Ministerie van Infrastructuur en Waterstaat

Response memorandum public submissions

Environmental Impact Assessment phase 1

Revision of the Nuclear Energy Act for the purpose of extending the operating life of the Borssele nuclear power plant

Date	4 March 2025
Reference	IenW/BSK-2025/40510
Status	Final

Colophon

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1. Introduction

1.1. Introduction

This document presents the response memorandum to the views submitted regarding the proposed amendment of the Nuclear Energy Act.

Background

The Dutch government intends to make it possible for the Borssele nuclear power plant to remain operating for longer. To do so, the operator must apply for a licence. In order to be able to apply for this licence, the first necessary step is to amend the Nuclear Energy Act. As things now stand under the Nuclear Energy Act, the nuclear power plant will no longer be permitted to generate energy after 31 December 2033. Furthermore, no application for a licence for the generation of nuclear energy after 2033 may be considered. The intention, which is also the subject of the EIA Phase 1, is to amend Article 15a of the Nuclear Energy Act.

A second step, in order to keep the nuclear power plant operating for longer, consists of a licence application to the Authority for Nuclear Safety and Radiation Protection (ANVS) made by the nuclear power plant operator. The nuclear power plant can only remain open longer if this can be done safely and responsibly, and this is demonstrated in the safety studies submitted with the licence application. As part of this licence application, the EIA Phase 2 is being prepared.

Description of the completed EIA procedure

In order to get a good understanding of the environmental effects and in view of the (cross-border) statutory consultation obligations - following from the Aarhus and Espoo Conventions - the Minister for Climate Policy and Energy and the State Secretary for Infrastructure and Water Management decided to follow the environmental impact assessment (EIA) procedure in preparing this legislative amendment. The aim of the EIA procedure is to identify all relevant environmental effects and present them for consideration in the decision-making process. In the first phase of the procedure, an exploratory EIA (EIA Phase 1) has been prepared for the legislative amendment, setting out the effects insofar as this is currently possible.

In this first phase of the EIA procedure, the Minister for Climate Policy and Green Growth and the State Secretary for Infrastructure and Water Management jointly constitute the competent authority. To give effect to an appropriate separation of functions, the Ministry of Climate Policy and Green Growth (KGG) acts as the initiator for the EIA Phase 1 and the Ministry of Infrastructure and Water Management (IenW) assumes the role of competent authority in the EIA procedure[1].

The first step in this procedure was the preparation and publication of a Draft Scoping and Detail Level Document (Draft NRD). The Draft NRD describes the proposed activity and the assessment criteria to be examined. The Draft NRD was made available for public inspection in the period 31 May to 12 July 2023. The Draft NRD received 170 responses.

Furthermore, the Ministry of Infrastructure and Water Management, in its role as competent authority in the EIA procedure, sought advice from the Netherlands Commission for Environmental Assessment (NCEA) regarding the Draft NRD. This advice[2] was provided on 12 October 2023. In the EIA procedure, the NCEA has the role of independent adviser regarding the scoping and detail level of the study to be conducted

1 The Minister for Climate and Green Growth and the Secretary of State for Infrastructure and Water Management are the joint competent authority (on behalf of the government) for the bill.

2 https://commissiemer.nl/adviezen/3723

and the quality of information in the EIA for the competent authority. Advice regarding the draft NRD was also sought from the statutory advisers[3]; they did not provide any advice.

The views provided gave a picture of how the proposed activity and assessment criteria in the Draft NRD are regarded. Subsequently, in May 2024, the response memorandum was published, containing the amended approach to the EIA.

The next step in this procedure was to prepare the EIA Phase 1 (see paragraph 1.2 for further explanation). This, together with the draft legal text, was made available for consultation from in the period 21 August to 2 October 2024. The EIA Phase 1 describes the environmental impact of the current use of the nuclear power plant. The EIA also indicates where environmental effects can be expected if the nuclear power plant remains open for longer and/or where further research is required.

In its role as competent authority, the Ministry of Infrastructure and Water Management asked the NCEA for advice regarding the EIA. This advice was provided on 25 October 2024. In this step of the EIA procedure, the NCEA acts as an independent advisor to the competent authority with regard to the quality of information in the EIA.

In total, 206 views were submitted regarding the EIA and the draft legislation. The views submitted were analysed and broken down into sub-questions. Answers have been formulated for all the sub-questions. These can be found in this response memorandum. The method for responding to the views received is described in paragraph 1.3.

1.2. Background to the procedure and process followed

Article 15a of the Nuclear Energy Act stipulates that the licence to operate the Borssele nuclear power plant (KCB) expires on 31 December 2033, insofar as it concerns the generation of nuclear energy, and an application for a licence to continue operating after 31 December 2033 will not be considered. The purpose of the proposed activity is to remove the legal barrier and, by means of a licence application, enable a potential extension of the plant’s operating life.

The intention is similar to the situation for the operating life extension of the nuclear power plants in Doel (Belgium). That procedure concerned a ten year extension of electricity production at two nuclear power plants in Doel, for which a legislative amendment was necessary. In the opinion of the European Court of Justice (ECJ), the measures adopted by the Belgian legislature (the legislative amendment) and the inseparably connected modernisation work on the nuclear power plants together were part of one and the same ‘project’ within the meaning of Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 regarding the assessment of the effects of certain public and private projects on the environment (PbEU 2012, L 26) (the EIA Directive). The Belgian Constitutional Court then held that the adoption of the legislative amendment should have been preceded by an environmental impact assessment and public consultation regarding the principle of the extension (…) and regarding the consequences of that extension with regard to the modernisation and security work.

From this ruling of the European Court of Justice on this operating life extension (the ‘Doel ruling’), it can be inferred that the legislative amendment for the operating life extension of the KCB qualifies as the first stage of a consent for a project within the meaning of the EIA Directive. The licence is the second phase. In short, in view of this

3 The Ministry of Agriculture, Fisheries, Food Safety and Nature and the Cultural Heritage Agency of the Netherlands.

ruling, the licence application and legislative amendment should be considered together as the consents for a single project. Since the whole constitutes one project, the project-eia-procedure will be followed.

This eia-procedure for the potential operating life extension and the EIA to be prepared consists of two phases:

Phase 1: Exploratory EIA for the legislative amendment
The first step in the decision-making process regarding the operating life extension is to amend the Nuclear Energy Act. In line with the advice from the NCEA (*also see Part A chapter 1),* the EIA Phase 1 for the legislative amendment explored the environmental impacts of the nuclear power plant in the current situation. Furthermore, the EIA gives a view of future environmental effects (the NCEA calls this extrapolation): what are the environmental aspects where possible negative effects could arise, and what points for attention are there for the next phase? The EIA concludes with an overview of the environmental aspects to be monitored and an overview of agenda items for the second phase (see below).

Phase 2: EIA for the licence application for the operating life extension
Amending the Nuclear Energy Act does not automatically mean that the nuclear power plant will be allowed to remain in operation for longer. Technical feasibility studies that are performed must show whether it is technically feasible to keep the nuclear power plant operating safely after 2033 and which modifications and investments to the nuclear power plant are necessary for this. Thereafter, the operator of the nuclear power plant must submit an application to the ANVS to amend the licence. The ANVS is the competent authority for this licensing procedure. It follows that the environmental impact must be investigated by the operator during this phase. The environmental study will be more concrete and detailed than the study in Phase 1 and more focused on the situation in which the nuclear power plant remains in operation after 31 December 2033. Indeed, the assessment of the environmental impacts in this phase may also include the results of the technical feasibility studies and - if any emerge from the feasibility studies - the necessary modifications to the nuclear power plant.

1.3. Views received

206 views were submitted. Of these, 27 views were submitted by organisations such as municipalities and interest groups, while the remaining 179 views were submitted by private individuals.

The views received are not only from the Netherlands, but also from abroad.

Belgium	9
Denmark	1
Germany	10
Luxembourg	1
Czech Republic	1
Austria	1 (5 parts)
The Netherlands	179, of which 109 are from Zeeland

The views received have been carefully read and analysed. The questions from the views received were categorised and summarised by theme and topic. In this way, all the views receive a response, but the exact views themselves are not included. However, each theme does refer to the views to which a response is given. In this way, everyone who submitted a view can find the response to his or her view.

1.4. Reading guide

Each view received is divided into questions. The views received have been summarised, consolidated, and responded to in a restructured manner, which means you may not find your exact view(s) repeated verbatim. Every question has been answered. Sometimes questions from the different views received are combined because they concern the same topic.

Each view received was given its own number. This number was sent to the submitter of a view with the acknowledgement of receipt. This number enables you to find the responses to the questions in the view that you submitted.

If you are reading the Response Memorandum on a computer, you can search in the following way:

1. Open the Response Memorandum
2. Use the search function in the document by pressing the key combination **CTRL+ F** (on Windows) or **Command + F** (on Mac)
3. Type the number of the view you submitted in the search bar and press enter
4. You will see a smaller window on your screen with the responses found.
5. You can now click through the responses to your questions one by one.

Some of the views received are very detailed and contain not only questions but also descriptions of the situation as perceived by the submitter. We appreciate the efforts made to prepare these descriptions. These descriptions do not contain any questions and we have therefore taken note of them for information purposes only. They are not discussed in detail in this response memorandum.

The advice of the NCEA and the most frequently raised comments in the views received are set out in Part A.

The views are responded to by theme in Part B.

- Chapter 1: Decision-making process Nuclear Energy Act
- Chapter 2: Energy mix, projects in the region
- Chapter 3: Environmental impact report: approach and structure
- Chapter 4: Environmental effects and other effects
- Chapter 5: Cross-border effects
- Chapter 6: Participation

Part A
NCEA advice and summary

1. Response to NCEA advice

The competent authority has asked the NCEA to provide an interim review advice regarding the quality and completeness of the EIA report Phase 1[4]. The Commission published its advice on 25 October 2024.

1.1. Main points of the advice

The NCEA finds the EIA Phase 1 to be accessible, methodically structured, easy to read, and well-presented. The Commission welcomes the clear indication of which environmental information has been prepared so far and which will follow later. The Commission finds the overview of all plans and decisions relating to nuclear energy clarifying and valuable. A complex decision-making process, such as the extension of the operating life of the Borssele Nuclear Power Plant (KCB), under considerable time pressure and in a region with limited room, requires, in the Commission's view, a timely and, as far as possible, logical sequence of considerations.

The Commission provides two pieces of advice.

Advice 1
The Commission advises that the results of the broad environmental consideration of the necessity of nuclear energy and its place in the national energy mix be made available and published in a timely manner. This is necessary in order to make a well-substantiated decision regarding the legislative amendment. This also applies for the results of the research into the interrelationship between all (national) energy projects in Borssele and the related distribution issue about what can be realised at which location. In a timely manner means being available before the decision-making process by the first and second chamber and the government regarding the legislative amendment.

Advice 2
The Commission advises that the missing environmental information be included in a supplement to the EIA prior to the decision-making regarding the amendment of the Nuclear Energy Act. Then, for all the environmental aspects in the supplement, provide a brief summary indicating the environmental research and reasoning that justify why the environmental pressures after 2033 are acceptable or can be mitigated. This means that this information can still play a role in the considerations made by the Lower and Upper Houses and the government.

The Commission is of the view that the EIA Phase 1 is missing information on the following points:

- Water and nature: the environmental effects of the KCB in the current situation have not been thoroughly investigated in the EIA. The EIA does not yet make any statements about whether the effects of the KCB on water and nature after 2033 are (or can be made) acceptable within relevant policy objectives and legislation and regulations (such as the Water Framework Directive and Natura 2000).
- Nuclear safety, emergencies, and disaster scenarios: dated information has been used. Furthermore, calamities and disaster scenarios, along with their associated effects, for the period after 2033 have not been elaborated in the EIA.
- Nuclear waste: the consequences for the volume of nuclear waste due to a longer lifespan after 2033 have not been sufficiently substantiated. This applies in particular to changes in the radioactive composition of the decommissioning waste.

[4] Where the Commission talks about "lifespan extension", the Ministry of Climate Policy and Green Growth continues to consistently call it "operating life extension". This is how the Ministry has communicated it in recent years and, to avoid confusion, it will continue to communicate it in this way.

1.2. How the NCEA's advice has been incorporated

The NCEA's advice consists of several points that have been incorporated in full. The information deemed missing by the NCEA has been added, further elaborated on and published in a Supplement to the EIA Phase 1. The supplement was offered at the same time as this response memorandum for the further decision-making on the bill.

Based on the main points stated above, how this is done is explained below. The NCEA's advice regarding those themes that were also raised in the views submitted is addressed in Part B of this response memorandum.

Advice 1
The Commission advises that the results of the broad environmental consideration of the necessity of nuclear energy and its place in the national energy mix be made available and published in a timely manner. This is necessary in order to make a well-substantiated decision regarding the legislative amendment. This also applies for the results of the research into the interrelationship between all (national) energy projects in Borssele and the related distribution issue.

The Ministry of Climate Policy and Green Growth places the environmental consideration of the need for nuclear energy in a separate procedure. At the end of 2024, the Ministry of Climate Policy and Green Growth (KGG) issued a call for tenders and awarded a contract for a study "nuclear energy in the energy mix". This study will map out the environmental effects of a number of scenarios for nuclear energy. The results will be published in a separate report, which is expected to be released in the second quarter of 2025. Participation with regard to this report will be possible at the same time with the participation in the Draft NRD New Construction.

The separate report "nuclear energy in the energy mix" will also be submitted to the first and second chamber as information when the legislative amendment of the Nuclear Energy Act is presented to both Houses.

Furthermore, the Ministry of Climate Policy and Green Growth is looking at how to distribute the limited room available for all energy projects in Borssele. This distribution issue is currently being worked out in more detail by all the relevant parties (government, business, port authority, etc.). During the decision-making process on the bill, the then-current situation regarding the interrelationship and distribution issue can be reported.

Advice 2-1
The EIA does not yet make any statements about whether the effects of the KCB on water and nature after 2033 are (or can be made) acceptable within relevant policy objectives and legislation and regulations (such as the Water Framework Directive and Natura 2000).

According to the NCEA, the EIA provides valuable insight into the quality of water and nature that is or may be affected by the Borssele Nuclear Power Plant and the resulting obstacles to achieving the water and nature objectives.

The EIA does not yet make any statements about 'whether a potential impact is acceptable', 'whether norms are exceeded' and 'whether thresholds are reached at which cumulative (stacked) effects are no longer acceptable'. These effects include the impact of cooling water discharges on the water temperature, the consequences of the intake of fish (larvae) and plankton, the consequences of discharges of radioactive and chemical

substances into the Westerschelde, the cumulative effects on nature due to nitrogen deposition and the impact on the Zeeland Nature Network.
The Ministry of Climate Policy and Green Growth has added this missing information and analyses in the supplement to the EIA Phase 1. Chapters 3 and 4 of the Supplement provide a consideration of the heat discharge, cooling water quality, fish intake and the discharge of substances. This indicates that the average temperature of the Westerschelde will not exceed the established limit of 2 degrees Celsius. Even in combination with the warming of the seawater due to climate change, the Westerschelde will not exceed 25 degrees Celsius as a consequence of the cooling water discharge from the KCB. The effect of the cooling water on the Westerschelde remains within the limits.

Chapter 3 also provides further information about nitrogen deposition and the Zeeland Nature Network.

Finally, for each environmental chapter, the EIA Phase 1 Supplement provides an outlook for the possible effects after 2033.

Advice 2-2
The NCEA notes that the EIA relies on dated information regarding nuclear safety and calamities and disaster scenarios. In a supplement to the EIA submitted before the decision-making regarding the amendment of the Nuclear Energy Act, the Commission advises that the nuclear safety, calamities and disaster scenarios should be elaborated further in accordance with its earlier NRD advice.

Paragraph 5.2.2 of the Supplement to the EIA Phase 1 gives further consideration to the potential safety risks and how these are managed, as described in the Safety Report of the Borssele Nuclear Power Plant. It explains how the safety of the KCB is demonstrated with the help of various safety analyses (internal events and external threats) that are in line with the state of the art and the applicable regulations. The methods of risk communication, risk management and crisis management are set out in the National Radiation Crisis Plan.

The nuclear safety will be examined in detail by the licence holder in Phase 2 as part of the application process for obtaining a licence for a longer operating life. The Authority for Nuclear Safety and Radiation Protection will assess the licence application and accompanying information.

Advice 2-3
The Commission advises that in a supplement to the EIA prior to the decision-making regarding the amendment of the Nuclear Energy Act, the consequences of a longer lifespan for the volume of nuclear waste should be briefly substantiated and put into perspective, with particular attention to the radioactive composition of decommissioning waste.

The Supplement to the EIA Phase 1 discusses radioactive waste in more detail in paragraph 5.2.3. This indicates that COVRA has sufficient capacity for a linear increase in radioactive waste in the event of an extension of the operating life of the plant. Room will also remain available for any decommissioning waste in the future. With regard to new nuclear power plants, these procedures need to examine the extent to which radioactive waste will increase and whether COVRA has sufficient capacity for this.

2. Summary of frequently asked questions, advice from the NCEA and effect on procedure

In this chapter, we look at the most frequently asked questions found in the views submitted. We also explain the changes to the planned study made in response to questions or ideas from the views submitted and the advice of the NCEA. Part B of this response memorandum deals with the questions raised in the views submitted in more detail.

2.1. Frequently asked questions

Several submitters asked questions or made comments about:

A. The role of nuclear power in the energy mix
B. The interrelationship of the energy projects in the region
C. Possible new nuclear power plants
D. Safety and radiological effects
E. The age of the nuclear power plant
F. Radioactive waste
G. Effects on the Westerschelde

Part B of the response memorandum looks at the various questions and comments in greater detail. A brief summary is given below.

A. The role of nuclear power in the energy mix

Several submitters and the NCEA ask about the role of nuclear power in the energy mix. The question 'why nuclear power in the energy mix' is not answered in this procedure.

The Ministry of Climate Policy and Green Growth is going to provide a further substantiation of the usefulness and necessity of nuclear power in the energy mix and what this means for the environment. The views submitted argue that the procedure does not comply with the 'Aarhus Convention' because there was no early public consultation on whether nuclear energy should be included in the energy mix at all. The advantages and disadvantages of nuclear energy in the energy mix in relation to other sources are being investigated. Public consultation on this will follow later.

The Ministry of Climate Policy and Green Growth is conducting the broader environmental consideration of the necessity for nuclear energy in a separate procedure. At the end of 2024, the Ministry of Climate Policy and Green Growth issued a call for tenders and awarded a contract for the study "nuclear energy in the energy mix". The results of this study must be published in a separate report, which will be made available in a timely manner and submitted to the Houses as information when the amendment of the Nuclear Energy Act is presented.

Several other procedures with relevance to nuclear power are named below.

National Energy System Plan

The National Energy System Plan (NPE) provides a clear development direction for the energy system until 2050. With the NPE, the Dutch Cabinet is making strategic choices that lay the foundation for the development of this energy system. In the transition to a fully sustainable energy system, the Dutch Cabinet is committed to the widest possible palette of energy sources and the necessary infrastructure. By making maximum efforts in the coming years to ensure a sufficient supply of energy (domestic production and imports) and timely availability of adequate energy infrastructure, the Dutch Cabinet is facilitating the sustainability of the demand sectors (built environment, mobility, industry and agriculture). In doing so, the Dutch Cabinet is looking at the energy system as a whole. Nuclear power is part of this: growing from 0.5 GW now (from the current KCB) possibly to more than 3.5 GW around 2035 and possibly growing further to 7 GW by 2050.

The plan was released in its final form in December 2023. Participation took place via an internet consultation and stakeholder dialogue on the basis of a draft NPE. The responses received also touch several times on the discussion of *why nuclear power in the energy mix*. At the moment, work is under way on the Implementation Agenda for the NPE. See also: Nationaal plan energiesysteem (NPE) (rvo.nl).

National Energy Infrastructure Programme (PEH)
In 2023/2024, the then Ministry of Economic Affairs and Climate Policy effected an elaboration of the National Energy System Plan (NPE) in the form of the National Energy Infrastructure Programme (PEH). The PEH revolves around seven scenarios that examine the spatial impact of the required growth of the Dutch energy system. One scenario called 'very strong nodes' was examined, the only one in which nuclear power has a role. This scenario examines a growth of nuclear power to 8.3 GW (with a total of five new nuclear power plants within the Borssele and Maasvlakte I safeguarded areas and the existing Borssele nuclear power plant. See also: Programma Energiehoofdstructuur (rvo.nl).

National Programme for the management of Radioactive Waste
Every ten years, all EU member states must update their national programme for the storage and management of radioactive waste and fissile materials (the National Programma for the management of Radioactive Waste; NPRA). The Netherlands must have a new national programme no later than 2025. See also: Nationaal Programma Radioactief Afval | Platform Participatie.

B. The interrelationship of projects in the region
In the area around Borssele – and particularly in the port area – several national government energy projects are under way, namely so-called project decisions or projects under the National Coordination Scheme.[5] (RCR projects). These include landfalls of offshore wind projects, a high-voltage substation and various infrastructure projects. These projects collectively place pressure on the region. Submitters have questioned how coordination is maintained when so many projects are being developed in their area.

Following input from various submitters, including the Province of Zeeland and the Municipality of Borssele, the Ministry of Climate Policy and Green Growth is now working with a broader consultation structure to address national tasks in the Sloe region. For example, there are cross-sectional working groups in which conflicting interests are addressed, and the province is organising various design workshops to help make sense of the various spatial claims. This strengthens cooperation between various levels of government and provides insights that would otherwise remain underexposed. Coordination is also being sought with local residents, which has, for example, led to the formulation of the Borssele Conditions. At present, however, there is no indication that the Ministry will adopt an integrated vision for the area, partly due to the complexity and risks associated with linking all the separate ongoing procedures.

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5 Before the Environmental Planning Act (Omgevingswet) came into force, projects were carried out as National Coordination Regulation (RCR) projects. In the RCR, the various decisions (licences and exemptions and a zoning plan) that are needed are taken simultaneously and in consultation with regional authorities. After the Environmental Planning Act comes into force, these will become Project Decisions.

C. Possible new nuclear power plants

The government has taken the initiative to build two new nuclear power plants. The letter to parliament[6] of 9 December 2022 sets out the preparations the State is making and describes several initial choices based on initial exploratory studies. At this stage, it is not yet clear where the new nuclear power plants will be located. Once the EIA for preferred locations for new nuclear power plants and the Comprehensive Impact Analysis have been completed, a decision will be made by the Minister for Climate Policy and Green Growth.
All information about new nuclear power plant construction can be found at https://www.rvo.nl/onderwerpen/bureau-energieprojecten/lopende-projecten/nieuwbouw-kerncentrales or on the dedicated Nuclear Energy website: www.overkernenergie.nl.

The first step in the procedure for the possible construction of new nuclear power plants is to take a Preferred Decision for a location. To this end, the Ministry of Climate Policy and Green Growth is undertaking several steps: a number of feasibility studies are being performed, an environmental impact assessment is being conducted, and an Integrated Impact Analysis (IEA) is being prepared. The aim is for the national government to be able to make a Preferred Decision in 2025 and, with this, to designate a location where the two new nuclear power plants can be realised. Although Borssele has already been named as preferred location, the EIA procedure requires an examination of alternative sites. The Kennisgeving Voornemen en Voorstel Participatie Nieuwbouw Kerncentrales [Notification of Intent and Participation Proposal for New Nuclear Power Plants] was published on 23 February 2024. The result of this first step in the EIA procedure is that several new search areas for nuclear power plants have been added in the Netherlands. In addition to Borssele, Maasvlakte I and Eemshaven, Maasvlakte II and Terneuzen have now been added. At the time of writing this response memorandum, the Ministry of Climate Policy and Green Growth is preparing the Draft Scoping and Detail Level Memorandum (cNRD): the research design for the environmental studies that will provide the information needed for a location decision. Thus, it is not yet clear where the new nuclear power plants will be located. A decision will only be made by the Minister for Climate Policy and Green Growth after completion of the EIA and the integrated impact analysis, which will also look at the costs and environmental interests. In the meantime, you can keep up-to-date with developments via the website of the Nuclear Energy Programme Directorate: www.overkernenergie.nl.

D. Safety and radiological effects

A large proportion of those submitting views are concerned about the safety of the nuclear power plant in the event of external threats and accidents.

Both now and in the future, the Borssele nuclear power plant must continue to satisfy the safety requirements and the risk objectives set out in the legal framework (Article 6 of the Nuclear Safety Regulation for Nuclear Installations and Article 18 of the Nuclear Facilities Fissile Materials and Ores Decree). An operating life extension does not change these safety objectives. These regulations set out the safety requirements that the nuclear power plant must meet, including for so-called ‘beyond design accidents’. Developments at other nuclear power plants or new threats may necessitate the implementation of stricter safety objectives. The ANVS oversees this.

Several evaluations (including the stress test after the disaster at the nuclear power plant in Fukushima) have investigated the robustness of the nuclear power plant and additional measures have been taken to improve the plant. The ANVS regularly assesses

6 https://open.overheid.nl/documenten/ron-l1d97704ce65c4ba42664fb0fbb21e02a40099b2e/pdf

whether the nuclear power plant continues to meet the established safety requirements. The nuclear power plant must always have a security package approved by the ANVS that prevents possible theft of materials and knowledge.

Paragraph 5.2.2 of the Supplement to the EIA Phase 1 gives further consideration to the potential safety risks and how these are managed, as described in the Safety Report of the Borssele Nuclear Power Plant. It explains how the safety of the KCB is demonstrated with the help of various safety analyses (internal events and external threats) that are in line with the state of the art and the applicable regulations. The methods of risk communication, risk management and crisis management are set out in the National Radiation Crisis Plan.

E. The age of the nuclear power plant

Several submitters had concerns about the age of the nuclear power plant, and what that age means for safety.

The Borssele nuclear power plant has undergone a number of safety evaluations during its operational lifetime, which has led to the implementation of various measures to ensure its continued safety. This has raised the level of safety.

The safety of the nuclear power plant and of all systems, structures and components (SSCs) has been demonstrated in the safety report and underlying substantiation up to an operating life of 60 years (2033). If the licence holder actually wishes to operate the nuclear power plant for longer, it will have to demonstrate that the plant will remain safe and will continue to be so going forward, with due consideration of ageing-related factors. For this purpose, a so-called Long Term Operation (LTO-)process has been established which culminates in a licence application. In broad terms, the LTO licensing process requires the following steps:

- action plan for the technical studies,
- conducting safety analyses and studies,
- assessment of studies by ANVS,
- submission of licence application and EIA Phase 2,
- ANVS submits a draft decision for public consultation and then takes a final decision on the application for a licence amendment.

The licence application will at the very least present the safety substantiation to the ANVS for assessment and decision-making.

In the EIA Phase 1 (paragraph 8.4.2) for the legislative amendment, the age of the power plant is discussed in the description of the effects on the area of (nuclear) safety and radiation protection.

The licence holder of the nuclear power plant must carry out a periodic safety evaluation at least once every ten years. The 2023 10-yearly evaluation (2023) has been completed and is now in the implementation phase. This means that the ANVS's assessment of the implementation plan (including the improvement measures) has been completed, and EPZ can soon (after formal approval has been granted) start implementing the improvement measures.

F. Radioactive waste

Submitters have questions about the radioactive waste produced by the KCB and its lifespan.

The radioactive waste produced by the KCB is stored at COVRA. This storage must meet strict safety requirements and is monitored. COVRA is legally obliged to ensure the responsible storage and processing of the waste released, regardless of the volume. A potential longer operating life of the Borssele nuclear power plant is included in the COVRA inventory[7].

The EIA Phase 1 for the amendment of the Nuclear Energy Act provides general information about radioactive waste and the nuclear fuel supply chain. The aim was to provide an understanding of the environmental effects of the current operation of the Borssele nuclear power plant. The volumes of radioactive waste coming from the KCB that will be involved in keeping the nuclear power plant in operation for longer are discussed in paragraph 7.4.1.4 of the EIA Phase 1.

It is not yet known what the fuel cycle of the nuclear power plant will look like after 2033. This is currently being investigated by the operator and, if changes are made, will be included in the licence application for the extension of the operating life.

For the mining, enrichment, reprocessing and storage, there are other procedures, sometimes in other countries, which address safety and, where necessary, also consider the environmental effects. Decommissioning is a separate licensing process that will require its own procedure in due course.

The Supplement to the EIA Phase 1 includes a further description of radioactive waste in paragraph 5.2.3. This indicates that COVRA has sufficient capacity for a linear increase in radioactive waste in the event of an extension of the operating life of the plant. Room will also remain available for any decommissioning waste in the future. With regard to new nuclear power plants, these procedures need to examine the extent to which radioactive waste will increase and whether COVRA has sufficient capacity for this.

Pursuant to the Nuclear Facilities Fissile Materials and Ores Decree and the Basic Safety Standards for Radiation Protection Decree, the Minister of Infrastructure and Water Management has established a national programme for the management of spent fissile material and radioactive waste (hereinafter: the NPRA). This is an obligation arising from Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fissile material and radioactive waste. This programme was initially established in 2016. In addition, the NPRA must be updated every ten years. The Netherlands must have a new national programme no later than the end of 2025. For more information, see: Nationaal Programma Radioactief Afval | Platform Participatie.

The design of the permanent final disposal facility is not part of the scope of this EIA procedure Nuclear Energy Act (KEW). This topic is being examined in the roadmap for final disposal as part of the national programme for the management of radioactive waste.

G. Effects on the Westerschelde

Submitters raised questions about the effects on the Westerschelde and wonder, for example, what effect the temperature of the discharged cooling water will have on flora and fauna and what exactly the foam at the KCB outlet is.

The Supplement to the EIA Phase 1 provides further details about the temperature of the water and its discharge in paragraph 4.2.1.2. This indicates that the average temperature of the Westerschelde will not exceed the established limit of 2 degrees Celsius. Even in combination with the warming of the seawater due to climate change, the Westerschelde will not exceed 25 degrees Celsius as a consequence of the cooling

7 Nationale-Radioactief-Afval-Inventarisatie.pdf (covra.nl)

water discharge from the KCB. The effect of the cooling water on the Westerschelde remains within the limits.

The sea foam is created by the churning of seawater. Radiological discharges to surface water are well below the permitted discharge limits (Table 7-6 in the EIA Phase 1). The safety report shows that even if the maximum permitted amount of radioactive substances is discharged with the cooling water, the legal criteria for doses to the population are still met.

2.2. Effects of the views submitted and the advice of the NCEA on procedure

The requests for further information expressed in the views submitted and the advice of the NCEA have been incorporated by the Ministry of Climate Policy and Green Growth in a Supplement to EIA Phase 1.

The Supplement to the EIA Phase 1 consists of six chapters. Chapter 1 explains the purpose of this report. Chapter 2 provides additional information about general topics such as nuclear energy in the energy mix, the planning of this EIA in relation to the technical studies still to be carried out and the relationship between the phases of the project. This supplement also provides further information about the process of nuclear energy in the energy mix and the interrelationship between all (national) energy projects in Borssele and the associated distribution issue. Chapters 3 to 5 provide additional information about nature, water, radiation protection and nuclear safety. These chapters first present the advice from the NCEA (and, where relevant, further information from the views submitted), followed by this supplementary information. Chapter 6 describes the validity of the conclusions of EIA Phase 1.

Part B
Response to views submitted on the EIA Phase 1

This part of the response memorandum looks at the various questions and comments in detail. Part A of this response memorandum contains a brief summary of the most frequently asked questions and a response to the advice of the NCEA.

1. Decision-making KEW

What did the EIA and the draft legislative amendment contain?
Article 15a of the Nuclear Energy Act states that, as of 31 December 2033, the licence granted to EPZ to operate the Borssele nuclear power plant, insofar as it concerns the generation of nuclear energy, expires. The second paragraph of Article 15a stipulates that an application for a licence for the generation of nuclear energy at the Borssele nuclear power plant after 31 December 2033, will not be considered. To enable the extension of the operation for the generation of nuclear power after 31 December 2033, Article 15a needs to be amended. This amendment allows the licence holder of the Borssele nuclear power plant to apply for an amendment of the Nuclear Energy Act licence in order to continue the generation of nuclear energy after 2033. This legislative amendment is the first and necessary step towards a potential operating life extension beyond 2033.

The second step in extending the operating life for the generation of nuclear energy after 31 December 2033 is a decision on the (amended) licence for continuing the generation of nuclear energy after 2033 (hereinafter: LTO licence). Together with the legislative amendment, this (amended) licence constitutes permission for the operating life extension as provided for in the EIA Directive. The ANVS assesses whether the licence application complies with the legal framework and decides on the granting of this licence.

1.1. NCEA advice

In its advice (chapter 2), the NCEA asks for clarification of the status of a licence to be granted: is it for an indefinite term or not? This clarification can be provided in the legal text itself, in the explanatory memorandum, in policy documents or in some other way.

The Ministry of Climate Policy and Green Growth (KGG) has provided further explanation of the procedure followed and to be followed in the Supplement to the EIA Phase 1 and the explanatory memorandum.

1.2. Decision to be taken

1.2.1. Generic views

Views 101161477, 101194799, 101194829, 101230466, 101231217, 101245424, 101252627, 101286658, 101287327, 101317824, 101342331, 101461552, 101616243, 101635870, 101635889, 101637231, 101637385, 101638051, 101638254, 101638310, 101638539, 101644362, 101645136, 101645202, 101655394, 101658805, 101659544, 101660877, 101660905, 101662068, 101662551, 101665066, 101665672, 101669290, 101671036, 101671480, 101679244, 101680449, 101686493, 101697692, 101722937, 101723012, 101725255, 101729017, 101733619, 101733829, 101733899, 101733984, 101734060

Several submitters object to the proposed amendment of the Nuclear Energy Act to extend the operating life of the Borssele nuclear power plant. They call for the plant to be closed immediately or by 2033 at the latest. One submitter explicitly states that he has lost confidence in the government: the plan is contrary to previous government decisions.
Another submitter asks the minister to reconsider this ill-advised course of action.

Views 101177278, 101651796, 101652326, 101652447, 101653051, 101653171, 101654550, 101654725, 101654736, 101654785, 101655379, 101655426, 101655500, 101656175, 101657817, 101657841, 101660322, 101665168, 101665559, 101666057, 101666898, 101670588, 101670769, 101675059, 101675087, 101675481, 101675535, 101675738, 101678410, 101678456, 101678961, 101679045, 101683359, 1016833593, 101685711, 101686029, 101687954, 101688476, 101690084, 101690723, 101691673, 101692189, 101692445, 101697008, 101697028, 101697199, 101697570, 101698295, 101698308, 101698515, 101698909, 101704241, 101704531, 101705221, 101705697, 101707410, 101717030, 101723041, 101725408, 101725573, 101727075, 101727607, 101728317, 101728778, 101729472, 101729684, 101730063, 101730377, 101730397, 101730583, 101730883, 101730929, 101730968, 101734302, 102023800

Several submitters have questions about the procedure to be followed, some of whom find it confusing. One submitter wonders whether all these procedures are necessary. Some of the submitters do not understand why the decision on extending the operating life is not being postponed until the results of the technical feasibility studies are available.

Other submitters indicate that they believe the procedure should be 'reversed'. By this they mean: first investigate whether extending the operating life is technically possible and desirable, and then amend the legislation if necessary. They express the expectation that this different sequence will result in a more objective execution and evaluation of the technical studies.

One submitter wonders why the procedure is not being postponed until the results of the SALTO study are available.

The current Dutch Cabinet is positive about nuclear energy and intends to keep it as part of the energy mix. Keeping an existing nuclear power plant open therefore seems to be a quick and efficient solution. This is done carefully and can only be done if it is safe.

To guarantee this, we have procedures in place in the Netherlands that must be followed. This takes time and money, but it does lead to a fair and open process.
The procedure has been divided into two parts: a legislative amendment process with an initial EIA procedure, followed by a licence application and the second part of the EIA procedure. The government is committed to communicating clearly and transparently about how these procedures are conducted and what your input in the procedure can be.

This legislative amendment only concerns the KCB. An application for a licence from the ANVS can only be initiated after a legislative amendment. Any extension of the operating life of the KCB is only possible if it can be demonstrated in a licence application that it is safe to do so. For the operator of the KCB, awareness of a legislative amendment is relevant in order to carry out the technical feasibility studies required for the licence application. If the legislation is not changed, these studies would be superfluous. The lead time for the steps required to achieve an extension of the operating life – the preparation and consideration of the bill, the submission of any licence application, its assessment by the ANVS and the performance of any work on the nuclear power plant – does not permit deferring the legislative amendment until the results of the technical investigations are available. The Ministry of Climate Policy and Green Growth foresees that, given the duration of the procedures and the necessary studies, 8 years is a relatively limited period in order to enable an extension of the operating life.

This first phase of the EIA procedure concerns the amendment of the Nuclear Energy Act. In this EIA, the Ministry of Climate Policy and Green Growth examines the current and expected future environmental effects of keeping the Borssele nuclear power plant open for longer. The outcomes of the studies is taken into account in the decision-making.

This (EIA) procedure focuses on identifying the environmental effects in the current situation and providing an outlook for the future in support of the proposed legislative amendment. This EIA process and legislative amendment are not intended to serve as a decision on whether the operational lifetime of the plant will in fact be extended.

This part of the procedure concerns amendments to the Nuclear Energy Act. This does not yet mean that a decision has been made to keep the KCB open for longer.

The SALTO mission is separate from the legislative proposal but concerns the extension of the operating life itself. SALTO stands for ‘Safety Aspects of Long Term Operation’. This is a visit and investigation by international experts and is also referred to as a ‘mission’. The International Atomic Energy Agency (IAEA) coordinates these types of missions. The investigation at the Borssele nuclear power plant is being carried out at the request of the ANVS. A pre-SALTO visit took place in November 2024 in order to inform the operator of what still needs to be investigated and which activities still need to be carried out in order to ensure that the nuclear power plant meets the standards that will make possible a safe extension of the operating life. This pre-SALTO mission will be followed by a SALTO mission. The date of this mission is not yet known.

In order to be able to remain in operation for longer, the operator/licence holder must demonstrate in a subsequent procedure (second phase of the EIA procedure and licence application) that a longer operating life can be safe, given the standards applicable at that time. The independent authority ANVS assesses this as part of the operating life extension licence procedure.

Views 101645023, 101666202, 101727171

Submitters argue that (it appears that) the government has opted for an indefinite-term extension.

The Nuclear Energy Act licence for the Borssele nuclear power plant has been granted for an indefinite term. The safety of the plant's operation has been demonstrated for a specific period. At the moment, this is the case until the end of 2033.

When the legal restriction on the operation is lifted as a result of the amendment to Article 15a and the licence holder wishes to continue operating the plant after 2033, the operator must apply for an amendment of the existing licence and demonstrate that operation after 2033 is safe, it must specify the period for which it would apply, under what conditions, and what measures are necessary to ensure this. When processing the application for the necessary amendment of the licence, the ANVS will assess whether this is the case.

No new end date has been chosen in the Act, because setting an end date for the operation of a nuclear installation runs counter to the general framework of the Nuclear Energy Act.

Views 101717502, 101654736, 101655426, 101655500, 101656175, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101690274, 101697008, 101697028, 101698576, 101704241, 101704531, 101705221, 101717030, 101722750, 101722750, 101723041, 101727075, 101727607, 101729684, 101730063, 101730555, 101734302, 102023800

Submitters believe that the absence of an end date deprives parliament of the option to decide on closing the nuclear power plant.

One submitter explicitly requests that an end date be included in the Act. The submitter argues that it is unclear how long the nuclear power plant will remain open after its operating life has been extended.
One submitter asks for an end date to be set in the legislation that is the same as the date on which the legally required 10-yearly self-evaluation, the 10EVA, must take place. In other words, an end date in the legislation of 2043.

An end date in itself says little about the safety of the nuclear power plant. Even after 2033, the licence holder of the nuclear power plant will have to continue to demonstrate that the nuclear power plant continues to meet all legal and licence-related safety requirements. The nuclear power plant can and may only remain open if the ANVS concludes that this is safe. The ANVS oversees this. Parliament has no direct authority because monitoring compliance with the safety requirements is the responsibility of the independent ANVS. However, Parliament can always express its opinion on the desirability of continuing or discontinuing the generation of nuclear energy at the Borssele nuclear power plant.

The EIA Phase 1 did not assume a lifetime extension of a specific number of years, partly because the NCEA concluded that this information is simply not available and therefore cannot be assessed. The continued operation of the nuclear power plant is strictly limited to what is permitted by safety considerations and demonstrable through comprehensive safety analyses. The validity period of the safety analyses is specified in the Safety Report. Since the Safety Report is linked to the licence, the plant cannot remain open without valid safety analyses. At a minimum, a periodic safety evaluation is conducted every ten years. Thus, the term ‘indefinite term’ does not mean ‘forever’.

This works as follows: in Phase 1, the legislative amendment is addressed; in Phase 2, the existing licence, which has been granted for an indefinite term, is amended, but with a ‘lock on the door’. In other words, if no application is submitted for the licence amendment, or if the amendment is not granted, the generation of nuclear energy at the KCB must cease at the end of 2033. The safety of the nuclear power plant and of all systems, structures and components (SSCs) has been demonstrated in the safety report and underlying substantiation for an operating life of 60 years (2033). If the licence holder wishes to continue operating the nuclear power plant for longer, it will have to demonstrate that the installation is safe for a period longer than 60 years and that, taking into account further ageing, this will remain the case in the future. For this purpose, a so-called Long Term Operation (LTO-)process has been established which culminates in a licence application. In broad terms, the LTO licensing process requires the following steps:

- action plan for the technical studies,
- conducting safety analyses and studies,
- assessment of studies by ANVS,
- submission of licence application and Phase 2 EIA,
- ANVS submits a draft decision for public consultation and then takes a final decision on the application for a licence amendment.

In this licence application, the safety substantiation is submitted to ANVS for evaluation and decision-making.

No new end date has been chosen in the Act, because setting an end date for the operation of a nuclear installation runs counter to the general framework of the Nuclear Energy Act.

Views 101151461, 101152099, 101152263, 101153273, 101154343, 101155070, 101155599, 101156091, 101158254, 101160129, 101162579, 101164889, 101166406, 101168735, 101173576, 101173592, 101204612, 101242863, 101261022, 101275859, 101616243, 101663158, 101674882, 101675012, 101691234, 101722198, 101734506

Several submitters endorse the proposal to amend the legislation in order to enable a licence application for the Borssele Nuclear Power Plant. Several submitters consider nuclear energy to be a safe and constant source of energy production. One of them hopes that the extension of the operating life will be sorted out soon. Another indicates that they have never experienced any inconvenience from the nuclear power plant. The FANC points out that there are currently no obstacles to the proposed legislative amendment.

These views support the proposed legislative amendment and are duly noted.

1.2.2. Specific views

View 101698515

One submitter argues that an extension without an end date conflicts with maintenance frequencies, fuel procurement contracts, spatial planning for radioactive waste and the decommissioning of highly radioactive components.

An extension without an end date simply means that the nuclear power plant may, in theory, remain in operation for as long as it can be demonstrated that it is safe. It is up to the operator of the nuclear power plant to carry out maintenance, contracts and suchlike.

View 101717502

The submitter wonders why a single EIA with licences is not being prepared now.

This is in fact the procedure currently being followed, albeit in phases.

Case law from the European Court of Justice on the Lifespan Extension Doel (Belgium) project has shown that, at the time, everything from start (amendment of the legislation) to finish (granting of licences) should have been considered as a single project. This approach is now being followed, with a division of the competent authority between the two phases. EIA Phase 1 for the legislative amendment and EIA Phase 2 for the licence application. The EIA Phase 2 is a follow-up to EIA Phase 1: together, they will cover the entire EIA procedure.

Views 101645023, 101666202, 101727171

In their views, the submitters indicate that they believe that the ANVS is not the most logical body to assess the EIA Phase 2 and propose that it be assessed by an authority with broader environmental knowledge.

The ANVS has been designated under the Nuclear Energy Act as the competent authority for making decisions about licences under the Nuclear Energy Act, including those for which the licence application is made that require the submission of an EIA Phase 2. The ANVS assesses the licence application, including the accompanying appendices. It also has the option to call on the expertise of the NCEA when assessing the still to be prepared EIA Phase 2.

View 101722750

The submitter argues that the approach to the EIA procedure deviates from that of a standard project, as the actual assessment of effects will only take place in Phase 2.

In line with the Doel ruling (on the extension of the operating life of the Doel nuclear power plant in Belgium), it has been advised that the EIA procedure be started in phases at the time of the legislation amendment. We have now performed an exploratory study of the current environmental pressure being exerted by the nuclear power plant, including an outlook for the future. The EIA Phase 2 will be used to provide more detailed insight into the environmental consequences associated with the continuing generation of nuclear energy. Together, the EIA Phases 1 and 2 provide a complete overview of the environmental consequences.

View 101717502

The submitter argues that Parliament must take a decision based on incomplete information, given that the ANVS is the competent authority in Phase 2 and not Parliament.

At present, the environmental effects of the current situation have been identified as far as possible and potential environmental issues for the next phase have been identified. In preparation for the parliamentary decision on the Nuclear Energy Act revision, the exploratory EIA Phase 1 has identified the environmental consequences as far as this is possible.

The ANVS is the competent authority for granting licences and can only grant a licence for the extension of the operating life if all safety and environmental information is available and complete. The ANVS assesses applications for Nuclear Energy Act licences and makes a decision regarding the application. This bill for extending the operating life of the Borssele nuclear power plant follows that line.

View 101717502

The submitter wonders why Article 15a is not being repealed but replaced. It is also unclear to the submitter what is intended with Article 15a (4).

Several variants were considered for this legislative amendment. Repealing Article 15a of the Nuclear Energy Act was not considered to be a good option, as it could be perceived as direct consent for the extension of the operating life. This is because the Nuclear Energy Act licence for the Borssele nuclear power plant was issued for an indefinite term.

To ensure a smooth transition, it was decided to amend Article 15a of the Nuclear Energy Act. Following the amendment of Article 15a of the Nuclear Energy Act, the licence holder for the Borssele nuclear power plant can submit an application to amend the Nuclear Energy Act licence in order to continue the generation of nuclear energy after 31 December 2033. Article 15a (2) stipulates that to extend the operating life, research must be conducted into the environmental impact of continuing operations after 2033, and an updated safety report must be produced. This is intended to clarify how an extension of the operating life can be requested and how the request will be assessed.

Article 15a (4) stipulates that the licence holder may only continue to generate nuclear energy after 31 December 2033 if the ANVS has granted the licence. This ensures that, before 31 December 2033, the amendment of the licence must not only have been applied for (paragraph 1), but that the application – and the accompanying substantiation – must also have been assessed by the ANVS and a licence must be granted on that basis.

View 102023800

The submitter points out that the Nuclear Energy Act specifies a year for the generation of energy at the Borssele nuclear power plant and assumes that this was motivated by safety considerations.

An end date was originally included in the legislation for the Borssele nuclear power plant as a response to the political will at the time to bring an end to the generation of nuclear energy in the Netherlands. This end date was not motivated by safety considerations.

View 101698576

The submitter requests that the following be included in the legislation:

- *if safety requirements are not met or if compliance with the safety requirements is not verified in a timely manner, the licence granted will be suspended and no new licence can be applied for;*
- *other requirements such as safety requirements to be included in the legislation;*
- *evaluation of the legislation in view of increasing aggression from foreign powers.*

The submitter requests that interim evaluations be included in the legislation so that it can be determined whether the legislation still meets the requirements in the event of changed circumstances, such as the consequences of climate change

The amended Article 15a stipulates that the licence amendment must be granted before the licence holder can continue to generate nuclear energy after 2033. This means that the application and the substantiation must be assessed before 31 December 2033. This means that research must be conducted into the environmental consequences of continuing operations after 2033 and that an updated safety report must be produced. The amendment of Article 15a Kew also makes clear that Article 15b Kew sets the assessment framework for evaluating the application for a (amended) licence.

The ANVS is also responsible for supervising compliance with the rules set out in the Nuclear Energy Act. If the safety requirements are not met, the ANVS has the authority to initiate enforcement measures.

The licence holder's obligation to carry out a ten-yearly safety assessment is established in Article 11 of the Regulation on Nuclear Safety and Nuclear Installations.

Views 101645023, 101666202, 101727171

The submitters ask questions about the intended term of the operating life extension and refer to the advice of the NCEA *on the NRD.*

In its advice on the NRD, the NCEA proposed the ‘exploratory’ approach. It advised against using different time frames in the study scenarios in this phase, because the legislation is currently being amended and no technical feasibility studies have yet been carried out. In the second step - the licence application for the continued generation of nuclear energy - the question of how much longer the KCB can remain open is explored.

View 101717502

The submitter points out that the EIA does not describe the (environmental) effects of the Covenant, such as the efforts by Delta and Essent to realise an additional saving of 0.47 Mton CO2/per year and the establishment of a fund by Delta and Essent to support innovative projects that contribute to the transition to sustainable energy system.

The covenant referred to by the submitter contains agreements between the government, the shareholders and the operator of the nuclear power plant. It is not a plan or decision for which an EIA procedure must be followed.
The legislative amendment and a possible application for an operating life extension do however require an EIA procedure. The EIA Phase 1 addresses the environmental pressure that the nuclear power plant currently exerts on its surroundings and provides an outlook for the future.

1.3. The Aarhus Convention in relation to the decision to be taken

1.3.1. Generic views

Views 101305533, 101635870, 101635889, 101637231, 101637385, 101637740, 101638051, 101638254, 101638310, 101638539, 101644362, 101645136, 101645202, 101647937, 101655394, 101659544, 101660877, 101660905, 101662551, 101665066, 101666202, 101669290, 101671036, 101671480, 101680449, 101686493, 101689648, 101690274, 101697692, 101725255, 101727171, 101729017, 101729684, 101734060

Several submitters argue that the decision to extend the operating life has effectively already been taken, even though no public consultation has yet taken place. Submitters, including the municipality of Borsele, highlight compliance with the Aarhus Convention, specifically emphasising public consultation and the involvement of elected representatives at both local and national levels.

The KCB can only continue to generate nuclear energy once the ANVS has granted the necessary licence. However, the ANVS cannot consider an application for this until the proposed legislative amendment has come into force.

In addition to the steps prescribed in the EIA procedure that are being followed for the bill, information evenings have been organised and discussions have been held. During these information evenings, people had the opportunity to learn more about the project. The national government is also consulting with other authorities in order to achieve the broadest possible consensus with regard to the outcome of the project. Furthermore, environmental information, including the environmental impact report, is publicly accessible within the applicable legal framework. Thus, we see no reason to assume that the process followed does not comply with the Aarhus Convention.

Views 101645023, 101666202, 101698515, 101727171

A number of submitters indicate that despite the findings of the Aarhus Convention Compliance Committee from 2019, following the 2013 licence amendment that allowed a lifespan extension from 2013 to 2033, no EIA has been performed for the operation of Borssele from 2013 to 2033. The 10-year safety assessment (10-EVA) must be viewed as a reassessment of the operation of nuclear installations. This should have involved public participation, but that did not happen. Data relating to the environmental impact during that period, as well as the evaluation, must be included in this procedure.

The design operating life extension (LTO licence) from 2013, which updated the safety report and resulted in the granting of an (amended) licence, concerned an activity that could be carried out without any physical alterations. For that reason, no EIA was indeed conducted at the time[8]. The Administrative Jurisdiction Division of the Council of State confirmed the decision not to conduct an EIA in 2014. With this ruling by the Administrative Jurisdiction Division of the Council of State, the LTO licence became irrevocable. For the 10EVA13, public consultation was possible under the umbrella of the 2016 revision licence. The findings of the Aarhus Compliance Committee from 2018 and the 2021 decision of the Meeting of the Parties (the parties to the Convention who meet every three years) do not change this.

The EIA includes a description of the history of the extension of the operating life and explains why an EIA is prepared. The EIA Phase 1 provides a description of the current situation.

8 In paragraph 85 of its findings on LTO Borssele (ACCC/C/2014/104), the Compliance Committee itself states that Article 6(6) of the Aarhus Convention does not require an EIA, but does require that sufficient environmental information be provided.

At the time of writing the response memorandum, the 10EVA23 has been completed and is in the implementation phase. This means that the ANVS's assessment of the implementation plan (which includes a number of improvement measures) has been completed and (once formal approval has been granted) EPZ can soon begin implementing the improvement measures.

1.3.2. Specific views

View 101717502

The submitter requests that the initiator (Ministry of Climate Policy and Green Growth) revises the EIA and then makes it available for public inspection again. The reason for this is the changed structure of the EIA and the fact that no views could be submitted before the preparation of the EIA.

In the response memorandum to the views submitted on the NRD, the revised approach for this EIA Phase 1 is described. This response memorandum has been published and is available for everyone to read. Everyone has also been able to submit their views on this EIA Phase 1, thereby ensuring effective public participation.

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

The submitters believe that the EIA contains politically influenced statements and request that the Minister ignores them.

The EIA is not a political document, but is intended to provide independent information on the basis of which political decisions can take place. Where statements appear to be politically influenced, the Ministry of Climate Policy and Green Growth has provided further explanation or clarification and included these in the Supplement to the EIA Phase 1. The Minister of Infrastructure and Water Management, in his capacity as the competent authority in the EIA procedure, assesses whether all essential information is available.

Views 101666202, 101727171

Submitters request that the role of the periodic safety analysis (10EVA) be expanded by accompanying it with the public participation required under the Aarhus Convention.

The amendment to the legislation relates to enabling the continued generation of nuclear energy at the KCB after 2033. In the licence amendment, the operator will have to demonstrate the safety of the proposed future design operating life and set out the environmental effects.

With regard to the10EVA23, that is separate from the legislative amendment and any subsequent application for an extension of the operating licence. The effects of the measures from 10EVA23 will, where necessary, be included in EIA Phase 2.

Views 101645023, 101666202, 101727171

Submitters recommend removing the statements about "existing right" from the EIA in order to avoid confusion. They argue that introducing "existing right" prior to the EIA Phase 2 is strongly at odds with the rights regarding public participation under the Aarhus Convention.

The text in the EIA Phase 1 is intended to indicate that "existing right" can influence any application for a licence to extend the operating life. However, because a change in the legislation in itself has no bearing on the existing rights of the KCB, this was not addressed in detail in the EIA. In Phase 2, when the licence application is submitted, insight will be provided regarding the existing rights and the licences that will be required. Public participation is possible under the umbrella of the licence application.

2. Energy mix, projects in the region

2.1. NCEA advice

The Commission advises that the results of the broad environmental consideration of the necessity of nuclear energy and its place in the national energy mix be made available and published in a timely manner. This is necessary in order to make a well-substantiated decision regarding the legislative amendment. This also applies for the results of the research into the interrelationship between all (national) energy projects in Borssele and the related distribution issue.

The Ministry of Climate Policy and Green Growth places the environmental consideration of the need for nuclear energy in a separate procedure. At the end of 2024, the Ministry of Climate Policy and Green Growth (KGG) issued a call for tenders and awarded a contract for a study "nuclear energy in the energy mix". This study will map out the environmental effects of a number of scenarios for nuclear energy. The results will be published in a separate report, which is expected to be released in the second quarter of 2025. Participation regarding this report is possible in parallel with the participation regarding the Draft NRD New Construction.

The separate report "nuclear energy in the energy mix" will also be submitted to the Lower and Upper Houses as information when the legislative amendment to the Nuclear Energy Act is presented to both Houses.

Furthermore, the Ministry of Climate Policy and Green Growth is looking at how to distribute the limited room available for all energy projects in Borssele. This distribution issue is currently being worked out in more detail by all the relevant parties (government, business, port authority, etc.). During the decision-making process on the bill, the then-current situation regarding the interrelationship and distribution issue can be reported.

2.2. Energy mix, usefulness and necessity of nuclear energy, renewable energy

2.2.1. Generic views

Views 101161477, 101175917, 101286658, 101286921, 101287128, 101635870, 101635889, 101637231, 101637385, 101638051, 101638254, 101638310, 101638539, 101640103, 101645023, 101645136, 101645202, 101651796, 101652326, 101652447, 101653051, 101653171, 101654725, 101654736, 101654785, 101655379, 101655394, 101655426, 101655500, 101656175, 101657817, 101657841, 101658805, 101659544, 101660322, 101662547, 101662551, 101665168, 101665559, 101666057, 101666202, 101666898, 101670588, 101670769, 101673936, 101675059, 101675087, 101675481, 101675535, 101675738, 101678456, 101678961, 101679045, 101679244, 101680449, 101683359, 101685711, 101686029, 101686493, 101687954, 101688476, 101690084, 101690723, 101691673, 101692189, 101692445, 101697008, 101697028, 101697199, 101697570, 101697692, 101697938, 101698295, 101698909, 101704241, 101704531, 101705221, 101705697, 101707410, 101717030, 101722750, 101722937, 101723041, 101725255, 101725408, 101725573, 101727075, 101727171, 101727607, 101728317, 101728778, 101729017, 101729472, 101729684, 101730063, 101730377, 101730397, 101730583, 101730883, 101730929, 101730968, 101732868, 101733829, 101734060, 101734302, 101734506, 102023800

Several submitters question the usefulness and necessity of nuclear energy, primarily citing its disadvantages. Some of the submitters feel that this substantiation is lacking. The role of nuclear energy in the energy mix envisaged by the Dutch Cabinet is not included in the EIA. However, references are made to other policy documents and to documents that are still being worked on.
One submitter wonders whether the KCB will play a meaningful role in the future, given its contribution of 0.7% to the energy mix.
One submitter indicates that the paragraph on nuclear energy in the mix (EIA paragraph 2.2) should be reduced to 'substantiation will be provided later'.
One submitter wonders about the short- and long-term benefits of nuclear energy.

The Ministry of Climate Policy and Green Growth places the environmental consideration of the need for nuclear energy in a separate procedure. At the end of 2024, the Ministry of Climate Policy and Green Growth (KGG) issued a call for tenders and awarded a contract for a study "nuclear energy in the energy mix". This study will map out the environmental effects of a number of scenarios for nuclear energy. The results will be published in a separate report, which is expected to be released in the second quarter of 2025. The results will be available prior to the decision by the Council of Ministers on submitting the legislative proposal to the Lower House.

Technical and financial feasibility studies for extending the operating life have not yet been carried out. Phase 1 of the procedure centres on the legislative amendment that makes it relevant for the operator to conduct these studies.

Views 101158838, 101159593, 101161477, 101174442, 101175917, 101194799, 101194829, 101207413, 101231217, 101245424, 101265978, 101287128, 101317824, 101342331, 101461552, 101640103, 101641871, 101654550, 101654736, 101655197, 101655426, 101655500, 101656175, 101657841, 101658805, 101659544, 101662068, 101662547, 101665559, 101666057, 101666202, 101670588, 101670769, 101671480, 101675481, 101675535, 101675738, 101678456, 101679045, 101679244, 101683359, 101686493, 101687954, 101690084, 101691676, 101697008, 101697028, 101697692, 101698515, 101704241, 101704531, 101705221, 101717030, 101722750, 101723041, 101727075, 101727171, 101727607, 101729684, 101730063, 101734302, 102023800

Several submitters ask the State to focus on renewable forms of energy (wind, solar, hydroelectric, geothermal). This must be sufficient for the electrification of industry, for example. According to the submitters, nuclear energy — and extending the operational life in particular — impedes the growth of renewable energy sources.
One submitter refers to the book 'Energietransitie, klimaatbeleid & duurzaamheid' (Energy transition, climate policy & sustainability).
One submitter recommends introducing a legislative amendment to promote the local sharing of locally generated energy from renewable sources.

The Ministry of Climate Policy and Green Growth will include the broad environmental consideration of the necessity of nuclear energy in the procedures for new nuclear power plants. At the end of 2024, the Ministry of Climate Policy and Green Growth issued a call for tenders and awarded a contract for the study "nuclear energy in the energy mix". The results will be published in a separate report that will be available before the Council of Ministers takes a decision on the bill. This separate report will also be submitted to the Lower and Upper Houses for information when the legislative amendment to the Nuclear Energy Act is presented to both Houses.

2.2.2. Specific views

View 101722750

One submitter points out that parliamentary committees in Germany have concluded that accelerating the phase-out of nuclear energy will not jeopardise climate targets.

The Dutch government sees advantages in nuclear energy because it generates a great deal of energy in a small area. It supplements wind and solar energy.

The Ministry of Climate Policy and Green Growth will provide a broader environmental consideration of the necessity of nuclear energy within the procedures for new nuclear power plants. At the end of 2024, the Ministry of Climate Policy and Green Growth issued a call for tenders and awarded a contract for the study "nuclear energy in the energy mix". The results of this will be published in a separate report that will be available before the decision is taken on the bill.

View 101717502

The submitter points out that the contribution of the nuclear power plant during so-called 'dunkelflautes' (editor's note: a longer period during which the sun does not shine and there is no wind) is limited, contrary to what is stated in the EIA. The submitter cites TenneT's Adequacy Outlook.

Paragraph 2.2 of the EIA Phase 1 begins with a consideration of why nuclear energy can deliver a valuable contribution to the Dutch energy mix. This consideration gives a one-sided picture of the role of nuclear energy in the energy mix. The situation is more nuanced and needs to be expanded further. The usefulness and necessity of nuclear energy in the Dutch energy mix will be further explained in a supplementary study by the Ministry of Climate Policy and Green Growth. This study will also take a closer look at the so-called ‘dunkelflautes’.

Views 101194799, 101194829, 101275859, 101640103, 101698806, 101717502, 102023800-8, 101194829-10, 101194799-10

Several submitters address the issue of the electricity supply and grid stability.
One submitter argues that the phasing out of fossil fuels will jeopardise the electricity supply.
Two other submitters oppose keeping the nuclear power plant open for longer because of the serious strain on the electricity grid caused by the quantity of nuclear energy in combination with the current use of wind turbines and solar panels.
One submitter points out that the so-called 'load following operation' (editor's note: adjusting the power supplied to demand) is not really possible with the type of nuclear power plant in Borssele.

The phasing out of fossil fuels will be offset as much as possible by obtaining energy from green sources such as wind, solar and, where possible, also nuclear energy. At present, the nuclear power plant has a stable place in the current energy grid.

In principle, a nuclear power plant can be deployed flexibly. However, this takes longer with an older nuclear power plant such as the KCB than it does with a newer model.

View 101717502

The submitter quotes a paragraph from the EIA stating that, in 2022, the gas price led to greater energy generation from coal. This was due to geopolitical tensions. The submitter then argues that nuclear energy is not immune to geopolitical developments either.

The EIA Phase 1 indicates that a geopolitical development led to a shift from gas to another fossil fuel. We are aware that no form of energy is immune to geopolitical developments, which is why the Ministry of Climate Policy and Green Growth is committed to exploring multiple energy sources.

View 101686493

In her view, the submitter notes that the impression is wrongly given that nuclear energy is a solution to the climate problem. The submitter then mentions several other options that contribute to solving the climate problem, such as reducing flying, focusing on public transport and adopting a vegan diet.

The Ministry of Climate Policy and Green Growth will provide a broader environmental consideration of the necessity of nuclear energy within the procedures for new nuclear power plants. At the end of 2024, the Ministry of Climate Policy and Green Growth issued a call for tenders for the study "nuclear energy in the energy mix". This study will map out the environmental impact of various scenarios for nuclear energy. The results will be available prior to the decision-making by the Council of Ministers on submitting the legislative proposal to the Lower House.

The National Energy System Plan outlines the strategic choices for the future of the energy system through to 2050. In addition to maximising the supply of sustainable energy (including nuclear), energy savings are also identified as a core element of energy policy. To achieve the CO_2 reduction targets, efforts are needed to increase the supply of low-CO_2 energy as well as to reduce energy consumption.

The other examples you mention do not fall within the scope of this project.

Views 101175917, 101194799, 101194829, 101317824, 101662551, 101730555

Submitter points out that there should (also) be investment in saving energy. Extending the operating life hinders energy saving.

This procedure is about possibly keeping an existing nuclear power plant generating energy, not about possible energy savings in the Netherlands. The Government of the Netherlands is investing in various policy fields related to energy saving, including the Nationaal Programma Energiebesparing (National Energy Saving Programme).

2.3. Projects in the region - including new construction

2.3.1. Generic views

Views 101651796, 101652326, 101652447, 101653051, 101653171, 101654725, 101654736, 101654785, 101655379, 101655426, 101655500, 101656175, 101657817, 101657841, 101660322, 101665168, 101665559, 101666057, 101666898, 101670588, 101670769, 101675059, 101675087, 101675481, 101675535, 101675738, 101678456, 101678961, 101679045, 101683359, 101685711, 101686029, 101687954, 101688476, 101689648, 101690084, 101690723, 101691673, 101692189, 101692445, 101697008, 101697028, 101697199, 101697570, 101698295, 101698308, 101698909, 101704241, 101704531, 101705221, 101707410, 101717030, 101723041, 101725408, 101725573, 101727075, 101727607, 101728778, 101729472, 101729684, 101730063, 101730377, 101730397, 101730583, 101730883, 101730929, 101730968, 101734302

A number of submitters, including the municipality of Borsele, point to the various projects that must be realised in the same area, such as the addition of new nuclear power plants and the various ‘wind on land’ projects (de Borsele Energiehub). These projects place significant demands on the limited physical space, demand capacity on the electricity grid and have an impact on the surrounding environment. They argue that handling projects as isolated procedural elements is inadequate and point to the cumulative effects on the landscape, environment and liveability.

Some of these submitters miss a clear overview of the projects in the region and find it incomprehensible that the Ministry of Climate Policy and Green Growth does not have this overview either. They refer to the following national projects (380-kV Zeeuws-Vlaanderen and 150-kV Zeeuws-Vlaanderen high-voltage projects, LNG landing) and known private projects (ammonia storage, hydrogen plant(s), battery storage, Central-Gate). It should be noted that the nearby oil refinery has its own jetty adjacent to the nuclear power plant, and the US Army utilises the port for the supply of military equipment.

The Ministry of Climate Policy and Green Growth is considering how to distribute the limited room available for all energy projects in Borssele. During the decision-making process on the bill, the then-current situation regarding the interrelationship and distribution issue can be reported.

The Ministry of Climate Policy and Green Growth also recognises the importance of coherence between different procedures and the broader strategic spatial planning of the area. Coordination is taking place on this, including with local authorities, and also between the procedures within Zeeland.

The proposed legislative amendment merely enables the operator of the nuclear power plant to submit an application for an extension of the operating life in order to continue the generation of nuclear energy and for this application to be considered by the ANVS. In EIA Phase 1, the environmental effects of current operations are investigated, and points for attention are formulated for the EIA Phase 2, taking into account possible threshold values that may become relevant. Where necessary, the interrelationship with existing and pending projects will be taken into account in EIA Phase 2.

Views 101154343, 101156091, 101158254, 101231217, 101287128, 101317824, 101461552, 101640103, 101654736, 101655426, 101655500, 101656175, 101657841, 101659544, 101662547, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101692109, 101697008, 101697028, 101698295, 101698308, 101698515, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101730377, 101730397, 101730555, 101730583, 101732868, 101734302

Several submitters have provided comments and/or advice in their views regarding the possible construction of new nuclear power plants. Submitters consider the idea of the construction of a new nuclear power plant to be outdated: it takes too long and is too expensive.
Other submitters indicate that the EIA should address the interrelationship between the extension of the operating life and the new nuclear power plants to be built, specifically addressing radiation and safety distances.
Another submitter points out that, in 2010, commercial parties faced numerous uncertainties with regard to the construction of a new nuclear power plant, which is why it did not proceed. The submitter wonders whether these uncertainties are no longer relevant.

This current procedure concerns the amendment of the Nuclear Energy Act that would enable an applicable to be submitted for a licence to continue the generation of nuclear energy at the existing Borssele nuclear power plant after 2033. The operating life extension of the Borssele nuclear power plant can take place in reasonable isolation: after all, the plant is already in operation. However, the EIA does identify potential future environmental sticking points with regard to possible new nuclear power plants, such as space requirements, integration into the high-voltage grid and possible environmental effects.

At this stage, it is not yet clear where the new nuclear power plants will be located. Following the completion of the EIA preferred locations for new nuclear power plants and the Integrated Impact Analysis, the Minister for Climate Policy and Green Growth will make a decision about the preferred location. All information about new nuclear power plant construction can be found on https://www.rvo.nl/onderwerpen/bureau-energieprojecten/lopende-projecten/nieuwbouw-kerncentrales or on the website of Programmadirectie Kernenergie (Nuclear Energy Programme Directorate): www.overkernenergie.nl.

2.3.2. Specific views

View 101705697

The submitter points out that both the national government and EPZ have submitted a number of views opposing projects of a sustainable nature within the Sloe area. The submitter would like to know whether the national government considers the development of the energy hub to be a threat to its plans for nuclear energy.

The Ministry of Climate Policy and Green Growth is considering how to distribute the limited room available for all energy projects in Borssele. During the decision-making process on the bill, the then-current situation regarding the interrelationship and distribution issue can be reported.

View 101689231

The submitter argues that extending the operating life can go hand in hand with the expansion of the 380 kV grid.

The Borssele nuclear power plant is connected to the adjacent 380 kV substation. An expansion for the KCB is not necessary.

Views 101692109, 101692602

Submitters argue that there is insufficient insight into the effects because new construction has not been taken into account.

The possible new nuclear power plants are not yet certain and are therefore not considered as autonomous development in EIA Phase 1 (see also https://www.rvo.nl/onderwerpen/bureau-energieprojecten/lopende-projecten/nieuwbouw-kerncentrales). However, the EIA Phase 1 does address potential future environmental sticking points related to possible new nuclear power plants, such as space requirements, integration into the high-voltage grid and possible environmental effects.

The interrelationship between a potential extension of the operating life and possible new nuclear power plants is described in the draft scoping and detail level memorandum, which is expected to be published before the summer of 2025.

If the location suitable for the new construction is known in EIA Phase 2, it can be included in EIA Phase 2 in the cumulative effects.

View 101286921

The submitter argues that if the KCB is granted a licence extension, an end date must also be included for the new nuclear power plants.

The new nuclear power plants are part of a different procedure.

No end date has been set for these nuclear power plants. Currently, only the KCB has a statutory end date, but this does not provide a framework for including an end date for any potential new nuclear power plants.

View 101166406

The submitter proposes that thorium reactors be chosen.

Within the current procedure, we focus on the possibility of keeping the KCB open - a nuclear power plant running on uranium. The Ministry of Climate Policy and Green Growth is investigating the possibilities regarding other reactors in a Programme Approach for SMRs. Some of these reactors have the capacity to run on a different fuel.

Views 101152099, 101152263, 101160129, 101275859

Several submitters indicate that they are in favour of building new nuclear power plants.

These views have been duly noted.

2.4. Compensation plan and Borsele Conditions

2.4.1. Generic views

Views 101698295, 101698308, 101730377, 101730397, 101730583

Submitters request that the Ministry include the Borssele compensation plan and the conditions of the Borselse Voorwaardengroep (Borsele Conditions Group) in the EIA. The submitter would like to hear from the minister about how these will be taken into account.

The process surrounding the compensation plan is being organised by the municipality, which bears the primary responsibility for it.

The municipality has asked a group of residents to indicate the conditions under which they should find energy projects in the region acceptable. These Borsele Conditions were set out by the municipal council in January 2024. These conditions also address compensation and nuisance reduction in the region.

Furthermore, a national-regional working group has been established to oversee discussions on investments in the region if the preferred decision is for new construction in the Sloe area. The compensation plan will be included in these discussions (between the national government, municipality of Borsele and Province of Zeeland) about nuclear energy in general as well as about the other energy projects.

3. Environmental impact report: approach and structure

What was the approach in the EIA and why?
The EIA accompanying the bill to amend the Nuclear Energy Act did not examine any alternatives, but an exploratory study was carried out in accordance with the advice of the NCEA. This exploratory study provided an overview of the current environmental situation around the KCB. Where possible, an extrapolation (forecast) was made for the period after 2033. This led to environmental issues for consideration and a study agenda for Phase 2.

3.1. Alternatives, including the zero alternative

3.1.1. Generic views

Views 101645023, 101651796, 101652326, 101652447, 101653051, 101653171, 101654725, 101654736, 101654785, 101655379, 101655426, 101655500, 101656175, 101657817, 101657841, 101660322, 101665559, 101666057, 101666202, 101666898, 101670588, 101670769, 101675059, 101675087, 101675481, 101675535, 101675738, 101678456, 101678961, 101679045, 101683359, 101685711, 101686029, 101687954, 101688476, 101690084, 101690723, 101691673, 101692189, 101692445, 101697008, 101697028, 101697199, 101697570, 101698909, 101704241, 101704531, 101705221, 101705697, 101717030, 101722937, 101723041, 101725408, 101725573, 101725923, 101727075, 101727171, 101727607, 101728317, 101729472, 101729684, 101730063, 101730883, 101730929, 101730968, 101733829, 101734060, 101734302, 102023800

Submitters indicate in their views that the EIA must describe a situation in which 'the proposed activity' does not go ahead (the zero alternative).
This zero alternative is the reference situation against which the effects must be compared. Looking only at the current situation with an outlook for the future is too narrow an interpretation of the NCEA *'s NRD advice.*
The submitters therefore request that the EIA examine a zero alternative and different alternatives for extending the operating life, in addition to the approach proposed by the NCEA.
According to the submitters, this should then lead to a revision of Chapter 13, 'conclusions'.

For EIA Phase 1, the Ministry of Climate Policy and Green Growth has mapped out the current situation and identified potential environmental sticking points in the future compared to a zero scenario without the existing nuclear power plant. This 'Exploration' was carried out on the advice of the NCEA, pending the results of technical studies at the nuclear power plant.

In its NRD advice (paragraph 3.2 of the NRD advice), the NCEA indicated that the results of the ongoing technical studies (which will not be known for several years) are necessary in order to be able to make statements about an extension for a specific number of years. For this reason, it recommended that no alternatives be studied in EIA Phase 1, but rather to examine the environmental effects of the current situation and to provide a high-level outlook for the future, the period after 2033. This recommendation has been adopted.

The EIA Phase 1 is an exploration of the current environmental effects of the KCB, with an outlook of what this could mean in the future. Phase 1 examined the current environmental pressure being exerted by the nuclear power plant and provides an outlook on potential environmental sticking points for Phase 2. Thus, in accordance with the NCEA's advice, no alternatives were investigated in this phase. The alternatives put forward in the views on the NRD were not investigated in the EIA Phase 1.

The exploratory study provides a (brief) description of the reference situation (EIA Phase 1, paragraph 2.5). This paragraph provides a high-level overview of the effects after 2033 if the KCB is closed. Paragraph 8.5 and chapter 13 of the EIA Phase 1 contain an extrapolation of the current environmental load in order to examine the likelihood of breaches of thresholds in the future.

When a new licence application is submitted, an assessment is made of how much longer the KCB could potentially remain open. The EIA Phase 2 will then actually examine the effects in relation to the reference situation in 2034 and beyond.

In the Supplement to the EIA Phase 1, the Ministry of Climate Policy and Green Growth elaborates on a number of statements (lack of nuance or erroneously missing source references) flagged in the submitted views.

The Ministry of Climate Policy and Green Growth is addressing the broader environmental consideration of the necessity of nuclear energy in a separate procedure. At the end of 2024, the Ministry of Climate Policy and Green Growth issued a call for tenders and awarded a contract for the study "nuclear energy in the energy mix". The results of this study must be published in a separate report, which will be made available in a timely manner and submitted to the Houses as information when the amendment of the Nuclear Energy Act is presented.

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

Submitters argue that the reference situation for determining the effects must be 2033, the moment when the 'proposed activity' should start.

The EIA Phase 1 maps out the current environmental pressure exerted by the nuclear power plant and then provides an outlook for the future. The year 2033, which marks the current end date for nuclear energy production at the KCB, serves as a key reference point in EIA Phase 1 for assessing the effects at that moment in time. The EIA Phase 1 identifies environmental points for attention that may be an obstacle for the period 2033. The Supplement to the EIA also includes some additional text about these potential environmental points for attention and how any negative effects can be mitigated.

3.1.2. Specific views

Views 101678410, 101723283

The submitter points out that the EIA states that the KCB does not have environmental permits and asks whether this will be corrected.
Another submitter believes that the building permit was granted unlawfully in the 1960s and wonders whether the KCB can continue to operate.

For the licence application (Phase 2 of this procedure), it is of course necessary to clarify whether and, if so, which (new) permits are required to enable an extension of the operating life.

Under the Nuclear Energy Act, all non-radiological environmental aspects of nuclear power plants are considered and regulated in the Nuclear Energy Act licence. For this reason, no separate 'environmental permit' is required under the Environment and Planning Act. This is different for non-radioactive direct discharges into surface water and for 'Natura 2000 activities', for which, where applicable, separate permits are required.

The Ministry of Climate Policy and Green Growth is not addressing the question of whether the building permit issued in the 1960s was lawfully granted. Prior to a decision-making on extending the operating life, the licence application, under Article 11 Bkse, must include a summary of the specific permits that have been granted.

View 101722750

The submitter considers the description of the effects to be unclear. He believes that no clear distinction is made between legally protected aspects (e.g., water, soil, and nature) and non-legally protected factors, such as noise. The submitter asks for a distinction to be made between radiological and non-radiological aspects.

The EIA Phase 1 explored the environmental pressure exerted by the current nuclear power plant and provides an outlook for the future. The EIA Phase 2 will provide a more detailed picture of the environmental effects of a potential extension of the operating life. Together, EIA Phases 1 and 2 provide a complete overview of the environmental consequences.

In line with the EIA methodology, the environmental information is presented in an even-handed manner. No distinction is made between aspects and factors, and no weighting is given to the effects. The desirability of effects is left to the discretion of the government ministers.

The EIA Phase 1 provides a description of the radiological and non-radiological aspects for each environmental aspect.

View 101678410

The submitter requests that EIA Phase 2 be started and that planned activities (such as new nuclear power plants, hydrogen plant) and (climate) developments (such as rising sea level and water temperature) be included.

In EIA Phase 2, the elements you refer to will be included, insofar as decisions have been made regarding the projects.

3.2. Revision of the EIA: content, text, source references

3.2.1. Generic views

Views 101245424, 101287128, 101645023, 101654736, 101655426, 101655500, 101656175, 101657841, 101658805, 101665559, 101666057, 101666202, 101670588, 101670769, 101675481, 101675535, 101675738, 101678410, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101717502, 101722937, 101723041, 101727075, 101727171, 101727607, 101729684, 101730063, 101733829, 101734060, 101734302, 102023800

Several submitters suggest various areas where they believe the EIA should be amended and supplemented (such as ageing management, safety, radioactive waste and recreation), and that the effects should be further quantified. They consider the structure of the EIA to be unclear

Some of these submitters also request that clearer and publicly accessible source references be included in the EIA so that statements can be verified. For example, the EIA refers to the RIVM website without providing further source references, and to EPZ's annual environmental reports; however, these reports cannot be found on the EPZ website.

Some of these submitters feel that the language used in the EIA is not (sufficiently) objective or clear enough and is too technical. For example, it states that 'this waste is *transported from France to COVRA', but the submitter does not consider this to be factual enough because it is not necessarily the same waste that was transported from the KCB to France.*

The views included several points that were not adequately addressed in the EIA Phase 1. The NCEA also submitted additional points for the EIA. This supplement has been prepared and published concurrently with this response memorandum. Various statements made in the EIA have been nuanced or explained further by the Ministry of Climate Policy and Green Growth in the Supplement to EIA Phase 1.

The EIA will then be further supplemented in Phase 2 during the licence application process, which will examine the environmental effects in greater detail.

The EIA Phase 1 has been written in as clear a manner as possible. Technical descriptions cannot be avoided for some elements. Because of this, the text can be complicated for a less technically-strong reader. The EIA Phase 1 therefore includes a non-technical summary.

In response to your view, the EIA has been screened for statements without specific source references and, where possible, these have been added in the Supplement to EIA Phase 1. It should be noted that the RIVM is part of the Dutch government, so there is no reason to doubt the accuracy of its website. EPZ's annual environmental reports are published on the ANVS website.

In the EIA Phase 1, the environmental effects have been described as objectively as possible and, where possible, assessed against the permitted frameworks. Where commonly used terms are used to describe specific elements, this has been done without compromising the objective intent of the EIA. The environmental effects have been quantified as much as possible by basing the research on existing (measurement) data and by assessing the effects identified against permitted and/or statutory frameworks.

With regard to the structure of the EIA Phase 1. Paragraph 6.6 of the EIA Phase 1 describes the environmental effects insofar as they relate to nature and associated biotic themes. The (abiotic) environmental effects on soil and water, as well as their interrelationship with recreation and other socio-economic developments, are described later in the EIA.

The submitter is correct in stating that an equivalent volume of vitrified waste is indeed transported to the Netherlands and stored at COVRA. However, the source of this waste makes no difference for its transport and storage, which is why it is not specifically mentioned.

Views 101651796, 101652326, 101652447, 101653051, 101653171, 101654725, 101654736, 101654785, 101655379, 101655426, 101655500, 101657817, 101657841, 101660322, 101665559, 101666057, 101666898, 101670588, 101670769, 101675059, 101675087, 101675481, 101675535, 101675738, 101678456, 101678961, 101679045, 101683359, 101685711, 101686029, 101687954, 101688476, 101690084, 101690723, 101691673, 101692189, 101692445, 101697008, 101697028, 101697199, 101697570, 101698909, 101704241, 101704531, 101705221, 101717030, 101723041, 101725408, 101725573, 101727075, 101727607, 101729472, 101729684, 101730063, 101730883, 101730929, 101730968, 101734302

Several submitters believe that the EIA does not adequately reflect the actual effects. They believe that the EIA to be a paper exercise disconnected from reality. The environmental effects have generally been calculated rather than measured.

Validated calculation methods were used in the EIA Phase. This validation is based on measurements. A calculation method is necessary to predict future effects. Where possible, both actual and permitted values are presented in the EIA. The study was performed by Arcadis, an independent consultancy firm.

In its interim review advice, the NCEA identified three areas for which more information should be provided in the EIA Phase 1. This information has been compiled in a Supplement to the EIA Phase 1. Various statements made in EIA Phase 1 have been nuanced and elaborated on further in the Supplement to EIA Phase 1. The Supplement to the EIA also includes further source references, allowing statements to be verified.

4. Environmental effects and other effects

4.1. Nuclear safety

4.1.1. NCEA advice

The NCEA notes that the EIA relies on dated information about nuclear safety, calamities and disaster scenarios. In a supplement to the EIA submitted before the decision on the amendment of the Nuclear Energy Act, the NCEA advises that nuclear safety, calamities and disaster scenarios be worked out in more detail in accordance with its earlier NRD advice.

Paragraph 5.2.2 of the Supplement to the EIA Phase 1 gives further consideration to the potential safety risks and how these are managed, as described in the Safety Report of the Borssele Nuclear Power Plant. It explains how the safety of the KCB is demonstrated with the help of various safety analyses (internal events and external threats) that are in line with the state of the art and the applicable regulations. The methods of risk communication, risk management and crisis management are set out in the National Radiation Crisis Plan.

The nuclear safety will be examined in detail by the licence holder in Phase 2 as part of the application process for obtaining a licence for a longer operating life. The Authority for Nuclear Safety and Radiation Protection will assess the licence application and accompanying information.

4.1.2. Ageing management

4.1.2.1. Generic views

Views 101159593, 101174442, 101207413, 101291451, 101305533, 101342331, 101461552, 101640103, 101645023, 101654736, 101655426, 101655500, 101656175, 101657841, 101662547, 101662551, 101665559, 101665672, 101666057, 101666202, 101670588, 101670769, 101671480, 101675481, 101675535, 101675738, 101678410, 101678456, 101679045, 101683359, 101687954, 101689231, 101690084, 101691676, 101697008, 101697028, 101698295, 101698308, 101698515, 101698806, 101704241, 101704531, 101705221, 101717030, 101723041, 101725923, 101727075, 101727171, 101727607, 101728317, 101728778, 101729019, 101729684, 101730063, 101730377, 101730397, 101730583, 101733899, 101733984, 101734302, 102023800

Several submitters argue that the safety requirements at the nuclear power plant, due to its age, are not in line with current safety requirements and the state of the art. Risks increase with increasing age. The plant was designed in the 1960s for an operating life of 40 years and not 50, 60 or 80 years. The submitters indicate that the power plant is an outdated design and thus prone to failure.

The design does not take into account the lessons and experience from disasters at nuclear power plants. The plant is operating for longer than originally planned. During the design phase of the KCB, safety requirements were lower than there are today.

Because of this, the submitters consider it a less safe nuclear power plant than a new nuclear power plant.

One submitter points out that nuclear power plants in Belgium have remained open longer than their original design life, which has led to problems (cracks in the reactor) and the shutdown of the plant.

Some of these submitters request that the EIA address the staffing levels at the KCB and also include an overview of unusual events (registered by ANVS) and problems identified during the 10-year safety evaluations (10EVAs), as well as an overview of the modernisation measures implemented since 1973.

The Borssele nuclear power plant has undergone a number of safety evaluations during its operating life and several measures have been implemented as a result of these in order to improve the plant. Pursuant to the legislation and regulations, the operator has an ongoing obligation to draw lessons from disasters and from minor malfunctions at other facilities. The ANVS monitors compliance with this obligation.

Furthermore, the operator is obliged to carry out a major periodic evaluation every 10 years. This periodic evaluation examines the ‘conceptual ageing’ (i.e., whether the nuclear power plant still complies with the current state of the art). This evaluation may reveal that the nuclear power plant needs to take additional measures to improve safety.

The safety of the nuclear power plant and of all systems, structures and components (SSCs) has been demonstrated in the safety report and underlying substantiation up to an operating life of 60 years (2033). If the licence holder actually wants to operate for longer, it will have to demonstrate that the plant is safe and that, taking into account further ageing, it will continue to be so into the future. For this purpose, the so-called Long Term Operation (LTO-)process has been established which culminates in a licence application. In that licence application, the safety substantiation is submitted to the ANVS for assessment and decision-making.

In the EIA Phase 1, paragraph 8.4.2 "Ageing management" looks at how the KCB deals with ageing management and what measures have been taken in this regard. This paragraph also provides an overview of the important changes implemented as a result of the 10-year safety evaluations. The effect of these measures on safety is also explained.

The scope of the EIA Phase 1 does not cover the staffing levels at EPZ. That is the responsibility of the company itself.

The current phase of the procedure deals with the amendment of the Nuclear Energy Act to make it possible for the Borssele nuclear power plant to continue operating after 2033, and thus not yet with an actual licence application with accompanying substantiation (that is Phase 2). The age of the nuclear power plant may not give rise to unsafe situations for the surrounding area. Technical feasibility studies and the licensing process at the ANVS must determine whether the nuclear power plant can remain open safely for longer (and in an environmentally responsible manner). Any application for a licence to extend the operating life must comply with Dutch legislation and regulations in order to ensure the protection of people and the environment both during operation and in the event of accidents.

Views 101645023, 101651796, 101652326, 101652447, 101653051, 101653171, 101654725, 101654736, 101654785, 101655379, 101655426, 101655500, 101656175, 101657817, 101657841, 101660322, 101665559, 101666057, 101666202, 101666898, 101670588, 101670769, 101675059, 101675087, 101675481, 101675535, 101675738, 101678456, 101678961, 101679045, 101683359, 101685711, 101686029, 101687954, 101688476, 101690084, 101690723, 101691673, 101692189, 101692445, 101697008, 101697028, 101697199, 101697570, 101698909, 101704241, 101704531, 101705221, 101717030, 101723041, 101725408, 101725573, 101727075, 101727171, 101727607, 101729472, 101729684, 101730063, 101730883, 101730929, 101730968, 101734302

Several submitters wonder how the assessment was made that classifies the KCB among the top 25% safest nuclear power plants. A number of people wonder how Borssele scores compared to all nuclear power plants, including more modern ones?

In 2013, 2018 and 2023 (see also the 2023 report), the benchmark committee (established in 2008 by the national government, the licence holders and its shareholders) assessed that the KCB is among the 25% safest water-cooled and water-moderated power reactors in the EU, the US and Canada. Contrary to what is assumed in this view, this assessment takes into account all water-cooled (i.e. comparable technology) operational nuclear power plants, including the more modern plants. A decision on the future of the benchmark still has to be taken.

4.1.2.2. Specific views

Views 101729019, 102023800

The submitter points out that due to the age of the power plant, certain components are no longer deliverable. Also, sharing experiences with other similar plants is no longer possible. Sharing experiences also becomes more difficult because a mix of old and new technology is used at the nuclear power plant. One submitter points out that switching to new technical solutions poses a challenge with regard to compatibility with existing technology. He fears that replacing components will make it impossible to meet all specifications, which would pose a safety risk.

The amendment of the legislation merely enables the operator of the KCB to submit an application for a licence to extend its operating life. In the second phase of the procedure - the licensing procedure - the safety will have to be demonstrated, including the necessary measures required to achieve this. It must also be demonstrated how the safe replacement of components can be guaranteed. The ANVS is the competent authority for this and will assess this in the licensing procedure (Phase 2 of the procedure). The ANVS also oversees nuclear safety at the KCB.

Views 101305533, 101724714, 101732616

The submitters express uncertainty about whether the original components of the plant, especially the reactor vessel, can handle a new regime of variable operational loads.

If the operating life is to be extended, the licence holder will have to demonstrate that the reactor vessel can withstand the operating loads. This must be done as part of the application to amend the licence for extending the design operating lifetime. This application can only be submitted once the amendment to Article 15a of the Act has come into force. The ANVS will then assess whether the longer operation of the nuclear power plant is safe.

Views 101645023, 101666202, 101727171

The submitters request that the KCB reactor vessel be subjected to an ultrasound inspection. They point out that such an inspection was conducted on the reactor vessels of nuclear power plants in Switzerland, Israel, and France several years ago, and that unexpected cracks were discovered.

The KCB reactor vessel is and will continue to be inspected regularly using modern inspection methods, including ultrasound techniques. The performance and results from these tests are assessed by the ANVS and, where necessary, other inspection authorities. In the past, research has also been conducted into the presence of hydrogen inclusions found in the other reactors. It has been demonstrated that these hydrogen inclusions do not pose a problem for the KCB reactor vessel.

View 10202023800

The submitter requests that, prior to the decision about the amendment of the legislation, an investigation be conducted into whether and, if so, how the corrosion events can be prevented.

The operator is conducting investigations into the management of ageing mechanisms, such as corrosion, in preparation for the licence application.

View 10202023800

The submitter requests a table of contents for the EIA Phase 2. The submitter also requests an outline of the decision-making process for Phase 2.

A table of contents for the EIA Phase 2 is not yet available. However, paragraph 6.7 of the EIA Phase 1 provides an overview of what will be covered in the EIA Phase 2.

In broad terms, the licensing procedure requires at least the following steps:

- action plan for the technical studies,
- conducting safety analyses and studies,
- assessment of studies by ANVS,
- submission of the licence application and EIA,
- ANVS submits a draft licence for public consultation and takes a decision on the application.

This licence application includes the safety substantiation and the EIA, which are submitted to ANVS for assessment.

4.1.3. Disasters and threats

4.1.3.1. Generic views

Views 101152099, 101195708, 101286921, 101287128, 101305533, 101635870, 101635889, 101637231, 101637385, 101638051, 101638254, 101638310, 101638539, 101640103, 101644362, 101645023, 101645136, 101645202, 101654550, 101654736, 101655394, 101655426, 101655500, 101656175, 101657841, 101658805, 101659544, 101660877, 101660905, 101662551, 101665066, 101665559, 101666057, 101666202, 101669290, 101670588, 101670769, 101671036, 101671480, 101675481, 101675535, 101675738, 101678456, 101679045, 101680449, 101683359, 101686493, 101687954, 101690084, 101697008, 101697028, 101697692, 101697938, 101698295, 101698308, 101698515, 101704241, 101704531, 101705221, 101717030, 101722750, 101722937, 101723041, 101725255, 101727075, 101727171, 101727607, 101729017, 101729684, 101730063, 101730377, 101730397, 101730583, 101733829, 101734060, 101734302, 102023800

A number of submitters feel that nuclear power plants, and thus the Borssele nuclear power plant, are not designed with threats of war in mind. Foreign wars, such as the war in Ukraine, and political tensions bring terrorist attacks and the threat of war closer to home. Submitters are concerned about a disaster and how it would be handled. Another submitter, in contrast, points to the limited likelihood of a disaster.

Several submitters fear that nuclear power plants can never be adequately protected against terrorist attacks and against the consequences of wars (malicious attacks, plane crashes, military use of nuclear material).

One submitter believes that new requirements after the Three Mile Island, Chernobyl and Fukushima accidents have not been adequately implemented in the old(er) nuclear power plants.

This part of the procedure deals with the legislative amendment. As stated in the EIA Phase 1, there is no specific reason to expect a change in the risk of terrorist attacks or wars. The operator of the KCB has security measures (established in a security package) in place in order to satisfy the reference threat level set by the Minister of Infrastructure and Water Management. The contents of the reference threat have not been made public.

In the second part of the procedure, the licence holder will have to demonstrate that staying open longer is safe.

The licence holder must conduct periodic safety evaluations and implement improvement measures identified in them. The Borssele nuclear power plant has conducted several safety assessments during its operating life. In several evaluations (including the stress test following the disaster at the Fukushima nuclear power plant), the robustness of the nuclear power plant was investigated and additional measures were taken to ensure the safety of the plant. The ANVS assesses whether the nuclear power plant satisfies the safety requirements (including external hazards such as the plant's resistance to the impact of an aircraft crash). Possible actions by malicious parties, other than an aircraft crash, are not explicitly covered here.

In addition to the safety requirements outlined in legislation and licences, nuclear licence holders have an active obligation to identify and implement current developments and new insights, insofar as this is reasonable. As a result, even older installations achieve a level of safety that is (much) higher than when the installation was originally built.

Proliferation risks (military use of nuclear material) are regulated by the international safeguards system overseen by EURATOM. This system provides for frequent inspections to establish the nuclear inventory. Exports of materials to other countries are regulated, among other things, by the EU regulation for the export of so-called dual-use materials. Furthermore, the nuclear power plant must always have a security package approved by the ANVS designed to prevent the theft of materials and knowledge.

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101698576, 101704241, 101704531, 101705221, 101705697, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

Submitters draw attention to the limited evacuation options available to the residents of Zeeland, and Walcheren in particular, in the event of a disaster. On busy days during the tourist season, roads are already easily congested. How will this be taken into account in the consideration?
One submitter explicitly requests attention for the evacuation plans for the future Vlissingen Judicial Complex (JCV), including the extra-secure facility (EBI).

The safety plan for the nuclear power plant itself addresses manageable accidents. In the event of a nuclear meltdown, national agreements have been established in the National Radiation Crisis Plan which describes how the crisis should be handled, with a division of responsibilities for different accident scenarios. Escape routes (and specific situations, such as the JCV) need to take into account the societal risks associated with a nuclear power plant and thus must demonstrate that they provide sufficient and safe evacuation capacity in the event of a disaster. The Safety Region oversees this.

4.1.3.2. Specific views

View 10202023800

The submitter asks how cybersecurity (digital security) is addressed. Is this also taken into account?

Yes, this is certainly taken into account. The operator must have a security package approved by the ANVS. In this security package, the operator describes the security measures that it takes to comply with the reference threat established by the Minister of Infrastructure and Water Management, which also includes cybersecurity (digital security). The contents of the reference threat have not been made public.

View 10202023800

The submitter requests insight into the current threat level for nuclear installations in the Netherlands. He also requests insight into the results of the 'Nuclear Security Index 2023'.

The Minister of Infrastructure and Water Management has established a reference threat (Design Basis Threat) for the nuclear sector in the Netherlands. Facilities must have a security package approved by the ANVS. In this security package, the facility describes the security measures required to provide sufficient protection against this threat. The reference threat is reviewed regularly, in consultation with the intelligence and security services, as well as other relevant parties. The contents of the reference threat and the security package have not been made public.

The Nuclear Security Index is published by the Nuclear Threat Initiative (NTI). The results can be viewed on the NTI website.

4.1.4. Accidents

4.1.4.1. Generic views

Views 101159593, 101161477, 101174442, 101195708, 101207413, 101286658, 101305533, 101317824, 101342331, 101635870, 101635889, 101637231, 101637385, 101638051, 101638254, 101638310, 101638539, 101639667, 101641871, 101644362, 101645023, 101645136, 101645202, 101647937, 101651796, 101652326, 101652447, 101653051, 101653171, 101654550, 101654725, 101654785, 101655379, 101655394, 101657817, 101658805, 101659544, 101660322, 101660877, 101660905, 101662068, 101662547, 101665066, 101665168, 101666202, 101666898, 101669290, 101671036, 101675059, 101675087, 101678961, 101679244, 101680449, 101685711, 101686029, 101686493, 101688476, 101689231, 101690723, 101691673, 101692189, 101692445, 101697199, 101697570, 101697692, 101698576, 101698909, 101707410, 101722750, 101724714, 101725255, 101725408, 101725573, 101727171, 101728317, 101729017, 101729472, 101730883, 101730929, 101730968, 101732616, 101733829, 101733899, 101734060, 102023800

Several submitters consider nuclear energy to be unsafe. They find it incomprehensible that a nuclear disaster would have no effects on the population and living environment at home and abroad. Some of them cite the disasters in Fukushima, Chernobyl and Harrisburg. These were major incidents with fallout reaching distances of up to 1,000 km, resulting in mass evacuations of more than 100,000 residents to locations far from the nuclear power plants.

Another submitter, the Rhineland-Palatinate State Government, is concerned about the Dutch government's plans to extend the operating life of the nuclear power plant. The submitter expresses concern about accidents and disasters and the effects thereof, including in its federal state.

Submitters request a complete and adequate analysis of the consequences of a (serious) accident involving radioactive substances. In their view, this overview is missing.

One submitter indicates that there is growing concern about the safety of nuclear energy. The submitter calls on the national government to take these concerns seriously.

This part of the procedure (Phase 1) concerns the amendment of the Nuclear Energy Act to make it possible to apply for a licence to extend the operation of the Borssele nuclear power plant. To actually remain in operation for longer, a licence will later have to be applied for (Part 2 of this procedure).

Both now and in the future, the Borssele nuclear power plant must continue to satisfy the safety requirements and the risk objectives set out in the legal framework (Article 6 of the Nuclear Safety Regulation for Nuclear Installations and Article 18 of the Nuclear Facilities Fissile Materials and Ores Decree (Bkse)). An operating life extension does not change these safety objectives. These regulations set out the safety requirements that the nuclear power plant must satisfy, including for so-called 'beyond design accidents'.

With nuclear safety in mind, phase 2 considers not only the radiological consequences of normal operation, but also the radiological effects of accident scenarios. The latter also includes 'beyond design accidents'. These are accidents that were not taken into account during the original design. The radiological effects of these 'beyond design accidents' must remain within the individual risk and societal risk limit values set out in Article 18 (3) of the Nuclear Facilities Fissile Materials and Ores Decree.

In the licence application, the ANVS assesses whether the accident scenarios examined are adequate and complete. Furthermore, in the case of design accidents, the ANVS also verifies that the dose limits and event frequencies set out, inter alia, in the Nuclear Facilities Fissile Materials and Ores Decree (Bkse), are met. For nuclear installations, the ANVS also examines whether the legal requirements for individual risk and societal risk are met in the event of beyond design accidents. At the behest of the ANVS, the RIVM calculates the dose distribution of representative accident scenarios. The emergency preparedness and response is based on this dose distribution.

The disasters cited by the submitters, such as *Fukushima, Chernobyl and Harrisburg*, do not fall within the scope of the so-called representative operation of the nuclear power plant. The effects of such disasters and the necessary actions (plans) are set out in the National Crisis Plan Radiation. The National Radiation Crisis Plan (LCP-S) describes the organisation for crisis management in the event of radiation accidents, the division of responsibilities, accident scenarios and response processes, as well as the necessary operationalisation (protective measures, zoning, intervention levels, etc.)

Among those participating in this procedure, there are people who are concerned about safety, people who are opposed to nuclear energy, and others who are in favour of it. The Ministries listen to all of them and provide them with adequate and correct information. Information evenings have been organised for this purpose and an information website has been set up www.overkernenergie.nl.

Views 101645023, 101651796, 101652326, 101652447, 101653051, 101653171, 101654725, 101654736, 101655379, 101655426, 101655500, 101656175, 101657817, 101657841, 101660322, 101665168, 101665559, 101666057, 101666202, 101666898, 101670588, 101670769, 101675059, 101675087, 101675481, 101675535, 101675738, 101678456, 101678961, 101679045, 101683359, 101685711, 101686029, 101687954, 101688476, 101690084, 101690723, 101691673, 101692189, 101692445, 101697008, 101697028, 101697199, 101697570, 101698295, 101698308, 101698909, 101704241, 101704531, 101705221, 101705697, 101707410, 101717030, 101723041, 101725408, 101725573, 101727075, 101727171, 101727607, 101729472, 101729684, 101730063, 101730377, 101730397, 101730583, 101730883, 101730929, 101730968, 101734302, 102023800

The ten-yearly external safety assessment of the nuclear power plant (10EVA) is an important part of the overall package of safety procedures. There must be no doubt that the nuclear power plant passes this assessment.

Some of these submitters indicate that the deadline for the 'EVA2023' assessment expired more than a year ago without this having any consequences for the nuclear power plant.

EPZ completed the 10-year safety assessment, due in 2023, in good time and submitted it to the ANVS for assessment. This is in accordance with the Nuclear Safety Regulation for Nuclear Installations and EPZ's licence. The 10EVA23 is now in the implementation phase. This means that the ANVS's assessment of the implementation plan (which includes a number of improvement measures) has been completed and (once formal approval has been granted) EPZ can soon begin implementing the improvement measures.

Views 101645023, 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101666202, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727171, 101727607, 101729684, 101730063, 101734302, 102023800

Submitters request an analysis of the dispersal of radioactivity following a severe accident at the KCB involving a substantial release of radioactive substances. An incident in Borssele could lead to high radiation levels hundreds of kilometres away.

In preparation for a possible nuclear accident, so-called preparedness zones are designated using representative accident scenarios. The preparedness zones are set out in the National Radiation Crisis Plan (LCP-S). Based on the designated preparedness zones, the Safety Regions concerned are required to make preparations. The LCP-S describes the organisation for crisis management in the event of radiation accidents, including the division of responsibilities, accident scenarios, and response processes, as well as the necessary operationalisation (protective measures, zoning, and intervention levels). Both regional and national crisis structures are detailed in the national crisis plan. The Zeeland Safety Region is also involved in this. The Supplement to the EIA Phase 1 provides additional details on how societal risks would be addressed in the event of a disaster (paragraph 5.2.2).

The Dutch legal framework includes legal requirements concerning the individual risk and societal risk, which are assessed during a licence-granting procedure. When determining whether these legal requirements can be satisfied, factors such as the actual population present and prescribed weather conditions are taken into account. If these requirements cannot be satisfied, a licence will be refused.

The risks to the environment from incidents at the KCB have been analysed in EIA Phase 1, paragraph 8.4.1. This analysis shows that the risks are highest in the vicinity of the plant and decrease sharply with distance. These risks in the vicinity of the plant fall well within the applicable criteria, with even greater margins at locations further away from the nuclear power plant.

4.1.4.2. Specific views

Views 101645023, 101666202, 101727171

Submitters suggest that the EIA should make use of the following breakdown:

- radioactive substances emitted during normal operation (including noble gases, tritium in cooling water and exhaust gases);
- radioactive substances emitted during a severe accident, including attention for accident preparedness and response plans with the associated detail analyses.
They ask for attention to be paid to, among other things, the effects on residents and users, the economy, nature, and the landscape.
Submitters argue that this information is relevant at this stage, since granting an indefinite-term licence (editor: for the Borssele nuclear power plant) could set a precedent for other nuclear installations, potentially leading to similar environmental impacts.

Every nuclear installation in the Netherlands has a licence for an indefinite term. However, safety always needs to be guaranteed. The KCB currently also has a licence for an indefinite term, but the legislation includes an end date for the generation of energy. This end date will no longer apply once the legislation is amended. This has no impact on other nuclear installations in the Netherlands.

The discharge of radioactive substances into the air and water during normal operation is described in par. 7.4.2 "Radiological emissions to air and water" of the EIA Phase 1. The discharge of radioactive substances and the consequences thereof during accidents are described in par. 8.4.1 ‘Disasters and accident scenarios’ of the EIA Phase 1.

View 101722198
The submitter points out that the EIA does not specify which reference accidents have been chosen and what the radiological consequences are for the different reference accidents.

The Supplement to the EIA explains which safety analyses have been performed in order to demonstrate that the assumed initiating events are adequately controlled and that the radiological consequences remain within the applicable limits (paragraph 5.2.2).

View 101705697
The submitter wants to know whether it is considered possible to bring the safety culture in this chain (operator, regulator, administrator) up to the required standard.

The Nuclear Safety Regulation for Nuclear Installations impose requirements on the licence holder and the regulator with regard to the safety culture. The ANVS monitors compliance with these requirements by the licence holder.

Views 101678410, 102023800
The submitter argues that with only one small nuclear power plant in operation in the Netherlands, it is difficult to maintain a complete and efficient organisation with all the necessary knowledge and competencies.

This part of the procedure deals with the amendment of the legislation. In order to actually remain in operation for longer, in the next phase of the procedure, the licence holder must demonstrate that this can be done safely.

The staffing levels at EPZ are not within the scope of this EIA. As part of any licence application for an extension of the operating life, the operator will have to demonstrate that the safety of the nuclear power plant is sufficiently ensured. A licence holder must have sufficient human resources to satisfy the nuclear safety requirements for the nuclear installation. The scope of the EIA does not cover the staffing levels at EPZ.

View 101305533

The submitter points out that the disaster in Fukushima was caused by a total power failure. Therefore, the submitter regards the assertion in the EIA that the failure of emergency power generators does not pose a threat to conventional (i.e. non-nuclear) systems to be too simplistic.

The submitter refers to paragraph 10.4.2 of the EIA Phase 1. This paragraph deals with the influence of emergency power generators on conventional safety, not nuclear safety. Emergency power generators are indeed important for nuclear safety. Nuclear safety is dealt with in chapter 18 of the EIA Phase 1.

View 101640103
The submitter believes that 'near misses' are not being properly reported.

The content of this view falls outside the scope of the documents that have been made available for public inspection. Furthermore, it is not clear on what grounds the submitter bases his opinion. The ANVS does not share this view.

For more detailed information about this topic, please refer to:
- the ANVS Guidance Document on Reporting Criteria for Nuclear Installations (for unusual events), in which the ANVS sets out what it considers to be an appropriate interpretation and implementation of the statutory reporting obligations regarding unusual events for nuclear installations (Handreiking Meldcriteria Nucleaire Inrichtingen | Richtlijn | Autoriteit NVS) and
- the overview of unusual events at the Borssele nuclear power plant reported to the ANVS: Kerncentrale Borssele | Ongewone gebeurtenissen | Autoriteit NVS.

4.2. Radioactive waste

4.2.1. NCEA advice

The NCEA advises that, in a supplement to the EIA and prior to the decision on the amendment of the Nuclear Energy Act, a brief substantiation should be provided regarding the consequences of extending operating life on the volume of nuclear waste and put into perspective, in particular, the radioactive composition of decommissioning waste.

The Supplement to the EIA Phase 1 includes a further description of radioactive waste in paragraph 5.2.3. This indicates that COVRA has sufficient capacity for a linear increase in radioactive waste in the event of an extension of the operating life of the plant. Room will also be available for any decommissioning waste in the future. With regard to new nuclear power plants, these procedures need to examine the extent to which radioactive waste will increase and whether COVRA has sufficient capacity for this.

4.2.2. Generic views

Views 101158838, 101160529, 101161477, 101166406, 101174442, 101175917, 101194799, 101194829, 101207413, 101245424, 101286921, 101287128, 101291451, 101305533, 101313219, 101317824, 101434587, 101461552, 101635870, 101635889, 101637231, 101637385, 101638051, 101638254, 101638310, 101638539, 101640103, 101644362, 101645023, 101645136, 101645202, 101647937, 101651796, 101652326, 101652447, 101653051, 101653171, 101654550, 101654725, 101654736, 101654785, 101655379, 101655394, 101655426, 101655500, 101656175, 101657817, 101657841, 101658805, 101659544, 101660322, 101660877, 101660905, 101662068, 101662547, 101662551, 101665066, 101665168, 101665559, 101666057, 101666202, 101666898, 101669290, 101670588, 101670769, 101671036, 101675012, 101675059, 101675087, 101675481, 101675535, 101675738, 101678410, 101678456, 101678961, 101679045, 101680449, 101683359, 101685711, 101686029, 101686493, 101687954, 101688476, 101689231, 101690084, 101690723, 101691673, 101691676, 101692189, 101692445, 101697008, 101697028, 101697199, 101697570, 101697692, 101697938, 101698295, 101698308, 101698806, 101698909, 101704241, 101704531, 101705221, 101707410, 101717030, 101717502, 101722198, 101722937, 101723041, 101724714, 101725255, 101725408, 101725573, 101727075, 101727171, 101727607, 101728317, 101728778, 101729017, 101729472, 101729684, 101730063, 101730377, 101730397, 101730583, 101730883, 101730929, 101730968, 101732868, 101733829, 101733899, 101733984, 101734060, 101734302, 102023800

Submitters have concerns about the radioactive waste produced by the KCB and its longevity. Some of them believe that insufficient information has been provided about radioactive waste and who is responsible for it. They are calling for a more extensive investigation into the volume and storage of radioactive waste. They also draw attention to the composition of the radioactive waste: due to a longer operating life with a higher 'burn-up', the waste will become more complex in nature and therefore more difficult to process.

Another group of submitters think it incomprehensible that there is still no (final) solution for the radioactive waste. The "recente studies van het Rathenau Instituut" (recent studies by the Rathenau Institute) cited in the EIA are not studies into the possibilities for geological final disposal, but studies into the decision-making processes required to achieve final disposal. They believe that future generations are being unfairly burdened with the radioactive waste.

Your request for more information about radioactive waste is consistent with the advice from the NCEA to include further information on this topic. Your comment has been taken into account by the Ministry of Climate Policy and Green Growth in the preparation of a Supplement to the EIA Phase 1. Paragraph 5.2.3 provides more insight into the volume of radioactive waste, what happens to it, and whether there is sufficient storage capacity at present and in the future.

The EIA Phase 1 (see, inter alia, paragraphs 3.2.2, 7.3.3 and 7.4.1.4) provides general information about radioactive waste and the nuclear fuel supply chain. The aim was to provide an understanding of the environmental effects of the current operation of the Borssele nuclear power plant.

COVRA is responsible for the collection, processing and storage of the radioactive waste produced in the Netherlands. The decision-making on final disposal is not part of this procedure or this EIA. The decision-making on final disposal is part of the National Programme for the management of Radioactive Waste (NPRA).

Under the umbrella of the NPRA, various supporting studies, including the Rathenau Institute's study on the decision-making will be conducted in the coming years. Research into the environmental impact of potential sites for final disposal has not yet been performed.

Views 101645023, 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678410, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101717502, 101723041, 101727075, 101727607, 101728778, 101729684, 101730063, 101734302

Several submitters point out that the nuclear fuel supply chain not only generates high-level radioactive waste, but also very substantial volumes of mining waste, depleted uranium and low- and intermediate-level radioactive waste. These flows are not mentioned in the EIA (e.g. in paragraph 3.2 on the nuclear fuel supply chain). Each of the 7 process steps depicted in the 'closed nuclear fuel cycle' results in the production of radioactive waste and fission products that must be stored.

The EIA Phase 1 for the legislative amendment provides an exploration of the environmental effects of the nuclear power plant in the current situation. It also provides an outlook for future environmental effects. EIA Phase 1 also identifies points for attention for EIA Phase 2.

The nuclear fuel cycle is described in broad terms. The uranium chain referred to in paragraph 3.2 of the EIA Phase 1 is not related to a specific location such as the KCB, but applies in a general sense. The description is not intended as a life cycle analysis.

The effects of waste processing by a licensed processor are generally not included in an EIA. A separate licensing procedure, including the necessary environmental studies, has already been completed (or is ongoing) for this processing. This ensures that environmental considerations are taken into account in the procedures for these processes.

The EIA refers to a 'closed' nuclear fuel cycle because the spent fissile material is processed (‘reprocessed’) in a reprocessing plant, and the products - uranium and plutonium - are reused. In principle, an 'open' nuclear fuel cycle is
also possible. In this, the spent fissile material is no longer reused but treated as radioactive waste.

COVRA has a legal obligation to ensure the safe and responsible storage and treatment of the waste generated, regardless of the volume. COVRA has sufficient capacity to receive and store the waste from the current nuclear power plant, even in the event of an extension of its operating life. The design of the final disposal facility is not part of the scope of this procedure or this EIA.

In the EIA Phase 1, the Ministry of Climate Policy and Green Growth based its assessment on the environmental effects associated with the operating life of the KCB. For the mining, enrichment, reprocessing and storage, there are other procedures, sometimes in other countries, which address safety and, where necessary, also consider the environmental effects. Decommissioning is a separate licensing process that will require its own procedure in due course.

Views 101645023, 101665168, 101666202, 101697008, 101717502, 101727171

Submitters wonder about the current and future volumes of plutonium that are being converted into MOX/RepU and reused, by whom, and how much is expected to be reused in the future. It is also unclear how much goes to the original customer and how much goes to other customers.

Submitters point out that we are dependent on Russia for the processing of radioactive waste. A clear description of the steps involved in the production of RepU is still lacking. *This process also requires steps to be taken by the Russian TVEL / Rosatom.*

The EIA Phase 1 for the legislative amendment provides an exploration of the environmental effects of the nuclear power plant in the current situation. It also provides an outlook for future environmental effects. EIA Phase 1 also identifies points for attention for EIA Phase 2. The EIA Phase 1 contains a brief description of the radioactive waste produced by the nuclear power plant; it does not cover all the global nuclear waste flows. The description is not intended as a life cycle analysis.

The current EPZ nuclear fuel cycle includes a step in the reuse process that is performed in Russia. The aim is to investigate whether and how the step in the process currently performed in Russia can be circumvented and what considerations need to be taken into account in this regard.[9] New contracts will be concluded for the situation after the extension of the operating life beyond 2033.

4.2.3. Specific views

Views 101645023, 101666202, 101717502, 101727171

Submitters wonder whether RepU (recycled uranium) and MOX can be reprocessed after use or whether they become waste after use. Submitter stichting Laka notes that fissile materials are not used/reprocessed more than twice.
The submitter points out that last year, in response to parliamentary questions, the State Secretary for Infrastructure and Water Management stated that spent MOX fuel is stored in France, "awaiting reprocessing".

It is not yet known what the fuel cycle of the nuclear power plant will look like after 2033. The operator is currently investigating this and it will be included in the licence application. It is possible to reprocess used RepU and MOX fuel into reusable fuel.

View 101717502

In her view, the submitter considers the information in the EIA regarding the production of MOX and cERU fissile materials. In their opinion, this information is incomplete and not entirely correct.
For example, there is no description of what happens to residual depleted uranium; only the portion with an elevated content is used for fissile materials.

Furthermore, the submitter indicates that the splitting of these fissile materials is not described in the EIA and that this is a complex process. The submitter also points out that Orano has been experiencing problems with the production of mixed oxide (MOX) fissile material for a number of years, as a result of which stocks are growing and not being used.

The EIA Phase 1 for the legislative amendment provides an exploration of the environmental effects of the nuclear power plant in the current situation. It also provides an outlook for future environmental effects. EIA Phase 1 also identifies points for attention for EIA Phase 2. The EIA Phase 1 includes a brief description of the radioactive waste produced by the KCB. It is not an aim of the EIA to provide an account of the reprocessing of the fissile material elements.

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101683359, 101687954, 101690084, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

The submitters point out that the NPRA is expected to be finalised in 2025 and that it may contain conditions relevant for the proposed legislative amendment, which are not yet known at this time. They therefore believe that the legislative amendment (editor's note: to the Nuclear Energy Act) is premature.

The volumes of radioactive waste coming from the KCB that will be involved in keeping the nuclear power plant in operation for longer are discussed in paragraph 7.4.1.4 of the EIA Phase 1. In its master plan, COVRA has indicated that it has sufficient room on its terrain in order to be able to store an increase in radioactive waste from the KCB, also after 2033. The method of storage is comparable to the storage of the current waste flow.

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View 101697008

The submitter argues that the NPRA 2025 creates conditions that could make it impossible to extend the operating life and that the amendment of the Act is therefore premature.

The amendment of the Act merely removes the obstacle preventing the operator from submitting a licence application to ANVS.

View 101717502

The submitter argues that the paragraph on radioactive waste must be amended because the year 2130 for final disposal has recently been abandoned.

The principles governing the handling of radioactive waste to and from COVRA remain unchanged at this stage. The NPRA oversees the roadmap to a decision on final disposal and is therefore not part of the procedure for extending the operating life.

View 101727171

The submitter points out that there is no international consensus on the safest final disposal for radioactive waste.

This view has been noted without further consideration, because it concerns the final disposal, which is not part of the procedure to amend the Nuclear Energy Act.

4.3. External safety

4.3.1. Generic views

Views 101291451, 101342331, 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101698295, 101698308, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101730377, 101730397, 101730583, 101734302, 102023800

Submitters argue that a nuclear power plant cannot safely coexist alongside petrochemicals, hydrogen, liquid gas landing, ammonia storage and a port used by the US military for the supply of military equipment in the Sloe area.

Some of the submitters point out that, once all the developments on the neighbouring terrains have been completed, there will be many more people living in the immediate vicinity of the power plant.

The EIA Phase 1 takes into account the risk contours of surrounding businesses. This does not lead to any bottlenecks.

In all cases, it will have to be demonstrated that hydrogen, ammonia storage and associated transport do not pose any external safety risks to the KCB. Safety is thereby ensured. The impact assessment in EIA Phase 2 will examine the interrelationship between the extension of the operating life and the autonomous developments known at that time.

4.3.2. Specific views

View 101722198

The submitter feels that safety is dealt with too narrowly in the EIA; for example, the description of individual and societal risk is missing. He refers to the Safety Report, which contains more information on this point.

Your comment is consistent with the advice from the NCEA to include further information on this point. The Ministry of Climate Policy and Green Growth has taken your comment into account in preparing a Supplement to the EIA Phase 1. Paragraph 5.2.2 of the Supplement to the EIA discusses how the societal risk is determined.

View 101698576

The submitter proposes that the legislation should specify what types of businesses are allowed to be located in the vicinity of a nuclear power plant.

The proximity of a nuclear power plant in relation to other types of businesses and industry must always be investigated in a safety study (for high-risk businesses in a so-called QRA). The nuclear power plant must not have any negative consequences for other industrial facilities, and vice versa. The safety consideration itself is therefore established in legislation and regulations. This applies for both external and nuclear safety.

Views 101692109, 101692602, 102023800

Submitters believe that effects and external (safety) risks should also be considered in a cumulative manner.

In EIA Phase 2 – once the measures necessary for the KCB are known, cumulative environmental effects - including those concerning external safety - will be examined, where necessary and possible. This EIA Phase 1 provides an exploration of the current environmental effects and an outlook for the future. The licence holder will consider the external risks in its safety analyses.

4.4. Health

4.4.1. Generic views

Views 101287128, 101654736, 101655197, 101655426, 101655500, 101656175, 101657841, 101662068, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

Several submitters point out that nuclear power plants have a potential impact on health because of radiation. Some of the views specifically address accidents and incidents. For example, one petitioner fears radiation and contamination from leaks, incidents and earthquakes. Several submitters call for the EIA to look at the health of both employees and local residents.

One submitter believes that the radiation exposure is incorrectly stated because it cannot be based on the sensitivity of the 'reference man'. Another submitter feels that a distinction must be made between men, women and children because there is a difference in radiation sensitivity.

Submitters also point out that there is a difference between the radiation sensitivity of wild and domesticated animals.

Some of the submitters refer to the Borssele Conditions. Part of these conditions is a baseline measurement of radiation levels and related cases of illness in the municipality, particularly in the vicinity of the nuclear power plant. They consider the current references in the EIA to the National Radiation Crisis Plan to be inadequate.

The EIA Phase 1 for the legislative amendment includes an exploration of the environmental effects of the nuclear power plant in the current situation. It also provides an outlook for future environmental effects. The Ministry of Climate Policy and Green Growth commissioned Arcadis to investigate these environmental effects in the EIA Phase 1 study. In addition to radiological effects, Arcadis also investigated non-radiological aspects, including health aspects such as noise pollution, air quality, and contamination.

The radiological effects on health arising from the nuclear power plant during normal operation were examined in chapter 10 of the MER Phase 1 study. A distinction was made between the normal operation of the plant and incidents. The KCB is designed in such a way that, during normal operation, the doses to which the population is exposed are negligible compared to background levels. Health effects are therefore not expected.

In the event of incidents, it is relevant to note that the effects on health from radiation exposure can manifest themselves years later. It is customary, also in scientific studies, to take into account both the early and late effects of radiation exposure. When analysing the effects of the situation during normal operation and when analysing the effects of an accident, the EIA will therefore take into account both the early and late effects. Assessment is carried out against the applicable standards set out in the Nuclear Installations, Fissile Materials and Ores Decree.

The safety analyses conducted in the EIA Phase 1 are based on the most vulnerable groups. In most cases, this concerns children. This is evident, for example, from Table 8-3 of the EIA, which sets out the stricter dose criteria for children against which assessments are made.

The Borssele Conditions serve as a guiding framework for the dialogue between the national government and the local community. These Borssele Conditions relate in particular to the new energy projects to be realised at Borssele. The baseline measurement referred is consistent with the local impact study carried out by the municipality.

Although the risk of a nuclear accident is minimal, efforts are being made to minimise the safety risks as much as possible. This information is included in a Safety Report.

The National Radiation Crisis Plan describes how the crisis should be approached, with a division of responsibilities for different accident scenarios.

4.4.2. Specific views

View 101698576

The submitter calls for legislation to stipulate how many people are allowed to be in the vicinity of a nuclear power plant.

People are allowed to live in the vicinity of a nuclear power plant. For safety reasons, local residents must be evacuated in the event of a disaster. That is why a safety report is always required for the licensing of a nuclear power plant. The Safety Region, fire brigade and other emergency and rescue services regularly practise what they must do in the event of a disaster.

Views 101691751, 101691876

The submitter believes that a population health screening should be performed within a radius of 5 km around the reactor vessel. He asks that the composition of the population be taken into account, in combination with age, religion and employment history. Preferably, a comparison should be made with similar municipalities in the country.

The EIA Phase 1 for the legislative amendment provides an exploration of the environmental effects of the nuclear power plant in the current situation. It also provides an outlook for future environmental effects. Based on previous studies, a population screening is not thought to be relevant. The EIA Phase 1 (Chapter 8) confirms that there are no significant radiation effects outside the nuclear power plant during normal operation. Where relevant, the environmental effects of the KCB on health are included in Chapter 7 and Chapter 10 of the EIA Phase 1.

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

Submitters believe that a survey on the acceptance of nuclear energy does not gather information about the environmental effects and therefore request that paragraph 10.4.5 be deleted from the EIA Phase 1.

Environmental effects go well beyond, for example, the impact on nature. The impact on humans is also included in this. There is a link between the rejection of developments in the immediate living environment and health-related concerns. People can experience stress and other health issues when they feel that their living environment is being threatened. A certain level of acceptance, therefore, says something about the health of local residents, which in turn says something about the environmental impact on an aspect such as health.

4.5. Soil and Water

4.5.1. NCEA advice

The NCEA believes that the EIA wrongly fails to address whether the effects of the KCB on water and nature after 2033 are or can be made acceptable within the framework of relevant policy objectives and legislation and regulations (such as the Water Framework Directive and Natura 2000).

According to the Commission, the EIA provides valuable insight into the quality of water and nature that is (or can be) influenced by the KCB and the resulting obstacles to achieving the water and nature objectives.

The EIA does not yet make any statements about ‘whether a potential impact is acceptable’, ‘whether norms are exceeded’ and ‘whether thresholds are reached at which cumulative (stacked) effects are no longer acceptable’. These effects include the impact of cooling water discharges on the water temperature, the consequences of the intake of fish (larvae) and plankton, the consequences of discharges of radioactive and chemical substances into the Westerschelde, the cumulative effects on nature due to nitrogen deposition and the impact on the Zeeland Nature Network.

The Supplement to EIA Phase 1 provides further details on the temperature of the water and its discharge in paragraph 4.2.1.2. This indicates that the average temperature of the Westerschelde will not exceed the established limit of 2 degrees Celsius. Even in combination with the warming of the seawater due to climate change, the Westerschelde will not exceed 25 degrees Celsius as a consequence of the cooling water discharge from the KCB. The effect of the cooling water on the Westerschelde remains within the limits.

Chapter 3 also provides further information about nitrogen deposition and the Zeeland Nature Network.

In the Supplement to EIA Phase 1, each environmental chapter provides an outlook for the possible effects after 2033.

4.5.2. Generic views

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101691876, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101728778, 101729684, 101730063, 101730555, 101734302

Submitters are concerned about the timely achievement of the policy objectives for Natura 2000 and the Water Framework Directive (hereinafter: KRW).

Submitters point out that a cost-benefit analysis in Phase 2 is necessary in order to gain insight into how the water quality of the Westerschelde can be improved.

In EIA Phase 2, it must be clearly explained how the continued operation of the KCB relates to the national and international river basin management plans for the Scheldt. In EIA Phase 2, all aspects that exert actual and potential pressure on the water system must be identified. Including the cumulative effects of aspects that adversely affect the system. The regional administrative and political consultation bodies, as well as the International Scheldt Commission must be involved in this research process.

Some of your comments have been addressed in a Supplement to EIA Phase 1 by the Ministry of Climate Policy and Green Growth, including the order of magnitude of the effects of heat discharge by the KCB.

The Supplement to the EIA Phase 1 discusses specific aspects of the KRW in more detail. EIA Phase 1 presents information at a general level. In the future EIA Phase 2 - as part of the application to be submitted and any associated permits necessary for the extension of the operating life - the potential effects on protected natural values (including flora and fauna, Natura 2000, but also, for example, the KRW) will be assessed. Whether the environmental effects of the KCB are permissible under the legislation and regulations in force at that time will determined at that stage.

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101691751, 101691876, 101697008, 101697028, 101698295, 101698308, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101730377, 101730397, 101730583, 101734302

Submitters point out that details of the maximum temperature of the discharged cooling water are missing in the EIA. The EIA states that the water permit for the nuclear power plant does not set a limit for the maximum temperature of the discharged cooling water. The submitters also miss the explanation for Table 9-6. They believe that, at the very least, an explanation should be provided as to why the EIA Phase 1 calculation indicates that the water temperature in Bath in 2050 will be lower than that in Vlissingen.
Submitters ask that a revision of the EIA should not only be based on model calculations but also use the available measurement data.

The EIA Phase 1 states that the water permit does not set a limit for the temperature of the recirculated cooling water, but that there is a limit for the maximum heat (the amount of energy to be transferred): 980 MWth. This appears to have led to ambiguities. A more detailed description has therefore been included in paragraph 4.2.1.2 of the Supplement to the EIA Phase 1.

Since March 2022, testing against the KRW criteria has been mandatory. The 25 °C contour serves as the determining factor for the temperature in estuaries and coastal waters. The cross-section of the mixing zone must be less than 25% of the total cross-section of the Westerschelde. In addition, the maximum permissible temperature of the water body is 25 °C.

The projection set out in the EIA Phase 1, which extends to the year 2050, is an expert estimation based on measurements and trends, and is therefore not substantiated by a physical model. Discharge(s) can have a measurable effect on a larger area than just the discharge point. That is why other measuring points have also been described. At Bath, the trend over the last 10 years has been for the temperature to be 0.5 °C lower than the temperature in Vlissingen. The KCB is located between Bath (upstream) and Vlissingen (downstream). This difference in temperature shows that the water downstream of the KCB has been warmer than the measured and extrapolated values upstream.

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678410, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

Submitters request clarification of the heat plume in relation to the water temperature.

The Supplement to the EIA Phase 1 contains a description of the heat plume in paragraph 4.2.1.

4.5.3. Specific views

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

Submitters point out that groundwater is used as an emergency cooling medium only occasionally and for short periods. They therefore believe that the peaks in groundwater abstraction and discharge should be identified rather than the total for one year.

Groundwater is used as an emergency supply and is extracted from deep aquifers. The exact period and peak abstraction volumes (in m3/day) fluctuate. The volumes depend mainly on maintenance or incidents in the surface water system. An order of magnitude estimate of the use of groundwater is between 4 and 40 days per year. This can cause disruptions on a local scale, namely a reduction in the hydraulic head in the aquifer and a change in concentrations in the discharge plume relative to seawater from the Westerschelde. The exact flow rates are not known.

The annual average values are sufficient for the EIA Phase 1, given the very small discharge and abstraction volumes for groundwater in relation to the tidal flow in the Westerschelde. The contribution of groundwater to the total cooling water mix is 1% to 11% compared to Scheldt water and usage occurs on a limited number of days per year. Looking at the rules for determining mixing zones for daily values, the size of the mixing zone appears to be less than 1% even in the most unfavourable situations (5 times smaller when using groundwater alone). The mixing zone is therefore small in relation to the total water volume of the Westerschelde. Further refinement of the assessment of peak abstraction and discharge is therefore not necessary for the EIA Phase 1.

Under the umbrella of the discharge permit, an assessment has been made of whether and to what extent these peak discharges result in temporary and permanent effects. If this discharge permit needs to be revised because of the extension of the operating period, the effects will be reassessed.

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

Submitters believe that the theme 'water' should be included in the chapter on 'nature' rather than in a separate chapter, because the water system is an integral part of the ecological system.

In the EIA Phase 1, a conscious decision was made to distinguish between biotic and abiotic effects. Where there are biotic ('nature') effects in the water system, these are described in the nature chapter. This allows the water chapter to focus on and be limited to the abiotic effects on the water system.

View 101698515

The submitter points out that chlorine bleach and hydrazine are used in the maintenance of the once-through cooling system to keep it free of mussel and shell growth. These substances end up in the sea. Furthermore, the submitter points out that a foam bed develops with the once-through cooling. The PFAS in the Westerschelde adhere to this sea foam and thus dispersed by the wind. These two issues are not addressed in the EIA.

The use of chlorine bleach is described in Chapter 9 of the EIA Phase 1. The permitted values are not exceeded during operation.

Sea foam in the Westerschelde is caused by the churning of seawater. The KCB complies with the discharge norms and conditions set out in the water permit. With this, the KCB cannot be held responsible for any PFAS contamination originating from other companies which occurs after the water has been discharged.

Views 101342331, 101729684

The submitters request an investigation into the possible consequences for a nuclear power plant built on soil consisting of different layers that may shift. The soil in Zeeland is not stable.

No shortcomings in soil stability were established in the EIA Phase 1 (see chapter 11 of the EIA Phase 1).

4.6. Ecology and biodiversity

4.6.1. Generic views

Views 101651796, 101652326, 101652447, 101653051, 101653171, 101654725, 101654736, 101654785, 101655379, 101655426, 101655500, 101656175, 101657817, 101657841, 101660322, 101665168, 101665559, 101666057, 101666898, 101670588, 101670769, 101675059, 101675087, 101675481, 101675535, 101675738, 101678456, 101678961, 101679045, 101683359, 101685711, 101686029, 101687954, 101688476, 101690084, 101690723, 101691673, 101692189, 101692445, 101697008, 101697028, 101697199, 101697570, 101698909, 101704241, 101704531, 101705221, 101707410, 101717030, 101723041, 101725408, 101725573, 101727075, 101727607, 101729472, 101729684, 101730063, 101730883, 101730929, 101730968, 101734302

Submitters argue that no attention is being paid to EU legislation protecting nature areas around the nuclear power plant. Some of the submitters ask for attention to be paid to the European Nature Restoration Act.

On the advice of the NCEA and based on various views, the Ministry of Climate Policy and Green Growth has prepared a supplement to the EIA Phase 1 which addresses, among other things, the nature areas around the nuclear power plant. This concerns both the Natura 2000 areas and the Zeeland Nature Network. This can be found in paragraph 3.2.5 of the Supplement to the EIA.

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101671480, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101691751, 101691876, 101697028, 101698295, 101698308, 101698515, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101730377, 101730397, 101730555, 101730583, 101734302

Several submitters ask about the effects of cooling water on the Westerschelde, a Natura 2000 site: how is it ensured that the temperature in the Western Scheldt does not rise (too much)? They ask about what the effect is of discharging warm water into the Westerschelde. What is the effect on biodiversity and marine life? Submitters argue that the assessment against the requirements in the licence does not go far enough.

Several submitters state that they believe that the cooling water inlet and outlet of the nuclear power plant do not meet current standards. Given the current technical and ecological norms, the inlet and outlet of the KCB would no longer be constructed in the same way. In the event of a decision to extending the operation of the KCB, they expect that the inlet and outlet of the KCB will be adapted to meet present day requirements. One submitter wonders whether, in the current situation, requirements have also been set out for the inlet and outlet.

Some of the submitters point out that, during the pumping back of the cooling water, foam with a dirty brown colour and a sticky coating forms, and that there is a foul odour in the immediate vicinity of the outlet.

Another submitter asks about biodiversity studies close to the outlet. This would allow us to examine whether and, if so, what exotic species have established themselves and what the impact of this is on native flora and fauna. Discharging cooling water into the Westerschelde (even longer) deteriorates the quality of the Westerschelde and, thus, the life in the Westerschelde. The submitter points out that the warm water has led to an increase in jellyfish (such as Aurelia aurita, moon jellyfish), which has led to a decline in (native) biodiversity.

The KCB does not currently have a nature permit. This is because the Natura 2000 areas were designated (long) after the KCB started operations in 1973. By that time, the KCB was already part of the system. The EIA Phase 1 and the Supplement to EIA Phase 1 provide an overview of the environmental situation and effects as a first step in the procedure. This has been done for the intended legislative amendment so that the operator of the nuclear power plant can submit an application for an extension of the operating life, and that this can be considered by ANVS. The legislative amendment and the licence application do not in themselves imply that the activity can continue. The EIA Phase 2, required for the submission of the licence application, contains an assessment of the effects on protected natural values (including flora and fauna).

Sea foam is created by the churning of seawater. Radiological discharges to surface water are well below the permitted discharge limits (Table 7-6 in the EIA Phase 1). The safety report shows that even when discharging the maximum permitted amount, the legal criteria for doses for the public are still met.

The aspect of heated cooling water discharge is discussed in more detail in the Supplement to the EIA Phase 1. The Supplement states that, without further research, it is not possible to establish the extent to which fish populations, marine mammals and birds could be affected. Thermophilic species may establish themselves around the KCB heat discharge point, including exotic species and certain jellyfish. It is also noted that during the winter, cold-intolerant (tropical) exotic species may make use of the warm water in order to survive. However, if this is the case, it does not concern invasive species. Tropical species will not survive outside the warm cooling water plume during the winter and therefore cannot spread inland beyond the areas influenced by the plume. This will be assessed in more detail, if necessary, in EIA Phase 2. Local (hydromorphological) conditions in relation to the KCB will be considered further in EIA Phase 2 insofar as they may have an influence on (protected) natural values.

4.6.2. Specific views

Views 101691751, 101691876

Salt water is pumped up at the pumping station on the Westerschelde. This salt water is used to cool the nuclear power plant. This causes an inflow towards this pumping station potentially drawing in fauna and algae-like organisms. The petitioner asks whether there is a system in place to protect marine species, such as the short-snouted seahorse (Hippocampus hippocampus), from this intake?

The submitter is correct: salt water is being pumped up. The KCB does not currently have a fish return system, only a fine mesh grid with a return channel to prevent larger fish from entering. To provide further clarity about this, the Ministry of Climate Policy and Green Growth has prepared a Supplement to the EIA Phase 1, which addresses this issue in paragraph 3.2.2.

In the second phase of the procedure - the licence application - this aspect must be assessed further in the EIA Phase 2. If it turns out that mitigating measures are necessary (such as a fish return system) then these will be implemented.

Views 101645023, 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101666202, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101727171, 101729684, 101730063

Submitters ask that the EIA also describes the possible effects on marine mammals such as harbour porpoises.

Submitters ask that the EIA also describes the possible effects on red list species such as the short-snouted seahorse.

EIA Phase 1 provides an overview of the relevant species groups in the estuarine environment of the Westerschelde (see par. 6.4) and subsequently discusses the environmental impact on these groups. Both species of seals were selected as representative examples in order to describe the status of marine mammals, because sufficient data are available for these species (see also the report of the Flemish-Dutch Scheldt Commission 2023). This is consistent with the treatment of the other species groups, in which not all individual species have been discussed. In EIA Phase 2, the impact of the continued operation of the KCB on protected natural values will be examined in more detail.

View 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

A number of submitters consider it irrelevant to assess the environmental effects beyond 2033. They argue that environmental effects should not be aggregated: a negative effect is not cancelled out by a positive effect (see, for example, table 6-11).

The intention is to indicate which parts of the nuclear power plant have or may have an effect on, among other things, nature. There is no question of the effects cancelling each other out. The study has shown that no clear positive or negative trend is observable between the various parts, which means that the situation can be summarised as "mixed". The "mixed" situation has a negative influence on the assessment of effects after 2033. Only for marine mammals, where positive trends are visible, does the positive situation act as a buffer for the effects of the KCB.

View 101645023

The submitter points out that there may be effects on plants and animals due to possible accidents. According to the submitter, this point is not adequately addressed in the EIA.

Potential effects on flora and fauna in the event of a major disaster cannot be completely ruled out. However, the likelihood of a major disaster is so low that this does not constitute a materially relevant factor for the legislative amendment. Paragraph 5.2.2 of the Supplement discusses the safety analyses of the KCB.

Views 101645023, 101666202, 101725923, 101727171

The submitter points out that it is not clear from the EIA Phase 1 whether nitrogen deposition is acceptable or not.
One submitter from Belgium points out that there is no mention of the recently approved nitrogen decree in Flanders (www.vlaanderen.be/stikstofin-vlaanderen/stikstofdecreet-in-werkinci-cietreden).

The KCB does not currently have a nature permit. This is because the Natura 2000 areas were designated (long) after the KCB started operations in 1973. By that time, the KCB was already part of the system. The EIA Phase 1 and the Supplement to EIA Phase 1 provide an overview of the environmental situation and effects as a first step in the procedure.
The background deposition of the nuclear power plant was explored in the EIA Phase 1. This background deposition is not a 'new' activity, which means that the nitrogen deposition from the KCB is included in the nature management plans in the reference situation. The EIA describes the effects.

In the EIA Phase 2, which accompanies any licence application that may be submitted, the effects of the continued operation of the KCB on protected natural values (including flora and fauna) will be examined in more detail.

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

Submitters argue that the reference situation used for determining the effects on Natura 2000 areas should not be based on the dates designated for the areas or the most recently granted licences (2000, 2004 or 2009), but rather on the year 2033. This is when the 'planned activity' will start. The impact on the Natura 2000 areas will need to be assessed if the negative effects on the nature and the current discharges of now are not ended in 2033.

The legal reference situation for assessing the impact on Natura 2000 areas in the case of the KCB is the moment when the area was designated (see https://www.bij12.nl/). An assessment must be made of which activities were actually and legally being carried out at the moment of designation and/or whether a more restrictive decision was made after that date.

4.7. Climate, greenhouse gases

4.7.1. Generic views

Views 101286921, 101342331, 101645023, 101662551, 101665168, 101666202, 101727171, 101728778

Submitters are concerned about rising sea levels and the possible impact of this on the KCB. Some of them request a more detailed analysis of the consequences of a possible prolonged flooding of the Sloe area.
Some of the submitters also question the safety of the flood defence: is the dyke by the nuclear power plant safe enough?

External risks, including flood risks, are part of the assessment framework used for both Phase 1 and Phase 2. The EIA Phase 1, which provides a broad analysis, shows that the current dyke has been raised in response to the Fukushima disaster and therefore complies with the current safety norms 1:1,000,000. This means that the dyke can fail once every million years. The dyke must meet strict safety requirements. Even if the sea level rises, this dyke must be able to guarantee the safety of the area behind it.

The issue of water safety will also be considered in any licence application. The ANVS assesses the application against the established safety requirements.

Views 101159593, 101161477, 101640103, 101655197, 101659544, 101662551, 101697938

Several submitters note that, although the nuclear power plant may not emit CO_2, this does not yet result in a climate-neutral energy supply. Certainly not if the CO_2 emissions from uranium mining are taken into account.

During the operational phase, a nuclear power plant is virtually CO_2-free. The correct term would actually be 'low-CO_2'. This is stated in paragraph 2.1 of the Supplement to the EIA Phase 1.

The EIA Phase 1 provides general information about the emissions from nuclear energy over the entire life cycle of a nuclear power plant. The environmental impact of the mineral extraction for nuclear power generation is not part of the investigation. It is true that uranium mining does release CO_2. The part of the nuclear fuel cycle that does form part of the EIA is the supply and removal of fissile materials and radioactive waste, viewed from the perspective of environmental safety.

4.8. Raw materials

4.8.1. Generic views

Views 101158838, 101161477, 101164889, 101175917, 101194799, 101194829, 101317824, 101638539, 101640103, 101651796, 101652326, 101652447, 101653051, 101653171, 101654725, 101654736, 101654785, 101655197, 101655379, 101655426, 101655500, 101656175, 101657817, 101657841, 101659544, 101660322, 101665168, 101665559, 101666057, 101666898, 101670588, 101670769, 101675059, 101675087, 101675481, 101675535, 101675738, 101678456, 101678961, 101679045, 101679244, 101683359, 101685711, 101686029, 101687954, 101688476, 101689231, 101690084, 101690723, 101691673, 101692189, 101692445, 101697008, 101697028, 101697199, 101697570, 101697938, 101698576, 101698909, 101698980, 101704241, 101704531, 101705221, 101705697, 101717030, 101717502, 101723041, 101725408, 101725573, 101727075, 101727607, 101728317, 101728778, 101729472, 101729684, 101730063, 101730883, 101730929, 101730968, 101734302, 102023800

Several submitters address the question of the origin of the fuel rods and the production of uranium in their views. In the countries of origin, the production of fuel rods causes major environmental damage and health problems for the local population. The use of uranium makes us dependent on other countries, specifically on Russia.

One submitter wonders whether the Russian sanctions policy has an impact on the KCB fuel cycle.

Several submitters point out that uranium is not a circular raw material and wonder how circularity is being pursued.

Nuclear energy also has a number of geopolitical dependencies, with the Netherlands being dependent on foreign countries for both uranium and uranium conversion. The operator of the nuclear power plant can choose to purchase some of its raw materials elsewhere. The largest uranium reserves are located in Australia, Canada and Kazakhstan. The recoverability depends on the price of uranium. For example, reserves in Kazakhstan are already economically viable at below 40 dollars per kg of uranium, while reserves in Australia are only economically viable if the price rises above 80 dollars per kg. Thus, there are reserves that are not yet economically viable, but may become so in the future.

When it comes to uranium enrichment, in principle, Western companies have sufficient enrichment capacity to meet Western demand, even with the growth ambitions for nuclear energy in the Netherlands. The redbook provides an indication of proven uranium reserves worldwide. The EIA includes an estimate of proven and unproven uranium reserves.

There are currently contracts in place until the end of 2033, which the KCB operator is adhering to. If the operating life is extended, the operator will have to conclude new contracts.

The EIA Phase 1 looks at the environmental pressure in the current situation. In principle, the nuclear fuel cycle is not part of this, but it is discussed in broad terms in the EIA (paragraph 3.2). The EIA looked at the supply and removal of fissile materials and radioactive waste. The production of necessary materials or raw materials is generally not included in an EIA, and this is also true, for example, for the processing of waste by a licensed processor. A separate licensing procedure has already been completed (or is ongoing) for the production and includes the environmental studies required in the country concerned.

The volumes of radioactive waste that will be involved in keeping the nuclear power plant in operation for longer are discussed in paragraph 7.4.1.4 of the EIA Phase 1. Furthermore, paragraph 5.2.3 discusses the handling of radioactive waste from the KCB in more detail.

In essence, the aim of the EIA is to provide insight into the environmental effects of the nuclear power plant itself. Other (geo)political considerations relating to the uranium chain are not within the scope of the EIA.

Nuclear energy is not fully circular. However, the KCB does reprocess some of its waste into new fuel. Optimal use is made of the available uranium and this reduces the volume of waste.

4.8.2. Specific views

View 101697938-4

The submitter points out that the KCB is not technically equipped to utilise spent fuel rods. The plant needs fuel from abroad.

The uranium required for the fuel rods in the nuclear power plant comes from mining and is extracted abroad. In addition, fuel rods can also be made from so-called reprocessed uranium, which is uranium recovered from fuel rods that have already been used in nuclear power plants. Plutonium is also extracted from used fuel rods, which can also be used to make fuel rods. The KCB uses enriched natural uranium, but also fuel rods made from reprocessed uranium and plutonium. The website of EPZ, the operator of the nuclear power plant, provides more information about the fuel used in the KCB: https://www.epz.nl/kennis-verdieping/wat-is-splijtstof-en-hoe-werkt-het.

4.9. Transport

4.9.1. Generic views

Views 101722198, 102023800

The submitter points out that the planned cross-border transport movements must be clarified. The EIA provides insufficient information in this regard.

Limited transport of radioactive substances takes place both within the Netherlands and across the border. The Supplement to EIA Phase 1 (paragraph 5.2.3) discusses the international transport regulations, which are adhered to.

4.10. Living environment, landscape and cultural heritage and recreation

4.10.1. Generic views

Views 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

The submitter considers the assessment of cultural history, archaeology and visual aspects to be incorrect. In the reference situation, the nuclear power plant is decommissioned, creating a different situation in terms of the landscape, cultural history and visual environment. The submitter requests that this point be amended in the revision of the EIA.

Relative to a decommissioning, this could be perceived as a negative effect, but it is to be expected that, given the industrial use of the sites, a different type of industrial structure would be built. It is therefore not to be expected that the sites would remain permanently undeveloped after decommissioning. Consequently, it does not represent a differentiating element in this EIA.

Views 101698295, 101698308, 101730377, 101730397, 101730583

Several submitters are concerned about the effects on recreation because of the extended operating life of the nuclear power plant. They ask that the attractiveness of the Kalloot (editor's note: nature reserve) not be diminished and that it remains accessible to both residents and tourists.

The EIA Phase 1 for the amendment of the Nuclear Energy Act briefly discusses cultural history, archaeology and spatial-visual aspects (paragraph 5.2). The plant has been there since the 1970s, and the effects of its realisation have been evident since that time. The EIA Phase 1 assumes the continuation of the existing situation. The Ministry of Climate Policy and Green Growth assumes that no space will be required outside the existing terrain of the power plant and that there will therefore be no new effects on recreation.

4.11. Costs and benefits, economic effects

4.11.1. Generic views

Views 101159593, 101160483, 101160529, 101194799, 101194829, 101207413, 101231217, 101286658, 101640103, 101651796, 101652326, 101652447, 101653051, 101653171, 101654725, 101654785, 101655379, 101657817, 101658805, 101659544, 101660322, 101662547, 101662551, 101665168, 101666898, 101675059, 101675087, 101678410, 101678961, 101679244, 101685711, 101686029, 101688476, 101690723, 101691673, 101692189, 101692445, 101697199, 101697570, 101698295, 101698308, 101698909, 101707410, 101724714, 101725408, 101725573, 101728317, 101728778, 101729472, 101730377, 101730397, 101730583, 101730883, 101730929, 101730968, 101732616, 1016530513

Several submitters consider the costs of nuclear energy production to be too high. They therefore believe that the licence should not be extended.

Some of these submitters request a very careful and extensive examination of the (investment) costs versus the benefits and returns. The costs of the extension must be clarified. One of them points out that the construction of the nuclear power plants in Finland is many times higher than was initially budgeted.

This procedure deals with the amendment of the Nuclear Energy Act to allow for the application of a licence permitting the Borssele nuclear power plant to continue operating after 2033. It is not now a decision about the extension of the actual operating life. In the subsequent procedure, the licence holder will have to demonstrate that this extension can indeed be done safely and what measures need to be taken to achieve it.

The cost aspects and business profitability are not environmental effects that are examined in the EIA.

4.11.2. Specific views

Views 101640103, 101659544, 101730377, 101730397, 101730583

Submitters believe that a decommissioning plan, including the financing, must be prepared. In their view, there is currently insufficient insight into the long-term costs. One submitter points out that the decommissioning of the Dodewaard nuclear power plant still remains unresolved.

The operator of the nuclear power plant must have a decommissioning plan approved by the ANVS. This decommissioning plan must be updated every five years. This obligation remains in force in the event of an extension of the operating life.

The Nuclear Energy Act also stipulates that the operator of the nuclear power plant must have sufficient financial resources in order to be able to decommission it. An element of this is that the decommissioning costs must be disclosed (Article 44a BKse). This remains applicable in the event of an extension of the operating life.

For the KCB, the Nuclear Energy Act stipulates that the operator must have sufficient financial resources in order to be able to decommission the plant. Because the legislation did not include provisions for Dodewaard at the time, the Dutch government is now stepping in.

View 101728778

The submitter argues that Phase 2 must provide clarity about which measures can be taken to mitigate the potential negative environmental effects of extending the operating *life vis-á-vis the objectives of the Water Framework Directive. Thus, the submitter considers a cost-benefit analysis (which also addresses the measures necessary to achieve the objectives of the WFD) to be necessary in EIA Phase 2.*

Phase 2 will examine the potential environmental effects of extending the operating life in more detail, as it will then be clear what measures are necessary at the nuclear power plant. Where relevant, mitigating measures will also be clarified.

Views 101635870, 101635889, 101637231, 101637385, 101638051, 101638254, 101638310, 101638539, 101644362, 101645136, 101645202, 101654550, 101655394, 101658805, 101659544, 101660877, 101660905, 101662551, 101665066, 101669290, 101671036, 101680449, 101686493, 101697692, 101722937, 101724714, 101725255, 101729017, 101732616, 101733829, 101734060

Several submitters believe that the EIA is incomplete because the effects of extending the operating life on social and economic activities must also be looked at.

In EIA Phase 1, produced for the amendment of the Nuclear Energy Act, the current environmental situation of the KCB is considered and, where possible, the environmental effects are extrapolated to the situation after 2033. The social and economic impacts are not part of the EIA.

The technical and financial feasibility will be examined by the nuclear power plant operator in the potential second phase and will be part of the decision-making process. This is also the moment when a licence is granted.

Views 101698295, 101698308, 101730377, 101730397

Several submitters point out in their views that agreements have been made about compensation and that they expect to be able to engage in the decision-making process about these. The submitter expects compensation in the form of a fund made available to and managed by the village of Borssele (Dorpsraad Borssele) and also priority for the realisation of the so-called 'Sloerand'.

Compensation is not part of the investigation in the EIA.

5. Cross-border effects

5.1.1. Generic views

View 101287327, 101662068, 101689231, 101722198, 101722750, 101722937, 101733984

Several submitters from abroad express concerns about the cross-border consequences of an accident at the KCB, which could result in radioactive substances reaching their communities.

In preparation for a possible nuclear accident, so-called preparedness zones are designated using representative accident scenarios. The preparedness zones are set out in the National Radiation Crisis Plan (LCP-S). Based on the designated preparedness zones, the Safety Regions concerned are required to make preparations. The Dutch legal framework includes legal requirements with respect to the individual risk and societal risk, which are tested during a licence-granting procedure. When determining whether these legal requirements can be satisfied, factors such as the actual population present and prescribed weather conditions are taken into account. If these requirements cannot be satisfied, a licence will be refused.

Pursuant to Dutch regulations, the risks to the environment posed by incidents at the KCB have been analysed; see EIA Phase 1, paragraph 8.4.1. This analysis shows that the risks are highest in the vicinity of the plant and decrease sharply with distance. These risks in the vicinity of the plant fall well within the applicable criteria, and the safety margins with regard to these criteria are thus even greater further away from the plant.

The LCP-S describes the organisation for crisis management in the event of radiation accidents, the division of responsibilities, accident scenarios, and response processes, as well as the necessary operationalisation (protective measures, zoning, intervention levels, etc.). Both regional and national crisis structures are detailed in the national crisis plan. The Zeeland Safety Region is also involved in this. This is discussed in more detail in the Supplement to the EIA Phase 1.

In the second phase, the operator will proceed with an in-depth review of the technical condition of the nuclear power plant and the effects that may occur after making necessary modifications to the plant itself. At that point, it will also be clear what measures need to be taken to extend the operating life. The EIA Phase 2 will include a more detailed examination of the effects in both the Netherlands and abroad.

5.1.2. Specific views

View 101647660

Various bodies in the Grand Duchy of Luxembourg point out that Luxembourg is not a direct neighbour and that the distance to the KCB is approximately 210 kilometres. They therefore consider the impact on Luxembourg to be low.
Although accidents are not addressed in the EIA Phase 1, the submitter emphasises that every operating nuclear reactor poses a risk of accidents, even if a high level of safety significantly reduces this risk. The only identifiable cross-border impact concerns a major nuclear accident. This would result in a radioactive cloud passing over all or part of the national territory. In the "zero option" scenario (cessation of operation in 2033), the likelihood of an environmental impact as a result of an accident would logically be lower than if operations should continue.
Luxembourg has prepared a nuclear emergency plan, which is primarily designed for the Cattecom nuclear power plant (in France) but also applies to accidents at nuclear power plants further afield, such as the Borssele nuclear power plant. They point out that the extension of the operating life of the Borssele nuclear power plant will have no impact on the implementation of the national emergency plan in the event of a nuclear accident. Luxembourg has indicated that it would like to be kept informed of the next steps in the procedure.

The cross-border effects – where relevant – were explored in the EIA Phase 1. These mainly concern the radiological effects. Paragraph 5.2.2 of the Supplement to the EIA also looks at the reasoning behind potential cross-border effects in the event of a disaster.

Where relevant, these cross-border effects will be examined in more detail in the EIA Phase 2. In the next step of the procedure, Poland will again be informed via the Espoo contact point.

This view was duly noted.

Views 101725923, 101749980

The Flemish Department for the Environment, the municipality of Knokke-Heist and the municipalities in the Meetjesland region (Assenede, Sint-Laureins, Maldegem, Eeklo, Kaprijke, Zelzate, Evergem and Wachtebeke) have requested that the procedure take into account the possible effects on Flemish territory. They have also requested to be kept informed of the next steps.

The EIA Phase 1 explored relevant cross-border effects. These mainly concern the radiological effects. The EIA Phase 1 states that the risk to the population is very low due to the distance from the Belgian border.

Paragraph 5.2.2 of the Supplement to the EIA discusses the course of action in the event of disasters and the potential cross-border consequences. Collaboration with neighbouring Belgium on crisis management is included as part of national crisis management. In Belgium, the Federal Public Service for Home Affairs is responsible for the crisis management in the event of radiation accidents. The exchange of information and coordination between Belgium and the Netherlands takes place at national (federal) and regional (local) levels.

The EIA Phase 2 looks at the relevant cross-border effects in more detail.

In the next phase of the procedure, notification will be provided once more via the Espoo contact point.

View 102023800

Six sub-views were submitted from Austria. One of these was accompanied by an extensive 'expert statement' in which the Austrian Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology made various recommendations for the EIA Phase 2. Some of the recommendations and questions have already been discussed under the relevant topics in the previous chapters, including in paragraph

- *1.2 regarding questions about the intended duration of an extension of the operating life,*
- *2.2 regarding questions about the relationship with sustainable energy production,*
- *4.1 questions about nuclear safety and the regulations applied, such as WENRA, commensurate with the detail level of EIA Phase 1,*
- *4.2 questions about radioactive waste commensurate with the detail level of EIA Phase 1,*
- *4.3 addresses questions about external safety and companies handling hazardous substances,*
- *4.8 regarding questions about raw materials and whether or not they will be reprocessed,*

Further recommendations and questions relate to the still to be prepared EIA Phase 2 and concern:

- *detailed description of the nuclear power plant, active and passive safety systems, including information about redundancy*[10]
- *radiation protection and accidents,*
- o *the differences between the Borssele nuclear power plant and new nuclear power plants with regard to excluding premature and large emissions,*
- o *technical concepts for the prevention of major discharges after a core meltdown accident,*
- o *consideration of how to prevent a meltdown,*
- o *description of the safety systems as well as the quality of the reactor vessel,*
- o *recommendations for the safety studies to be carried out,*

10 Redundancy is having additional components or systems available as backup in the event of failure or breakdown of the primary components or systems. The purpose of redundancy is to improve the availability, reliability and continuity of critical systems. Having redundant systems reduces the probability of critical systems failure and improves their availability, reliability and continuity.

- *radioactive waste, including the capacity and safety of the storage of the radioactive waste produced; According to the submitter, the EIA must at the very minimum include a detailed description of the plant, active and passive safety systems, including information about redundancy.*

The phase we are in now concerns the legislative amendment. In the EIA Phase 1, the Ministry of Climate Policy and Green Growth conducted an exploratory study into the effects of the current operating situation as it stands at present and extrapolated these to the situation after 2033.

In the second phase, the operator will proceed with an in-depth review of the technical condition of the nuclear power plant and the effects that may occur after making necessary modifications to the plant itself. At that point, it will be clear what measures need to be taken to extend the operating life. Further research will then be conducted into the effects, including the cross-border radiological effects. The EIA Phase 2 will address the relevant aspects raised by the submitter.

In the next phase of the procedure, notification will be provided once more via the Espoo contact point.

View 101725273
Denmark has no comments, but would like to be kept informed.

In the next phase of the procedure, Denmark will be kept informed via the Espoo contact point.

View 101750092
The Czech Republic has no comments, but would like to be kept informed.

In the next phase of the procedure, the Czech Republic will be kept informed via the Espoo contact point.

View 101472902
Poland has no comments, but would like to be kept informed.

In the next step of the procedure, Poland will again be informed via the Espoo contact point.

View 101615193
The submitter, transmission system operator of the Belgian high-voltage grid, has submitted a letter with design requirements and safety protocols that ensure that account is taken of the presence of high-voltage lines, high-voltage and signalling cables and high-voltage substations. The submitter is happy to contribute ideas to the optimal design of the high-voltage grid or for activities that affect its assets.

Any further development of the high-voltage grid falls outside the scope of the Operating Life Extension.

View 101722198
Fanc wishes to remain involved in the further steps of this project and the associated EIA procedure(s). If possible, we would also like to send a representative to the various consultations planned under the umbrella of these procedures.

The ANVS has good structural contact with the FANC. There are also existing working arrangements for mutual notification regarding specific licensing procedures for nuclear installations in Belgium and the Netherlands, particularly when an EIA is involved. These working arrangements also relate to the nuclear power plant in Borssele. The ANVS will inform the FANC as per these arrangements when the further procedures are initiated.

6. Participation

6.1. General participation

6.1.1. Generic views

Views 101637740, 101654736, 101655426, 101655500, 101656175, 101657841, 101665559, 101666057, 101670588, 101670769, 101675481, 101675535, 101675738, 101678456, 101679045, 101683359, 101687954, 101690084, 101697008, 101697028, 101704241, 101704531, 101705221, 101717030, 101723041, 101727075, 101727607, 101729684, 101730063, 101734302

In light of the Environment Act, the submitters see more opportunities for securing participation in the process leading up to the granting of a licence. They propose that participation provisions be included in the bill.

The manner in which participation is secured is established in the Nuclear Energy Participation and Communication Plans of the national government. Furthermore, there are also several formal moments at which people are involved in the project. That is why we have also prepared a participation and communication plan for both the extension of the operating life of existing nuclear power plants and for the new nuclear power plants to be constructed. Information evenings have been organised, people have access to environmental data and reports, and they are kept informed as much as possible. There is also a website with information about the processes: www.overkernenergie.nl

Within this procedure, no provision of this nature will be added to the Nuclear Energy Act.

6.1.2. Specific views

Views 101689231, 101691751, 101691876, 101692109, 101692602

Several submitters have indicated explicitly that they wish to be involved in Phase 2 of this procedure.

Your involvement is greatly appreciated. Interested parties are invited in various ways, such as door-to-door leaflets, online (www.overkernenergie.nl) and via the website www.platformparticipatie.nl.

Views 101645023, 101666202, 101727171

Submitters argue that there are unnecessary barriers for organisations, such as the requirement to provide documentation and extracts.

When someone has indicated that they are submitting a response on behalf of an organisation, it is helpful if that can be verified, so that the recipient of the response can also be sure 'that it is bona fide' and the response was not submitted by someone who has nothing to do with that organisation. It is important to be clear about who is authorised to speak on behalf of the organisation and therefore who should be contacted. The easiest way to check this is with an extract from the register at the Chamber of Commerce and the articles of association. Every organisation that is registered with the Chamber of Commerce can request such an extract and should submit (a copy of) it.

Views 101645023, 101666202, 101727171

The submitter refers to an advisory report ('Splijtzwam' from the Council for the Environment and Infrastructure) which argues for comprehensive public participation *with knowledge building for the local community. The submitter is concerned that, if residents are not listened to, there will be no trust in the government.*

The government is making every effort to provide local residents with as much clear information as possible and to indicate what role they are playing in this. For example, we regularly organise information evenings, we are in contact with community managers in the region, we talk to village councils, and people have the opportunity to respond to our reports. The government also values mutual trust in and understanding for the procedure.

Views 101637740, 101690274

The submitter believes that the voice of the residents is not being sufficiently heard. The submitter refers to the involvement in the new construction project in which the Borsele Conditions Group played a role.

The purpose of this amendment of the Nuclear Energy Act is to make possible a licence application for an extension of the operating life of the existing nuclear power plant in Borssele. The Ministry of Climate Policy and Green Growth has concluded that, because no new situation is created compared to the situation that has existed for 50 years, this requires a different process than that for the construction of one or more new nuclear power plants. That is why this procedure focuses on involving the local community through information evenings and regularly informing the village councils.

View 101662551,

The submitter believes the (editor's note: nuclear) industry to be secretive.

The government strives to provide open and transparent information about the project to extend the nuclear power plant's operating life. A number of information evenings have been organised as part of the procedure: during the publication of the NRD and during the publication of the EIA Phase 1. All available information has also been published on https://www.platformparticipatie.nl/kerncentraleborssele and https://www.overkernenergie.nl.

View 101153273

The submitter feels that the form that has to be completed is too complicated.

The government strives to provide open and transparent information about the project to extend the nuclear power plant's operating life. A number of information evenings have been organised as part of the procedure: during the publication of the NRD and during the publication of the EIA Phase 1. On these evenings, it was also possible to submit a view verbally. Views could also be submitted verbally via telephone during the public inspection period.

View 101173576

The submitter was initially unable to access the website. After telephone contact, an employee passed this on to the IT department and called the submitter back later to inform them that the site was again accessible. The submitter found the website used to express a view uninviting and unattractively designed.

We appreciate you actively contacting our staff to get the website back up and running. We are sorry to hear that you found the website uninviting and unattractive. This information is valuable because the Ministry is working on improving the website and making it more user-friendly. Your response is consistent with the findings of the user survey that was recently conducted. The website will be modified based on your response and the recommendations from the user survey.

6.2. Translation of documents

6.2.1. Specific views

View 101722937

The submitter points out that a translation of only the summary into German is inadequate and believes that this fails to meet the requirements of the Aarhus Convention.

A translation of the summary into German is in line with the agreements made under the umbrella of the Espoo and Aarhus Conventions.

View 101722937

The submitter reports difficulty in locating the translation (editor's note: of the EIA) directly on the website of the participation bureau.

The participation bureau has done its best to place the translations of the documents in an easily accessible place on the project page. The home page of Platform Participatie that covers the bill to amend the Nuclear Energy Act to allow an extension of the operating life, has a box with a link to the documents in English, German and French. Despite this effort, this was not your experience. If you are unable to find the documents in the future, please send an e-mail to info@platformparticipatie.nl. You will then receive the documents by e-mail.

View 101732616

The submitter complains that the procedure was not announced in Germany and Belgium.

The Ministry of Infrastructure and Water Management has sought to publicise the procedure as widely as possible in Germany and Belgium via the Espoo Convention. The Espoo Convention gives residents of other Member States the opportunity to respond to projects with potential cross-border effects. We have an obligation to announce our procedure, including internationally, in accordance with the Espoo Convention. In the different steps of the EIA procedure, the Espoo Convention contact points are specified. Each country party to the Espoo Convention has a contact point. We make this announcement, for example, to the Belgian and German authorities. The Belgian and German contacts for the Espoo Convention then ensure further dissemination.

View 101722937

The submitter does not wish their address to be made public.

Addresses are not made public. The Ministry of Infrastructure and Water Management processes the personal data provided by the submitter when the view is submitted. This is necessary in order to process the view in an adequate manner and to correspond with the submitter. The personal data provided by the submitter is not made public.

Annex: Glossary and abbreviations used

Abbreviation	Meaning abbreviation	Explanation
ANVS	Autoriteit Nucleaire Veiligheid en Stralingsbescherming (Authority for Nuclear Safety and Radiation Protection)	The ANVS is the independent inspection body for nuclear energy–related activities. It monitors safety and regulatory compliance.
Ministry of KGG	Ministry of Climate Policy and Green Growth	The Ministry of Climate Policy and Green Growth (KGG) has the role of initiator in the EIA procedure and prepares the environmental impact assessment (EIA) report.
Ministry of IenW	Ministry of Infrastructure and Water Management	The Ministry of Infrastructure and Water Management (IenW) is the competent authority for the EIA procedure.
	Statutory advisers	The Minister of Infrastructure and Water Management or the spatial planning inspector, the Minister of Agriculture, Nature and Food Quality and the Minister of Education, Culture and Science (or an administrative body designated by them). They are asked for advice on the plan-eia-assessment and the scoping and detail level of the plan- and project-eia.
eia	The environmental impact assessment	The environmental impact assessment procedure
EIA	The environmental impact assessment report	The booklet detailing the environmental impacts
NCEA	The Netherlands Commission for Environmental Assessment	The NCEA is an independent foundation that advises the competent authority on the scoping and detail level of the investigations to be carried out and the quality of information in the EIA
MOX fuel	Mixed oxides fuel	A form of nuclear fuel consisting of a mixture of plutonium, natural uranium, reprocessed or depleted uranium.
KCB	Kerncentrale Borssele (Borssele nuclear power plant)	
EPZ	Elektriciteits Produktie maatschappij Zuid-Nederland (Electricity Production Company South-Netherlands)	EPZ is the current operator of the Borssele nuclear power plant
LTO licence 2013	Long Term Operation licence 2013	In 2013, EPZ applied for a licence to operate for longer, namely until 2033.
	Meeting of the Parties	Parties to the Convention who meet every three years
ERDO	Association for Multinatio nal Radioactive Waste Solutions	International alliance of organisations concerned with the (final) disposal of radioactive waste
BKSE	Besluit kerninstallaties splijtstoffen en ertsen (Nuclear Facilities Fissile Materials and Ores Decree)	
PFD	probability of failure on demand	The likelihood of a device or instrument not working on start-up

Abbreviation	Meaning abbreviation	Explanation
	Redundancy	Redundancy is having additional components or systems available as backup in the event of failure or breakdown of the primary components or systems. The purpose of redundancy is to improve the availability, reliability and continuity of critical systems. Having redundant systems reduces the probability of critical systems failure and improves their availability, reliability and continuity.
	Embrittlement	Loss of strength of the material
RepU	Recycled uranium	