

In accordance with Section 15 (b) of the Nuclear Energy Act (*Kernenergiewet*), the applicant, N.V. Elektriciteits-Produktie­maatschappij Zuid-Nederland (NV EPZ), Zeedijk 32, 4454 PM Borssele (Postal address: Postbus 130, 4380 AC Vlissingen), will be granted a licence for the changes requested in the letter of 12 September 2012, reference number KT/MCr/TKe/B1200055, to the licence for extending the design lifetime of the Borssele Nuclear Power Plant (KCB), in Borssele, to 31 December 2033.

The licence application especially concerns the changes to the Safety Report, which are stated in the revised VR-KCB93 REV.7 document added to the application. The applicable safety report assumed a design lifetime of 40 years (end of 2013) for KCB, while Section 15a (1) of the Nuclear Energy Act now prescribes a lifetime of 60 years (not extending beyond 31 September 2033). In the licence application, the technical safety justification is provided for a 60-year lifetime for KCB.

The requested changes are described in the accompanying application document and are clarified in chapter 2 of this licence. With the authorisation of the requested changes, the applicable Nuclear Energy Act licence of 18 June 1973, with reference no. 373/1132/EEK, as laid down in the Royal Decree of 13 September 1979, no. 46, in accordance with Sections 15 (a) and (b), 29 and 34 of the Nuclear Energy Act, as last amended by the decision of 24 June 2011, with reference number ETM/ED/11081801, for the Borssele Nuclear Power Plant located at Zeedijk 32 in Borssele, will be modified again. The licensed changes concern amendments to the sections 3.3, 3.4, 3.7 and 5.1.3 of the Safety Report in accordance with Appendix C of the application.

The documents referred to in section 1.2 are part of the licence. To guarantee safety and radiation protection, the provisions of 1.3 will be attached to this licence. At the same time, a number of provisions of 1.3 will be attached to the licence ex officio in accordance with Section 19 (1) of the Nuclear Energy Act. The official modification of the provisions concerns:

- the investigation of the reactor wall due to the discovery of previously unknown laminar discrepancies in the wall of the reactor vessels in the Belgian nuclear power plants Doel-3 and Tihange-2.
- the deletion of the provisions related to dismantling and security. These provisions have become redundant, because EPZ has a dismantling and security plan approved by the Minister of Economic Affairs.

A list of terms that appear in this decision has been incorporated in Appendix A. This terminology list is not a part of the present decision. The same applies to the list of abbreviations incorporated in Appendix B. The licence is valid for an indefinite period.

#### Subject to Environmental Impact Assessment

An assessment was made to determine whether the change to the licence requested by NV EPZ should be subject to a compulsory Environmental Impact Assessment. The outcome of this assessment is that the proposed activity is not subject to a compulsory Environmental Impact Assessment, having taken into account the requested change, involving the modification of the KCB Safety Report with regard to the effects of the extended design lifetime on the design analyses and on other aspects connected with the continued safe operation after 2013. NV EPZ was notified of the outcome of this assessment by a letter dated 13 September 2011, reference no. ETM/ED/11132793. The current Nuclear Energy Act licence of NV EPZ for the KCB is valid for an indefinite period and not just for 40 years. The validity period of the KCB's Nuclear Energy Act licence has therefore not been extended with the present licence for the extension of the design lifetime of the KCB. Within the framework of the requested change, the primary focus lies on the formalisation of the modifications to the Safety Report associated with the valid licence. In extreme cases, a one-to-one replacement of components of less importance to the environment may be necessary; this replacement can be realised with the current licence. The requested change therefore does not concern an extension to or modification of the design/layout of the KCB. In addition, an extension of the validity period of the safety report cannot be regarded as an extension of the validity period of the licence itself, which has been granted for an indefinite period. Furthermore, none of the cases described in category D 22.3, of Appendix D of the Environmental Impact Assessment Decision apply. Moreover, on the basis of Section 2 (5b) of the Environmental Impact Assessment Decision, no assessment is required to determine whether a compulsory Environmental Impact Assessment is applicable due to the fact that none of the activities referred to in column 1 of the Environmental Impact Assessment Decision now take place. Finally, the activities carried out within the framework of the Long Term Operation will not adversely affect the environment, since the Safety Report is simply being updated, while the Borssele Nuclear Power Plant remains unchanged. The existing environmental impact – nuclear or conventional – as previously licensed, will therefore not change.

#### 3.2 The procedure

##### Reception and admissibility assessment of the application

On 19 September 2012, the application of NV EPZ (as previously described in 2.1) was received. NV EPZ made an addition to this in a letter of 18 October 2012. In connection with the question whether the application can be processed or not, the application has been tested against the applicable requirements laid down in the General

Administrative Law Act and the 'Decision regarding nuclear plants, fissile material and ores' (especially Sections 3 and 11). The application meets the requirements and was therefore processed.

The provisional decision

On 24 October 2012, the provisional decision was communicated and the opportunities for access to documents and for participation were stated. In addition, the provisional decision and the notification have been sent to the governing bodies involved, which are mentioned above. Up to and including 5 December 2012, everyone was given the opportunity to submit their views on the provisional decision in accordance with Section 3.15 and 3.16 of the General Administrative Law Act.

On 7 November 2012, an information evening was organised in Heinkenszand, where people were able to ask questions and submit views. Up to and including 5 December 2012, 638 (of which 635 written and 3 verbal) views were received. The written views included 2 petitions, which were signed by 3088 participants. Of the 638 views, 284 originated from the Netherlands and 354 from Germany. Many of the 638 views are identical. A total of 54 unique views received within the participation period can be distinguished. An additional 13 views were received outside of the participation period. These were submitted too late and will therefore not be taken into account.

#### 4.1.1 What does Long Term Operation signify?

The fact that the KCB Nuclear Energy Act licence of NV EPZ does not prescribe a time limit and was granted for an indefinite period is important for the assessment of the Long Term Operation licence application. Nevertheless, a lifetime of 40 years was taken into account when the KCB was originally designed and constructed. This design lifetime was taken as the point of departure for the design of the KCB and was also stated in the Safety Report that forms a part of the Nuclear Energy Act licence. It should be noted that NV EPZ has not requested any change to the validity period of the licence within the framework of the present licence procedure. The licence application for the Long Term Operation of the KCB relates to the formalisation of the changes to the Safety Report. In fact, the present application concerns the continuation of the current operation, for which the Safety Report must be updated to include a design lifetime of 60 years. In the previous Safety Report, a lifetime of 40 years (end of 2013) was assumed for the design of the KCB, while Section 15a (1) of the Nuclear Energy Act states that the KCB may operate until 31 December 2033 at the latest, a period of 60 years.

The application does not concern an extension to or modification of the design/layout of the KCB. Within the framework of the requested change, the primary focus lies on the formalisation of the modifications to the Safety Report associated with the current licence. For operational purposes, one-to-one replacement of components may be necessary before 2034, but the licence does not need to be modified for this. Because the application does not concern an extension to or modification of the design/layout of the KCB, aspects such as the production of waste, security and non-proliferation, the effects of radioactive material discharges, the consequences of accidents, or other consequences for the environment will not be changed. This means that these aspects will remain outside the scope of the assessment framework of the present application.

The justification for the present change to the licence concerns the physical ageing of the KCB plant. It does not concern the conceptual ageing of the plant design, which is not part of the assessment framework for the present licence for the extension of the design lifetime of the KCB. However, the conceptual ageing of the design will be assessed in the 10-year safety evaluation. This is also mentioned in section

#### 4.1.3, under 10-year safety evaluation (10EVA).

#### 4.1.2 Long Term Operation international context

The change to the licence with regard to keeping the nuclear power plant operational until the end of 2033 has been tested against an assessment framework, the most important criteria of which can be found in the guides for the Long Term Operation (LTO) of nuclear power plants published by the International Atomic Energy Agency (IAEA). A finite lifetime is taken into account when a nuclear power plant is first designed. In recent years, increasing attention has been paid at the international level to the extension of power plant lifetimes beyond the original lifetimes predicted in the design analyses.

IAEA provides the following definition<sup>2</sup> for LTO:

"Long term operation (LTO) is operation beyond an established timeframe set forth by, for example licence term, design, standards, licence and/or regulations, which has been justified by safety assessments with consideration given to life limiting processes and features of systems, structures and components (SSCs)".

#### 4.1.3 Different types of safety assessments

**Comment [GE1]:** De vertaler merkt op: "31 december 2013 is een typefout van de schrijver; de werkelijke datum is 31 december 2033, zoals elders in de brontekst wordt vermeld".

#### 10-year safety evaluation (10EVA)

The aim of the 10-year safety evaluation (10EVA) is to assess the current physical condition of the plant and also to compare the design and operation of the KCB with the latest state of the art and insights. The 10EVA is a specific implementation of 'continuous improvement'. The results of the 10EVA lead to adjustments and improvements to the plant and will partly lead to a licence modification. The 10-year evaluation of the safety of the KCB is compulsory under the terms of the licence. The current 10EVA covers the 2004-2013 period and is the 3<sup>rd</sup> formal 10EVA of the KCB since the start of operations in 1973. The evaluation phase should be completed by the end of 2013 (10EVA13). The measures taken as a result of the 1<sup>st</sup> and 2<sup>nd</sup> 10EVA led to an improvement of the KCB design in accordance with the prevailing insights of the time. Ageing is also the subject of investigation in a 10EVA. However, the focus is not just on an investigation into the degree of physical ageing of SSCs and materials, as carried out within the framework of the present licence application, but also on evaluating the ageing of the design. The ageing of the design – conceptual ageing – does not influence the decision-making process for the present licence for extending the design lifetime of the KCB. The changes proposed on the basis of the 3<sup>rd</sup> 10-year safety evaluation will be implemented after 2013. The implementation of the measures will take until the end of 2017 at the latest.

#### 4.2.3 Management & Organisation (Safety Factors 10 and 12)

KCB conducts periodic safety evaluations. For example, NV EPZ is required to conduct an extensive safety evaluation, the so-called 10EVA, every 10 years. The current evaluation phase of the 10EVA for the KCB should be completed by the end of 2013 (10EVA13). An IAEA guide, NS-G-2.10 'Periodic Safety Review of Nuclear Power Plants' from 2003, is used as a policy framework for a 10EVA. A draft DS 426 from the successor to the IAEA Safety Guide of the same title now also exists. NS-G-2.10 and DS 426 offer recommendations for conducting a periodic safety evaluation of an existing nuclear power plant by using a number of 'Safety Factors'. A 10EVA does not just focus on technical aspects, but also on organisational and personnel-related matters. In the NS-G-2.10 and DS 426, Safety Factor 10 concerns 'Organisation, management system and safety culture' and Safety Factor 12 concerns the 'Human Factor'. The aim of evaluating SF10 is to determine if the organisation, the management system and the safety culture can adequately and effectively ensure the safe operation of the nuclear power plant. The aim of SF12 is to evaluate different human factors that may affect the safe operation of the nuclear power plant, and also to strive to make improvements (to be identified) that are reasonable and can be implemented. With a view to the continued operation of the KCB, SF10 and SF12 have been included in the assessment framework for LTO. To this end, NV EPZ has used the assessment reports for SF10 and SF12, which were drawn up within the framework of 10EVA, so that a decision can be reached before 1 January 2014 on whether these factors will lead to measures for the organisation of the KCB operations.

#### What does the Long Term Operation application involve?

The fact that the Nuclear Energy Act licence of NV EPZ does not prescribe a time limit and was granted for an indefinite period is important for the assessment of the Long Term Operation licence application. Nevertheless, a lifetime of 40 years was taken into account when the KCB was originally designed and constructed. This design lifetime was taken as the point of departure for the design of the KCB and was also stated in the Safety Report that forms a part of the Nuclear Energy Act licence. It should be noted that NV EPZ has not requested any change to the validity period of the licence within the framework of the present licence procedure. The licence application for the Long Term Operation of the KCB relates to the formalisation of changes to the Safety Report. In fact, the present application concerns the continuation of the current operation, for which the Safety Report must be updated to include a design lifetime of 60 years. In the previous Safety Report, a lifetime of 40 years (end of 2013) was assumed for the design of the KCB, while Section 15a (1) of the Nuclear Energy Act states that the KCB may operate until 31 December 2033 at the latest, a period of 60 years. The application does not concern an extension to or modification of the design/layout of the KCB. Within the framework of the requested change, the primary focus lies on the formalisation of the modifications to the Safety Report associated with the current licence. For operational purposes, one-to-one replacement of components may be necessary before 2034, but the licence does not need to be modified for this. Because the application does not concern an extension to or modification of the design/layout of the KCB, aspects such as the production of waste, security and non-proliferation, the effects of radioactive material discharges, the consequences of accidents, or other consequences for the environment will not be changed. This means that these aspects will remain outside the scope of the assessment framework of the present application.

#### Borssele Nuclear Power Plant Covenant

In June 2006, NV EPZ, the operator and also the licence holder of the KCB, the shareholders in NV EPZ, Delta and Essent, and the Kingdom of the Netherlands reached a consensus about the starting points for allowing the KCB to remain operational until 31 December 2033 at the latest, instead of for the original forty years, by signing the KCB

Covenant (Government Gazette 2006, 136). The most important provisions with regard to nuclear safety in this covenant are:

KCB may remain open until 31 December 2033 at the latest;

KCB will continue to belong to the safest twenty-five per cent of all water-cooled and water-moderated nuclear power reactors in the European Union, United States and Canada.

The deadline for closing the KCB has been laid down in Section 15a (1) of the Nuclear Energy Act. With the approval of the KCB Covenant by the House of Representatives in 2006, the political decision was effectively made to keep the KCB open until the end of 2033 at the latest (Parliamentary Papers II, 2005/06, 30000 no. 31).

The covenant has led to the continuation of the KCB operations until the end of 2033, but is not a part of the assessment framework for evaluating the application for extending the design lifetime.

#### Compulsory Environmental Impact Assessment

a. A number of submitters stated that the licence holder should have made an Environmental Impact Assessment, including an assessment of the cross-border effects. This was not done, despite treaties such as OSPAR.

#### Response

Before granting the licence for Long Term Operation, I evaluated whether it was necessary to make an Environmental Impact Assessment of the changes to the safety report for the KCB proposed by NV EPZ with a view to the lifetime extending to 2033. The outcome of this evaluation was communicated to NV EPZ by a letter dated 13 September 2011, reference no. ETM/ED/11132793. I concluded that the activity proposed by NV EPZ and the necessary licence modification within the framework of the LTO not only do not require an Environmental Impact Assessment, but are not subject to a compulsory Environmental Impact Assessment either. I also motivated this judgement in section 3.1 of the licence. A clause about this has also been included in the public notification that was published following the provisional LTO decision. I will once again explain how I arrived at this judgement.

It should first be noted that the current Nuclear Energy Act Licence of NV EPZ for the KCB is valid for an indefinite period and not just for 40 years, as many submitters implicitly assumed. The present licence for extending the design lifetime of the KCB explicitly did not involve the extension of the validity period of the Nuclear Energy Act licence of the KCB. The reason NV EPZ requested a change to the Nuclear Energy Act licence for the KCB for the period after 2013 is related to the fact that the original KCB Safety Report assumed a 40-year lifetime lasting until 2014. In order to continue using the Nuclear Energy Act licence for the period after 2013, NV EPZ needs to demonstrate that the continuation of the KCB operations will still be possible within the applicable technical preconditions after 2013. Now that the KCB Covenant of 2006 and Section 15a (1) of the Nuclear Energy Act state that the KCB may remain operational until the end of 2033 at the latest, NV EPZ must prove the following: that the large components that are difficult to replace, such as the reactor vessel, can be used for another 20 years, that all structures, systems and components with a safety function remain in acceptable physical condition and are subject to an adequate programme for controlling the ageing process. By means of extensive technical safety assessments, the above-mentioned points have been demonstrated by NV EPZ. In certain cases, one-to-one replacement of components less important to the environment is necessary, but this cannot be accomplished without modifying the licence. Nevertheless, more had to be done to be able to use the current Nuclear Energy Act licence after 2013. The Safety Report that is part of the KCB Nuclear Energy Act licence also had to be modified with regard to the effects of the longer design lifetime on the preliminary analyses and on other aspects related to the safe continuation of operations after 2013. The modified parts of the safety report are covered by the licence; a licence modification is required to make them a part of the licence. Such a licence modification actually has the goal of formalising changes to the safety report with a view to an extension of the design lifetime to 60 years. The change to the licence therefore does not concern an expansion or modification of the KCB design. Furthermore, an extension of the validity period of the safety report cannot be considered an extension of the validity period of the licence itself, which, as previously stated, has been granted for an indefinite period.

In my judgement, the change to the licence for Long Term Operation, as explained above, is not subject to a compulsory Environmental Impact Assessment. Part D of the appendix to the Environmental Impact Assessment Decision, under category 22.3, classifies "The modification or expansion of a facility in which nuclear energy may be released, including the decommissioning or dismantling of such plants or reactors" as subject to a compulsory Environmental Impact Assessment if certain situations mentioned in column 2 arise in connection with this activity. First of all, I ascertained that the change to the Safety Report proposed by NV EPZ did not involve an 'expansion' or 'modification' of the design, as described in column 1, Appendix D of the Environmental Impact Assessment Decision, because the change to the Safety Report is not connected with a change to the nuclear power plant itself. I further ascertained that the licence modification for extending the design lifetime does not relate to one of the situations mentioned in column 2, Appendix D of the Environmental Impact Decision. An extension of the design lifetime does not involve a change of the type or amount of nuclear fuel, or a change to the initial enrichment (1st situation). Furthermore, neither an increase in the licensed discharges into water or air (2nd situation), nor an increase in the storage capacity for spent fuel (3rd situation) applies in this case. In addition, no systems are introduced for the prevention or management of serious accidents (4th situation) within the framework of extending the design lifetime. Finally, a change to the decommissioning or dismantling date of more than 5 years (5th situation) does not have to be

taken into account either, because the licence modification for Long Term Operation does not involve a revision of a previously granted licence for the dismantling or decommissioning of the KCB. The KCB has not reached the end of its lifetime and a decommissioning and dismantling licence has not been granted yet.

In fact, NV EPZ holds a licence for keeping the KCB operational for an indefinite period and the decommissioning date has already been decided within the framework of the KCB Covenant and Section 15a of the Nuclear Energy Act. The change requested by NV EPZ only involves the modification of the safety report and therefore does not concern the decommissioning or dismantling of the plant. Situation 5 therefore does not apply in this case. Now that none of the situations mentioned under category 22.3 of section D of the Environmental Impact Assessment Decision arise in connection with the licence modification for Long Term Operation, an Environmental Impact Assessment cannot be considered compulsory, to say nothing of an obligation to draw up an environmental impact report.

Moreover, I determined that, on the basis of Section 2 (5b) of the Environmental Impact Assessment Decision, no Environmental Impact Assessment is required, since no activity as indicated in column 1 of the above-mentioned Decision is being carried out. Despite this observation and despite the fact that the situations of column 2 are not applicable, I also investigated whether the activity truly could not have any adverse effects on the environment, in order to be completely thorough. I determined that the activities carried out within the framework of the Long Term Operation will not have any adverse effects on the environment, since it is simply an update to the Safety Report and not a modification of the Borssele nuclear power plant. The existing environmental effects – nuclear or conventional – as previously licensed, will not change as a result of this. Finally, the additional measures resulting from the stress test are not part of the present licensing procedure for the extension of the design lifetime and cannot be subject to a compulsory Environmental Impact Assessment. These measures will be incorporated within the framework of a separate or existing licensing procedure, such as the procedure for the 10-year safety evaluation.

The submitters also refer to the 2000/1 decision of the OSPAR Commission. In 2000, the OSPAR treaty parties decided that the discharge licences of the reprocessing facilities must be reviewed as a priority by the competent national authorities. This decision only applies to the treaty parties with reprocessing facilities, i.e. the United Kingdom and France. This decision would therefore only have consequences for the competent authorities of those countries. These two treaty parties nevertheless abstained when a vote was held on this decision. This means that they are not bound by OSPAR Decision 2000/1. There are no reprocessing facilities of that kind in the Netherlands. This decision therefore does not apply to the Netherlands. This also means that it is not applicable to the application for Long Term Operation of the KCB.

#### Divided assessments

m. A number of submitters stated that by not making the modification with regard to security and dismantling available at the same time as the modification with regard to the design lifetime, the assessment of the extension of the KCB design lifetime was wrongfully divided into parts, because the extension of the design lifetime cannot be regarded as separate from the date on which the KCB will be dismantled.

#### Response

The ex officio modification of the licence provisions with regard to dismantling and security was indeed combined with the licence to extend the design lifetime, but is otherwise not connected with this licence. The ex officio modification could just as easily have occurred separately, but it was combined with another licensing procedure for reasons of efficiency. The licence for extending the design lifetime was the first opportunity that presented itself. Unlike in the case of the extension of the design lifetime, the deletion of the provisions related to dismantling and security is connected with the Regulation concerning the dismantling and decommissioning of nuclear power plants and the Regulation concerning the safeguarding of nuclear power plants and nuclear fuel, which took effect in 2011. In accordance with these Regulations, NV EPZ must possess both a dismantling and a security plan for the KCB approved by the Minister of Economic Affairs. I approved the dismantling plan on 27 October 2011 and the security plan on 15 February 2012. The approval of both plans led to the licence provisions with regard to both dismantling and security being replaced on those dates with these plans, thereby rendering those licence provisions obsolete and meaningless. Given this fact, the provisions were deleted from the licence.

o. A number of submitters claimed that, within the framework of extending the design lifetime, the risks of MOX fuel have not been sufficiently substantiated and were not discussed at the information evening of 7 November 2012. This is in conflict with the justification principle.

#### Response

This is not in conflict with the justification principle. The application for Long Term Operation and the assessment thereof explicitly took into account the use of MOX fuel. The use of MOX fuel was also discussed at the information evening of 7 November 2012.

#### Environmental effects

e. A number of submitters stated that nuclear energy has an adverse effect on health and the environment when uranium is mined.

#### Response

The scope of the licence procedure under the Nuclear Energy Act does not extend to uranium mining.

f. A number of submitters stated that the extension of the design lifetime is not justified due to the environmental impact of the radioactive waste resulting from the use of nuclear energy.

Response

NV EPZ holds a licence for the KCB for an indefinite period, limited to the end of 2033 by Section 15a (1) of the Nuclear Energy Act. Given the fact that this view does not concern the technical safety demonstration of the licence application for extending the design lifetime of the nuclear power plant, this view will not lead to any changes to the provisional decision. For the sake of completeness, I will note that nuclear waste in the Netherlands will be stored aboveground for at least 100 years.

g. A number of submitters claimed that the KCB contributes to the radiation exposure of inhabitants of the Netherlands and Germany through discharges into the air and water.

Response

NV EPZ holds a licence for the KCB for an indefinite period, shortened to the end of 2033 by Section 15a (1) of the Nuclear Energy Act. Given the fact that this view does not concern the technical safety demonstration of the licence application for extending the design lifetime of the nuclear power plant, this view will not lead to any changes to the provisional decision.

h. One submitter claimed to be against the extension of the plant lifetime because the wind mostly comes from the south-west and the submitter cares a great deal about his/her grandchildren.

Response

NV EPZ holds a licence for the KCB for an indefinite period, limited to the end of 2033 by Section 15a (1) of the Nuclear Energy Act. Given the fact that this view does not concern the technical safety demonstration of the licence application for extending the design lifetime of the nuclear power plant, this view will not lead to any changes to the provisional decision. For the sake of completeness: the predominant wind direction and wind speed have been taken into account in the accident analyses. The results of these analyses comply with the laws and regulations, as well as the provisions of the licence. The consequences of accidents will not change as a result of the requested change to the licence.

Competition with sustainable energy

j. A number of submitters stated that continued operation of the KCB will lead to less interest in the Netherlands in increasing energy efficiency and energy savings, as well as in renewable energy investments.

Response

NV EPZ holds a licence for the KCB for an indefinite period, limited to the end of 2033 by Section 15a (1) of the Nuclear Energy Act. Given the fact that this view does not concern the technical safety demonstration of the licence application for extending the design lifetime of the nuclear power plant, this view will not lead to any changes to the provisional decision. For the sake of completeness, I will give a substantive response.

Justification/social cost-benefit analysis

m. A number of submitters indicated that the government never carried out a cost-benefit analysis before the signing of the Borssele Covenant. They also stated that the benefits – safeguarding the energy supplies and achieving the Kyoto objectives – which, it was believed at the time, a longer lifetime would provide, are now already outdated. The submitters believe that there are sufficient alternatives available for supplying the Netherlands with energy in a truly sustainable, climate-friendly way.

Response

As previously stated, the KCB Covenant is not part of the assessment framework for the Long Term Operation of the KCB. The covenant and the agreements therein therefore fall outside of the scope of this procedure and will not be discussed. In addition, it is not a matter of keeping the KCB open longer, since NV EPZ holds a licence for the KCB for an indefinite period. With regard to the sustainable alternatives mentioned by the submitters, it must be noted here that the generation of energy in the KCB is generally supported by the Regulation concerning the publication of the justification of the use of ionizing radiation (category I.B.2) and will therefore not be discussed. Moreover, nuclear energy is considered important for the transition to a sustainable (low-CO<sub>2</sub>) energy supply by the Dutch cabinet on the basis of the 2011 Energy Report (Parliamentary Documents II, 2010/11, 31 510, no. 45) , because nuclear energy contributes to the diversity of energy sources and does not lead to the emission of CO<sub>2</sub> and other greenhouse gases.

KCB will not last forever

a. A number of submitters claim that, despite what NV EPZ states in its licence application, there are limits to the technical lifetime of the Borssele plant. Even though the original KCB licence has no final date, the nuclear power plant was designed and built for a lifetime of forty years. The risks and environmental effects of the KCB have been

assessed from that perspective. Furthermore, submitters stated that the European Nuclear Installations Safety Standards Initiative indicates that Western pressurised water reactors have a technical design lifetime of forty years.

Response

NV EPZ holds a licence for the KCB for an indefinite period, limited to the end of 2033 by Section 15a (1) of the Nuclear Energy Act. Given the fact that this view does not concern the technical safety demonstration of the licence application for extending the design lifetime of the nuclear power plant, this view will not lead to any changes to the provisional decision. For the sake of completeness, I will give a substantive response. Results of EU stress test of nuclear power plants

h. A number of submitters stated that the results of the so-called European stress test concerning the KCB have recently been made available and that these show that measures must be taken in and around the KCB to ensure safety. The submitters also state that the documents and the application of NV EPZ do not show that these measures have been considered during the assessment of the extension of the lifetime, and that this should take place before a decision can be reached on the application.

Response

First of all, it must be stated that NV EPZ holds a licence for the KCB for an indefinite period. Given the fact that this view does not concern the justification of the licence application for extending the design lifetime of the nuclear power plant, this view will not lead to any changes to the provisional decision.

Safety margins

w. A number of submitters claimed that the documents stated in several places that the safety margins of the KCB are becoming smaller and that this also happened when the KCB licence was changed to allow the use of MOX fuel.

Response

The claim that the papers state in several places that the safety margins of the KCB are becoming smaller is not substantiated by the submitters. Calculations and analyses in support of the application prove that all relevant safety parameters fall well within the applicable acceptance criteria and definitely do not exceed these criteria.

#### 6.5 Conclusion drawn from the views

The above-mentioned views did not lead to the rejection of the requested change to the current licence. The views submitted as a result of the provisional decision have led to a modification of the definitive decision as compared with the provisional one. The justification for the decision has been further clarified in a number of areas and the terminology was more closely aligned with the application, without changing that which is covered by the licence or the provisions incorporated in it. The views have created the impression that there is a need for the assessment framework to be clarified more extensively. This mainly concerns the significance of the term Long Term Operation, or extended or continued design lifetime, the scope of the assessment framework for assessing the application with respect to other safety evaluations, and the fact that the proposed activity is not subject to a compulsory Environmental Impact Assessment. As a result, section 3.1 was modified and chapter 4 was expanded and restructured.

Interested parties may appeal against this decision to the Administrative Jurisdiction Division of the Council of State, Postbus 20019, 2500 EA The Hague.