plan in the Lausuntopalvelu.fi public consultation service.

To the extent that the Government Decree on Nuclear Facilities is considered to have potentially significant transboundary environmental impacts, the consultation of Contracting Parties under the Protocol on Strategic Environmental Assessment (SEA Protocol) to the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) shall apply.

OBJECTIVES

The Government Decree on Nuclear Facilities would be issued under the new Nuclear Energy Act, and it would contain provisions supplementing and specifying the Act with respect to radiation

exposure, emission limits for radioactive materials, preparedness, processing of licences and applications, and the relevant advisory committees. The Decree could also contain other provisions on nuclear facilities. The objective of the Decree is to:

- set dose constraints for the exposure of the population arising from the normal operation of a nuclear facility and in the event of an accident at a nuclear facility;
- regulate preparedness for accidents and disruptions in the operation of a nuclear facility;
- issue supplementary provisions on the decisions in principle and licensing referred to in the Nuclear Energy Act as well as miscellaneous provisions.

PRESENT STATUS

The Nuclear Energy Act sets out general principles and safety requirements for the use of nuclear energy, which concern the safe use of nuclear energy, limiting radiation exposure, protecting the population and the environment, and the decision-making and licensing system for the use of nuclear energy. These provisions of the Act are supplemented by the Nuclear Energy Decree, which lays down more detailed provisions on safety requirements related to the use of nuclear energy, licensing procedures and the obligations of the authorities and operators.

The Nuclear Energy Decree lays down more detailed provisions on the safety of nuclear facilities, limiting exposure to radiation and radioactive materials arising from the operation of a nuclear facility, and preparedness for emergencies and accidents. In addition, the Decree lays down provisions on applications for decisions in principle and licences under the Nuclear Energy Act, on their processing, and on the relevant advisory committees and their duties.

Chapter 3a of the Nuclear Energy Decree lays down provisions on restricting radiation exposure caused by the operation of a nuclear facility and emissions of radioactive materials released into the environment. The regulation is based on the principle that the exposure of the population and the environment to radiation must be kept as low as is practically possible, taking into account technical and economic considerations.

The annual effective radiation dose caused to the population from the normal operation of a nuclear facility shall not exceed 0.1 mSv, while the radiation dose arising from the decommissioning of a nuclear facility shall not exceed 0.01 mSv. As a result of an anticipated operational occurrence, the annual dose constraint for an individual of the population is 0.1 mSv. The dose constraints set in the Decree are applied when assessing the planning, construction and use of nuclear facilities as well as the environmental effects of their operation.

Under the current legislation, the annual dose constraint for an individual of the population shall be 1 mSv in the event of Class 1 postulated accidents, 5 mSv in the event of Class 2 postulated accidents and 20 mSv in the event of an extension of a postulated accident. The release of radioactive material as a result of a severe accident at a nuclear power plant may not necessitate large-scale protective measures for the population or any long-term restrictions on the use of extensive areas of land and water. In order to limit the long-term effects, the limit for atmospheric releases of cesium-137 shall be 100 terabecquerel. The possibility of exceeding the limit shall be extremely small. The possibility of a release in the early stages of an accident requiring measures to protect the population shall be extremely small.

The emission limits for radioactive materials require that emissions from a nuclear facility into the air and water be restricted in such a way that they, either alone or together with other exposure pathways, do not exceed the above-mentioned dose limit. It is the duty of the operator to ensure that nuclear facilities are planned, constructed and used in a way that enables the management and mitigation of radioactive material emissions and that the generation of emissions is prevented proactively.

The principles concerning dose limits and the management of radioactive material emissions laid down in the Nuclear Energy Decree form the basis for the processing of decisions in principle and licences concerning nuclear facilities.

In the comprehensive reform of the Nuclear Energy Act, the current Nuclear Energy Act will be replaced by a new Nuclear Energy Act. At the same time, the current Nuclear Energy Decree will be repealed.

The current Nuclear Energy Decree contains provisions on restricting radiation exposure and emissions of radioactive materials, on applications for decisions in principle and licences under the Nuclear Energy Act and on the processing thereof. The intention is to include the contents of the decisions in a new way in the new Government Decree on Nuclear Facilities.

The Government Decree on Nuclear Facilities would be issued under the new Nuclear Energy Act, and it would replace the provisions of the current Nuclear Energy Decree insofar as they concern the safety of nuclear facilities, radiation exposure, radioactive material emissions, licensing procedures and the related administrative structures.

ENVIRONMENTAL ASSESSMENT

Environmental assessment is guided by the SEA Act and the Government Decree supplementing it (347/2005, hereinafter the SEA Decree). The objectives of the SEA legislation are to promote the assessment of environmental effects and their consideration in preparing and approving plans and programmes, and to improve the accessibility of information for the public and the public's opportunities for participation. The aim of an environmental assessment is to promote knowledge-based planning and decision-making.

The environmental assessment will examine and evaluate the likely significant effects of the Decree on the environment and its components. Under section 2, paragraph 2 of the SEA Act, an environmental effect means a direct or indirect effect of a plan or programme in Finland and outside its territory on:

- a) human health, living conditions and amenity;
- b) soil, water, air, climate, flora, fauna and biodiversity;
- c) community structure, built environment, landscape, townscape and cultural heritage;
- d) utilisation of natural resources;
- e) interaction among the factors referred to in paragraphs a–d.

The key environmental effects of the Decree are related to radiation exposure and radioactive emissions caused by the operation of a nuclear facility. According to preliminary estimates, the most significant effects of radiation mainly affect human health, nature and the community structure, but the environmental assessment will also assess other likely significant environmental effects. The environmental assessment will take into account the effects during the normal operation of a nuclear facility but also in the event of an emergency or accident.

The Decree under preparation will affect both existing nuclear facilities and new nuclear facilities whose location, size and other details are unknown, which means that the current state of the environment cannot be described in detail. As such, the effects will be assessed and their significance described in the environmental report at a general level. The environmental effects of individual nuclear facilities will be assessed in subsequent facility-specific planning and licensing procedures.

The Decree is of national significance and will provide a framework for decisions on the licensing and approval of nuclear facility projects. The normal use of nuclear facilities affects the site of the facility and in its immediate vicinity, but an accident may have a more wide-ranging impact area. When preparing the Decree, the likelihood of significant transboundary environmental impacts will also be assessed.

The environmental assessment will take into account the following alternative scenarios:

- Parliament does not approve the government proposal for a Nuclear Energy Act and the current state of the regulation remains unchanged;
- Parliament approves the proposal for a Nuclear Energy Act, and the Government issues a Decree on Nuclear Facilities under the new Act.

The assessment will compare the effects of the two alternative scenarios as applicable, focusing on describing the effects of the Decree in relation to the baseline situation. If mitigation measures are identified in the assessment, they will be presented in the environmental report. In addition, plans will be put in place for monitoring the effects of the Decree.

The environmental assessment will be carried out as part of the impact assessment of the Decree, which will be carried out in line with the Government Guidelines for Impact Assessment in Law Drafting (Publications of the Finnish Government 2022:66). The assessment will be carried out as an expert assessment by experts from the Ministry of Economic Affairs and Employment and the Radiation and Nuclear Safety Authority. An environmental report as referred to in section 8 of the SEA Act and section 4 of the SEA Decree will be prepared as part of the reporting on the environmental assessment, and the environmental assessment will be documented in the memorandum to the Decree.

The Government Decree on Nuclear Facilities is part of the comprehensive reform of the legislation on nuclear energy. The timetable for the Decree and the related environmental assessment will depend on the progress of the legislative reform. Two consultations will be held in Finland and internationally during the assessment procedure as required by the SEA Act. In the first phase, a consultation will be held concerning the environmental assessment plan and the preparation of the environmental report. In the second phase, at a later date in 2026, a consultation under section 9 of the SEA Act will be held concerning the Decree, i.e. the draft plan or programme, as well as the environmental report. The consultation will include consultations with Parties likely to be affected by the transboundary impacts of the planned activities under the SEA Protocol to the Espoo Convention. The feedback received during the consultations will be taken into account in the environmental assessment and the preparation of the Decree to the extent possible.

More information

- Comprehensive reform of the Nuclear Energy Act, information about the project (available in Finnish and Swedish) <https://valtioneuvosto.fi/hanke?tunnus=TEM032:00/2023>