

Title-page

Unofficial English translation

“Conditions for new build Nuclear PowerPlants in the Netherlands”

This document is a translation of the document:

“Randvoorwaarden voor de bouw van nieuwe kerncentrales”

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In case of textual differences between the original document and this translation the original document is binding.

Ministry of Economic Affairs, Agriculture and Innovation

The President of the House of Representatives
of the States General
Binnenhof 4
2513 AA The Hague

Date:

Re: Conditions for the construction of new nuclear power plants

Dear Madam President,

The Coalition Agreement states that licensing applications to build one or more new nuclear power plants will be granted, provided they satisfy the requirements. The purpose of this letter is to notify you of the principal conditions for the establishment of new nuclear power plants (i.e. nuclear reactors used to generate electricity). The letter provides a complete overview of the main conditions, some of which are already in force. My objective is to clarify matters for all parties involved, including the general public, local government authorities and the companies currently developing plans for the construction of nuclear power plants. Over the coming period, I intend to apply and flesh out these conditions in drafting the relevant procedures for imposed land-use plans and for licensing, amending the necessary legislation and drawing up any other plans mentioned in this letter.

Nuclear power in the context of broader energy policy

The government aims for affordable, secure energy supplies while striking the best possible balance between sustainability and growth. This means producing sustainable energy competitively and providing scope for nuclear power. Industry and knowledge institutions will continue to cooperate in developing new, cost-effective energy technologies. We are thus aiming to move towards a low-carbon economy via short-term efficiency and longer-term innovation.

Nuclear power is clean. Its use will lead to a reduction in CO₂ emissions and it is therefore a logical transitional measure as we move towards a sustainable energy economy. Through the diversification of technologies, fuel and supply routes, new nuclear power plants will help to increase energy security. The establishment of one or more new nuclear power plants will generate high-level employment opportunities

and knowledge. It will also boost nuclear research and education, especially at research institutes and universities.

International context

Worldwide, 441 nuclear power plants are currently in operation, with a total capacity of 376 GW.¹ There is a strong, discernible trend towards expansion, especially in Asia, the United States and some Arab oil-producing states. Within the European Union, nuclear power currently plays a substantial role in power generation, accounting for around one third of the market. A total of four nuclear power plants are currently under construction in Finland, France and Slovakia. Bulgaria, the Czech Republic, France, Poland, Romania and the United Kingdom have plans for the establishment of a total of between 15 and 20 new nuclear power plants, while various countries – including Germany and Sweden – have postponed or cancelled plans to phase them out.

Role of government

The electricity market has been liberalised and the government will not itself invest in new power generation facilities. Instead, it will set conditions and leave it to the private sector to decide whether or not to invest in nuclear power. Applications for licences to build one or more new nuclear power plants will be granted provided they satisfy these conditions. To speed up and streamline the decision-making process, major energy projects, such as the construction of nuclear power plants, are subject to the regulations for central government coordination. This means that I am responsible, with the Minister of Infrastructure and the Environment, for the incorporation of large-scale energy infrastructure projects in the relevant land-use plans. Under these regulations, I am also responsible for the coordination of all the necessary permitting procedures for the new plant, as well as for the licence under the Nuclear Energy Act. My aim will be to complete all the necessary permitting and licensing procedures within the present government's term in office. Applications must therefore be made swiftly. Since it would be undesirable to change the rules in the course of the process, I am eager to act now, thus before the licence applications are submitted, and provide a clear statement of the main conditions that the government intends to impose.

¹ World Nuclear Association (17 December 2010), www.world-nuclear.org/info/reactors.html.

Further details of these conditions and any necessary legislation will follow soon. I aim to complete this process by the end of 2011. Due care and nuclear safety will, of course, be the prime considerations.

Status of initiatives for new nuclear power plants

Two concrete initiatives for new nuclear power plants at Borssele are currently on the table. DELTA submitted a notification of intent in June 2009 and the guidelines for the environmental impact assessment (EIA) were established a year later. DELTA expects the EIA to be completed by the end of 2011 and intends to submit its application for a licence under the Nuclear Energy Act in early 2012.

Energy Resources Holding (ERH) drafted a notification of intent in September 2010. The public participation procedure has been completed and, in late 2010, the Netherlands Commission for Environmental Assessment delivered its advisory report on the scope and level of detail of the EIA. The EIA guidelines are to be established in the near future. ERH expects its licence application under the Nuclear Energy Act to be submitted to the competent authority, together with the EIA, in 2012. Both companies expect to be in a position to commence construction in around 2015 and to start delivering power to the grid in 2019/2020.

Outline of main conditions

The main conditions for the establishment of new nuclear power plants are listed below. They concern, in the following order, nuclear safety, radioactive waste, dismantling, uranium, non-proliferation, security and anti-terrorism measures, the knowledge infrastructure, spatial planning, public perceptions, procedural aspects and certain other issues. This letter draws on the results of previous work.²

1. Nuclear power plants: types, characteristics, safety and the environment

Since the first nuclear reactors became commercially viable in the 1950s, considerable technological advances have been achieved. The 1960s saw the construction of a host of second-generation reactors. Efforts then focused on the development of market-ripe third-generation reactors. These represent a further

² House of Representatives, Session 2006–2007, 30 000, no. 40 (*Randvoorwaarden voor nieuwe kerncentrales*) and House of Representatives, Session 2009–2010, 31510, no. 40 (*Uitwerking kernenergiescenario's ten behoeve van besluitvorming door het volgende kabinet*). For further information, see these letters and associated annexes.

evolutionary advance and improvement on earlier, tried-and-tested technologies (particularly in the safety field), having benefited from many years' worldwide experience in terms of operation and design. Third-generation reactors currently represent state-of-the-art technology and are now available on the market. They are extremely safe. The risk of incidents is very slight and many measures have been taken to limit the impact of any events that do occur. Two third-generation pressurised water reactors are currently being built in Finland and France. Outside the European Union, third-generation reactors of a different type – boiling water reactors – have been in service for over 10 years and a number of third-generation pressurised water reactors are under construction. By the time a third-generation reactor goes into operation in the Netherlands, therefore, operational experience will also have been gained with them within the European Union and operators in the Netherlands will be able to draw on this. Reactors that are still under development or at the experimental stage are undesirable because safety and reliability are inadequately safeguarded.

Conditions concerning the construction of new nuclear power plants:

1. The design of the new nuclear power plant must be based on state-of-the-art technology. At present, this means third-generation reactors. It does not, therefore, mean reactors that are still under development or at the experimental stage.
2. The new plant must at least satisfy the current technical requirements imposed by European and national legislation, including rules on nuclear safety and it must have no unacceptable impact on the aquatic environment.
3. Under existing rules – both national and international – huge efforts have been made to minimise the risk of serious accidents. From the viewpoint of safety, the technical conditions for new nuclear power plants will be based on the latest insights. The following principles will at any rate apply:
 - a. the risk of a core melt accident must be less than once in a million years;
 - b. precautions must be taken to prevent core material escaping from the containment structure in the event of a core melt accident;
 - c. accidents not involving core melt must have no radiological consequences off-site and must certainly not necessitate preventive measures such as evacuation or the use of nuclear shelters;
 - d. precautions must be taken to ensure that in the event of a core melt accident protective measures will be required for no more than a limited area and a limited time. This means, for example, that immediate

- evacuation must not be necessary beyond the immediate vicinity of the facility;
- e. the containment structure must be able to withstand great overpressure from inside and a commercial airliner crash from outside;
 - f. the nuclear power plant must have a long accident response time, so that if incidents occur the operators have time to decide whether and how to react;
 - g. the new nuclear power plant must meet all current rules on matters such as conventional environmental protection, nature protection, radiation protection and nuclear safety.
4. The Nuclear Energy Act requires regular evaluations of plant safety in the light of current state-of-the-art technology. In the Netherlands, this means that facilities must be assessed in the light of the latest state-of-the-art technology at least once every ten years, starting from the issue of the Nuclear Energy Act licence. These periodic assessments will include consideration of any improvements that may be deemed reasonably feasible. Account must also be taken of any important developments that occur while the plant is under construction.³ Moreover, events occurring between periodic assessments, such as the discovery of shortcomings in other nuclear power plants of the same type, may necessitate extra evaluations.
5. Consideration will be given to the feasibility and desirability of issuing fixed-term licences, and also of setting deadlines for the commencement of construction work following the issue of licences. Decisions on these matters will be taken in the very near future.

³ To cite a foreign example: following the events of 2001, the design of a nuclear power plant under construction in Finland was modified to enable it to withstand an aircraft crash.

2. Radioactive waste

In 2002, the Netherlands decided⁴ to store low, intermediate and high-level radioactive waste for a period of at least 100 years in purpose-designed buildings managed by the Netherlands' Central Organisation for Radioactive Waste (COVRA) in the province of Zeeland. Thereafter, the waste is to be disposed of in deep underground 'final repositories'. Based on the current state of science and technology, this method of geological disposal is the safest and most appropriate option for the long-term management of long-lived high-level radioactive waste,⁵ ensuring its permanent isolation from the human and natural environment.

With a view to possible future recycling and integrated chain management, the government took the position as long ago as 1993 that waste placed in storage facilities must be retrievable far into the future. It can then be brought back into the chain if appropriate recycling technologies are developed. Research by the Committee on Radioactive Waste Disposal (CORA) has shown that it is possible to dispose of high-level radioactive waste safely and retrievably in deep geological repositories.⁶ That is why the Netherlands now envisages establishing such a repository deep underground, probably in salt or clay layers.

Under a proposed EURATOM Directive on the management of spent fuel and radioactive waste,⁷ Member States will be required to adopt national programmes stating how, in practice, they intend to construct and manage final repositories. Cooperation between Member States is not ruled out. Dutch nuclear power policy justifies expectations that the Dutch programme will be ready on time. By 2014, I shall produce a programme setting out the steps to be taken to achieve the final disposal of this country's radioactive waste.

⁴ House of Representatives, Parliamentary Papers, Session 2002-2003, 28674, no. 1

⁵ OECD-NEA Radioactive Waste Management Committee, *Collective Statement on Moving Forward to Geological Disposal of Radioactive Waste*, ISBN 978-92-64-99057-9, 2008

⁶ Final report by the Committee on Radioactive Waste Disposal (CORA), *Terugneembare berging, een begaanbaar pad?*, letter of 21 February 2001 from the Minister of Economic Affairs (EZ01-107)

⁷ Directive 2010/0306/Euratom, proposed by the European Commission on 2 November 2010.

The Dutch Research Programme on the Final Disposal of Radioactive Waste (OPERA 2009-2014) is now under way. The last Dutch studies on the feasibility and safety of the final disposal of radioactive waste date from between 10 and 20 years ago. OPERA is re-evaluating them. The government and industry are supporting this research on a voluntary basis. In view of the sensitivity of the issue of radioactive waste, future research will focus on both societal and technical factors. I will take the results of OPERA into account when deciding my position on the steps to be taken to achieve a final form of disposal for radioactive waste.

Until a few years ago, the choice between direct storage and reprocessing of spent fuel (known as the back-end strategy) was entirely in the hands of the nuclear power plant licence-holder. This is not now the case, since an agreement is always needed with the country where reprocessing is to take place. The consent of the government and parliament is required for the agreement and, therefore, for the decision to reprocess.

Various studies sent to the House of Representatives in recent years show that neither of these options is clearly preferable from the environmental, safety or non-proliferation point of view.⁸ Technologies may eventually be developed for partitioning spent fuel to remove long-lived components and then transmuting them in order to reduce the half-life of this form of nuclear waste. However, such technologies are not expected to be available on the market for some decades to come.

Conditions concerning radioactive waste:

1. The 'polluter pays' principle will continue to apply. Nuclear power plant licence-holders are responsible for both bearing the cost of waste management and providing storage facilities. In practice, this will mean, for example, that they will have to make arrangements with COVRA concerning storage capacity.

⁸ *Ontwikkelingen met betrekking tot eind verwerking van gebruikte splijtstof*, NRG, April 2005, annexe to House of Representatives, Parliamentary Papers, Session 2004–2005, 30000, no. 5; *Kerncentrale Borssele na 2013, Gevolgen van beëindiging of voortzetting van de bedrijfsvoering*, ECN, November 2005, annexe to House of Representatives, Parliamentary Papers, Session 2005–2006, 30000, no. 18; Memorandum annexed to House of Representatives, Parliamentary Papers, Session 2006–2007, 30000, no. 40; *Kernenergie & Randvoorwaarden, Een verkenning van mogelijke randvoorwaarden voor de kernenergiescenario's uit het Energierapport 2008*, NRG, March 2010, annexe to House of Representatives, Parliamentary Papers, Session 2009-2010, 31510, no. 40.

2. From the date on which the plant goes into service, nuclear power plant licence-holders will contribute to a fund financing research into the final disposal of radioactive waste. This fund will be self-financing and will be managed by COVRA. It will be funded with higher COVRA charges for radioactive waste storage.
3. For the time being, it will be up to the nuclear power plant licence-holder to decide whether or not to reprocess spent fuel. If the licence-holder opts for reprocessing, the government will take action to conclude an agreement with the country in which reprocessing is to take place. The agreement will correspond to the length of the contract, subject to a maximum of around thirty years. The licence-holder will evaluate its back-end strategy every ten years. The State will do so every twenty years. Depending on the outcome of these evaluations, the licence-holder may be instructed to adopt a different back-end strategy. In that event, the government can be expected to set reasonable deadlines for compliance.

3. Dismantling

Prior to the construction of any new nuclear power plant, there must be a clear strategy for dismantling it and for funding the dismantlement operation. This is laid down in the recent amendments to the Nuclear Energy Act and the Nuclear Facilities, Fissile Material and Ores Decree.⁹

The licence-holder has long been responsible for the costs of decommissioning and dismantling the nuclear power plant. From 1 April this year, however, the licence-holder will be required to make advance financial provision for this, approved by the Minister of Economic Affairs, Agriculture and Innovation and the Minister of Finance. Before giving their approval, the Ministers will ensure that the financial arrangements made by the licence-holder provide a solid guarantee that the costs of decommissioning and dismantling will be covered when the time comes.

Conditions concerning dismantling:

1. Decommissioning and dismantling must commence immediately after the nuclear power plant reaches the end of its normal operating life.

⁹ Bulletin of Acts and Decrees 2010, 18.

2. Decommissioning and dismantling must be completed as soon as is reasonably possible.
3. The final aim of decommissioning and dismantling will be to return the site to 'green field' status. This means that there must be no reason to limit its re-use in consequence of its past use as the site of a nuclear installation.
4. Would-be licence-holders for new nuclear power plants must present an initial dismantling plan when applying for the licence. The dismantling plan must be updated every 5 years, starting from the moment at which the plant goes into service.
5. Licence-holders will be responsible for the entire cost of decommissioning and dismantling nuclear power plants, and must have made advance financial provision for this, approved by the Minister of Economic Affairs, Agriculture and Innovation and the Minister of Finance.
6. The entire costs of decommissioning and dismantling must be covered from the moment that fuel rods are loaded into the core of the new nuclear power plant. This can be achieved by means of insurance, a bank guarantee, collateral or some other arrangement providing equivalent guarantees.
7. A fund must be amassed by means of annual appropriations from profits made throughout the plant's operational life, so that a financial reserve is available once decommissioning and dismantling commence.
8. While the fund is being amassed, the difference between the amount of money available in it and the estimated cost of decommissioning and dismantling must be covered by the guarantees referred to in point 6.
9. The arrangements made by the licence-holder for these financial guarantees must be based on an up-to-date dismantling plan, and must be approved by the Minister of Economic Affairs, Agriculture and Innovation and the Minister of Finance.
10. There must be satisfactory, transparent arrangements for managing and scrutinising the dismantling fund. The continuing availability of the financial resources must be guaranteed in the event of operator bankruptcy or transfer of the plant to third parties.

4. Uranium mining and fuel manufacture

Uranium is found in many places around the world but the concentrations vary. For this reason, potential global production of uranium fluctuates and is to some extent determined by current market prices. In principle, global uranium stocks are sufficient

to fuel a substantial growth in nuclear power generation. However, shortages may occur because of the limited production capacity of existing uranium mines and the decline in production capacity from the dismantling of decommissioned nuclear weapons. In that event, a rise in the price of uranium may be expected, although this will have a limited impact on production costs, since the cost of fuel for nuclear power plants is estimated at 5 to 10% of total production costs, compared to over 50% for gas and around 30% for coal-fired power stations.

It is important to society to reduce the environmental impact of uranium mining and nuclear fuel production. The main environmental issue relating to the mining and processing of uranium is the management of residues and of mines themselves, both during operation and after closure. Local pollution is caused by emissions of radon gas to the air and discharges of heavy metals into water and soil. In principle, the reservoirs can be sealed effectively enough to reduce local pollution to levels equivalent to natural emissions of radon from the subsurface. Even so, environmental risks cannot be entirely excluded.

Uranium enrichment is a method of concentrating uranium for use as nuclear fuel. Enrichment can be achieved sustainably. Indeed, this is already being done, for example by URENCO in the Netherlands. To protect the environment, the remaining depleted uranium needs to be carefully managed, especially if it takes the form of uranium hexafluoride and is stored close to enrichment plants.

I think it is important that operators of new nuclear power plants ensure, as an intrinsic part of corporate social responsibility, that the fuel to be used in their reactors is manufactured in a responsible manner. I am thinking in particular of the following factors. The front-end process (from the mining of the uranium through to the production of the fuel elements) should be transparent. In other words, the source of the uranium, the way it is processed and the way the fuel elements are produced should all be fully traceable. In addition, if the uranium is sourced from mining, the mining company should be at least ISO 14001 certified and should deal responsibly with the natural and human environment. Moreover, the preference in that case should be for solution mining (i.e. underground extraction). If this is not feasible, open pit mining or underground mining are acceptable alternatives, provided that immediate and future pollution are kept to a minimum. However, recycling – for example, from the dismantling of nuclear weapons – is preferable to mining. Finally, I expect operators of new nuclear power plants relying on the enrichment of fissile

material to manage the enrichment facilities, the depleted uranium and any other waste products in an environmentally responsible manner. Because it is difficult to enact legislation in the Netherlands establishing and enforcing the relevant requirements, I will enter into consultations on these issues with those initiating new nuclear power plant projects.

5. Non-proliferation

Since certain fissile materials can be used to manufacture nuclear weapons and nuclear knowledge can also contribute, it is important for those operating nuclear facilities to prevent nuclear material and sensitive nuclear knowledge ever passing into the wrong hands, either accidentally or deliberately. Action to prevent the spread of such materials and knowledge is known as non-proliferation.

Non-proliferation is enshrined in international agreements. Under the EURATOM Treaty (1957) and the Nuclear Non-Proliferation Treaty (NPT, 1968), with its associated Safeguards Agreement and Additional Protocol, the Netherlands is obliged to place its nuclear activities under international supervision. Every nuclear facility falls automatically under the supervision of the EU (EURATOM) and the International Atomic Energy Agency in Vienna (IAEA) and its licence-holder is obliged to supply necessary information.

The aim of international supervision is to ensure that nuclear material is used for peaceful purposes only. One consequence for nuclear power plants is that regular joint inspections are conducted by the IAEA and EURATOM. Given the safety and security arrangements and the inspection regime, the risk of nuclear materials being diverted is extremely remote. The plutonium separated from spent nuclear fuel during its reprocessing is also subject to IAEA inspection and EURATOM oversight.

Compliance with the Nuclear Non-Proliferation Treaty, including the Safeguard Agreement and the Additional Protocol, provides substantial and effective safeguards in the Dutch situation. The operation of a new nuclear power plant in accordance with this regime is unlikely to create any particular new risk of proliferation.

Conditions concerning non-proliferation:

1. Before any new nuclear power plant is taken into service, comprehensive reports, as required under the prevailing treaties and agreements and in national legislation on non-proliferation, must be provided.
2. Once the nuclear power plant goes into operation, there must be full compliance with all the Netherlands' obligations under the prevailing treaties and agreements and in national legislation on non-proliferation.

6. Security and anti-terrorism measures

Since the events of 11 September 2001, anti-terrorism measures have been stepped up considerably at both international and national level. For example, national and international legislation on nuclear facilities and the transportation of nuclear materials has been modified and tightened up. Partly in that context, the amendment to the IAEA Convention on the Physical Protection of Nuclear Material¹⁰ has recently been implemented through amendments to the Security of Nuclear Installations and Fissile Materials Order.¹¹ Security measures at the existing nuclear power plant at Borssele have been reviewed, improvements have been recommended and measures are being implemented. These measures will provide the basis for the integrated package of security arrangements required at any new nuclear power plant.

Current government security policy will also apply to any new nuclear power plant. Major features of this policy include identifying possible threats, making provision and taking measures at the design stage to prepare for them, and allocating responsibilities to the plant's own Internal Security Organisation (ISO) and a government External Security Organisation (ESO). Needless to say, effective coordination and harmonisation between these two organisations will be essential. The relevant security requirements are set out in the regulations governing the security of nuclear installations and fissile materials.

¹⁰ Dutch Treaty Series, 2006. No. 81.

¹¹ Dutch Government Gazette 2010, 19950

Conditions concerning security:

1. The design of the nuclear power plant must take account of facilities and measures realistically needed to maximise security, in combination with safety measures throughout the plant's period in service.
2. Before a nuclear power plant goes into service, it must satisfy the provisions of both the (amended) Convention on the Physical Protection of Nuclear Material and the relevant national and international legislation. The terms of the Convention are implemented in the Security of Nuclear Installations and Fissile Materials Order and elsewhere.
3. Security measures for nuclear installations and related government services must be geared to the latest threat scenarios, as specified in the Security of Nuclear Installations and Fissile Materials Order.
4. During the construction of nuclear power plants, adequate security measures must be taken to prevent deliberate disruption at the site.
5. In the development and design of nuclear power plants, adequate measures must be taken to enable the effective implementation of security and safety measures in the operational phase.

7. Knowledge infrastructure in the Netherlands and government organisation

If one or more new nuclear power plants are to be established, the public authorities and companies involved will need staff with sufficient knowledge and expertise. Government will need them for policy preparation, licensing and supervision, while the companies will need them for activities like the construction of the nuclear facility or facilities (including the designation of Dutch supply companies) and the operation and maintenance of the plants. Facilities will also have to be available for sufficient fundamental and applied research on nuclear safety issues.

The Netherlands possesses a broad cluster of relevant institutions in the shape of the EPZ power producer (nuclear power plant), URENCO (uranium enrichment), COVRA (radioactive waste storage), NRG (fundamental and applied research and production of medical isotopes) and the Reactor Institute Delft (RID) (fundamental research and training). Internationally, the country is a major player in fields like the production of medical radioisotopes and uranium enrichment.

I want to maintain and strengthen this position. Incentives for research in the nuclear technology field will be continued. Wherever necessary and possible, Dutch

knowledge and experience will be developed and disseminated internationally. The government will also take a positive attitude to the replacement of the Petten high flux reactor by a new reactor (Pallas) and will ensure that the necessary licensing conditions are ready in good time. It is up to NRG, as the initiating party, to present a watertight business case for the new reactor. New nuclear power plants will give a powerful boost to the nuclear knowledge infrastructure in the Netherlands.

Sufficient opportunities must be available to specialise. There is an international market for such specialists and Delft University of Technology has recently launched an MSc specialisation in Nuclear Science and Engineering. In Zeeland, a specialisation in nuclear technology has been created for students doing courses at secondary vocational and higher professional level. These are welcome developments. Together with the Minister of Education, Culture and Science, I will consider what complementary role the State can play. The Ministry of Economic Affairs, Agriculture and Innovation will continue to subsidise NRG research activities at Petten.

8. Spatial planning, sites for nuclear power plants

A policy is in place to safeguard sites designated for nuclear power facilities. This policy was first recorded in the government decision on sites for new nuclear power plants¹² and has been maintained ever since. It is currently enshrined in the Third National Structure Plan on Electricity Supply (SEV III),¹³ which prohibits any developments that render building nuclear power plants impossible or that seriously impede their construction at the designated locations at Borssele, Eemshaven and Maasvlakte I.¹⁴ That remains the policy of this government.

The Delta and ERH initiatives both relate to the designated location at Borssele. On my behalf and in consultation with the relevant subnational authorities, ARCADIS is now conducting an exploratory study of the planning implications of the various energy-related and other proposals for the area around Borssele known as the Sloegebied. It will also consider whether there is room for one or more new nuclear power plants there. I will use the results of this study in deciding whether (and, if so,

¹² Parliamentary Papers II, Session 1985-1986, 18 830, nos. 46-47.

¹³ Parliamentary Papers II, Session 2009-2010, 31 410, no. 16.

The policy no longer applies, therefore, to the Westelijke Noordoostpolderdijk and Moerdijk locations listed in SEV II.

how) to produce an EIA plan and an imposed central government land-use plan for the area. I will notify the House in due course. Factors in the planning decision will include cooling water (both intake and discharge), population density, logistics for the supply of nuclear fuel and the removal of spent fuel and radioactive waste, and visual intrusion. I will also take account of the provisions of relevant IAEA Safety Documents, including the Site Evaluation for Nuclear Installations Safety Requirements, which address site-specific considerations like the risk of flooding.

9. Public perceptions

In preparing the nuclear power scenarios, a survey was conducted of the Dutch public's perceptions of nuclear power.¹⁵ The results show that the public find nuclear power a particularly thorny issue.¹⁶ Their initial gut reaction is that nuclear power is dangerous, but necessary. While there is a need for debate about nuclear power in the context of the broader energy economy, the survey showed that attitudes to it are closely connected to three key factors: fear, knowledge and trust.

The qualitative part of the survey revealed that the Dutch public's attitude to nuclear power could best be summed up as 'a necessary, but hopefully temporary, evil'. The vast majority of people are neither definitely pro nor definitely anti nuclear power. The researchers felt that the debate needed to focus more explicitly on both facts and figures and people's fears and concerns.

People are particularly concerned about nuclear waste storage, the non-proliferation issue, and the safety of nuclear power plants. Investment in research on radioactive waste disposal and the use of sustainable energy is regarded as important for this reason, if for no other.

¹⁵ House of Representatives, Session 2009-2010, 31510, no. 40.

¹⁶ This was revealed, for example, by the quantitative part of the survey, where respondents were asked to rate the scenarios in terms of appeal, initial gut reaction, and final preference. The various results were as follows. The scenario with most general appeal was scenario 1a (no new nuclear power plants). After that, scenario 1b held most appeal (no new nuclear power plants, unless inherently safe), followed by scenario 2 (replace Borssele in 2033) and finally by scenario 3 (new nuclear power plant after 2020 – as well as replacing Borssele). Where gut reactions to each scenario were concerned, scenario 3 evoked the most anxiety. Scenario 1a was the one most frequently viewed as a sensible choice. The general feeling about scenario 1b was that the country couldn't wait that long. However, when respondents were asked to award ultimate preference to one of the scenarios, scenario 3 was the winner, followed by scenario 1b and scenario 1a, in that order. Scenario 2 was definitely the least popular.

To promote public debate, it is extremely important for objective, transparent and accessible information to be available. I shall take action to ensure this is the case, making use of independent agencies to gather and disseminate it. Research on safe methods of final disposal of radioactive waste will continue. Nuclear power is a useful transitional technology as we move towards a sustainable energy economy.

Conditions concerning public perceptions:

1. Those initiating the establishment of new nuclear installations will be responsible for well-planned, transparent public communications strategies to ensure that the general public find their projects understandable and accessible.

10. Procedures

There are a number of procedures to be completed before work can start on the physical establishment and construction of a new nuclear power plant. These include a modification of the existing land-use plan by way of an imposed central government land-use plan, as well as licensing and permitting procedures under the Nuclear Energy Act, the Environmental Permitting (General Provisions) Act, the Water Act and other statutes. A number of decisions (the imposed central government land-use plan and the main licences and permits) also require an EIA report.

Under the Electricity Act 1998, the establishment of new nuclear power plants is by law subject to the regulations for the central government coordination of large-scale energy infrastructure projects. The imposed land-use plan will be adopted by the Minister of Economic Affairs, Agriculture and Innovation and the Minister of Infrastructure and the Environment.

To streamline the process, the regulations for the central government coordination of large-scale energy infrastructure projects include an 'implementation module'. This means that all (or, at any rate, many) of the necessary licences, permits and exemptions can be prepared in a single coordinated procedure. Decisions continue in the first instance to be the responsibility of the relevant subnational authorities, such as the province or municipality, and central government coordinates the whole process. This means, for example, that responsibility for setting reasonable time limits for the granting of licences and permits rests with me. The regulations also make it possible for the State ultimately to appropriate the permitting powers of

another administrative authority, if that proves necessary. At this point, I assume that this will not be the case.

My aim is to ensure that the necessary decisions are taken and permitting processes completed within the present government's term in office. This is based on the assumption that the relevant applications will be submitted by the end of 2012 (as DELTA and ERH currently intend). The licences can then be awarded in early 2014, so that – depending on any appeal procedures – construction can start around 2014/2015. This can only be achieved, however, if the applications are submitted in time and if, in assessing them, substantial use can be made (as I think it can) of an approval or draft approval for a power plant issued by a Member State of the European Union, or by the United States of America or Canada.

The licence under the Nuclear Energy Act will be designed in such a way that the prescribed safety standards and other requirements can be carefully monitored and assessed at the various consecutive stages (construction, pre-operational testing and the lead-up to regular service). The Nuclear Safety Service will have a major role to play and, like the other services involved, will need to be adequately equipped to do so. I will ensure that this is the case.

11. Other issues

Requirements for licence-holders

A nuclear power plant licence is awarded to a particular person. One of the reasons for this is the need to assess the trustworthiness of the applicant (or, in the case of a legal person, the members of its board), given the sometimes confidential nature of information and the involvement of proliferation-sensitive materials and knowledge. The safety of nuclear power plants is assured by legislation, supervision and inspection. Strictly speaking, supplementary requirements concerning the type of share ownership would add nothing to this. It is conceivable, however, that further agreements may be sought with licence applicants on specific matters such as national and regional employment opportunities.

Conditions concerning licence-holders will include the following:

1. Licence-holders must be trustworthy and professional.
2. Licence-holders must have the organisation and expertise to be able to guarantee safe operation of plants.
3. Licence-holders must be responsible for guaranteeing the necessary financial and human resources to ensure nuclear safety at their facilities.¹⁷

Supporting measures and liability for accidents at nuclear power plants

As stated above, the liberalisation of the Dutch electricity market means that the State will not now invest in power generation. Grants or other financial support will not be provided for the construction of new power plants, whether nuclear or, for example, gas or coal-fired. And, in fact, the authors of the current initiatives have made no requests for any such assistance.

The liability of nuclear plant operators is established in the Paris Convention (1960) and the Brussels Convention (1963) supplementary to it. In the Netherlands, the terms of these conventions are fleshed out in the Nuclear Incidents (Third Party Liability) Act. New nuclear power plants will, of course, have to satisfy the requirements of that Act. This means that, in the event of a nuclear accident, the operator concerned will be liable for up to €340 million. Consequent to an amendment to the Act which has not yet entered into force, this sum is to rise to €700 million.

If the damage exceeds €340 million but is not above €485 million, there is an agreement under the Brussels Convention that the Member States will contribute set amounts to cover the cost. The Dutch contribution will be funded from the public purse.

If damage exceeds €485 million, there is a supplementary State guarantee up to a maximum of €2.3 billion.¹⁸ This maximum will be increased to €3.2 billion. The

¹⁷ Based on the Nuclear Safety Directive (2009/71/EURATOM) and the recently amended Nuclear Energy Act.

¹⁸ The changes in the amounts have not yet come into operation, however, because it has been agreed (Decision 2004/294/EC of the Council of the European Union, 8 March 2004 (PbEU L 97)) that the EU Member States party to the Paris Convention will all ratify the relevant Protocol simultaneously. Since some of the Member States concerned have still to amend their national legislation, the Protocols – and the amended Nuclear Incidents (Third Party Liability) Act – have not yet come into force.

licence-holder pays the State an annual premium for this guarantee. Since the size of the annual premium must adequately reflect the risk run by the State, it will be reviewed on an annual basis.

Costs

Accident management and security measures can be regarded to some extent as belonging to government's normal tasks (maintaining public order and ensuring individual safety) and prerogatives (the use of force). However, they may also include measures within the nuclear power plant itself (for example, in relation to the plant's security personnel, the installation of extra fences, surveillance apparatus etc.). The costs involved are currently shared on the basis of a breakdown of responsibilities. The financial arrangements will be reviewed to see whether there is any reason to change them.

The operators of nuclear facilities currently make a financial contribution towards the costs of licensing and supervision. The level of the contribution is laid down in the Nuclear Energy Act (Contributions) Decree. Since it has not been adjusted for the last 20 years, it now needs updating. The review will address, in particular, the funding of the licensing system, follow-up action and preventive and punitive enforcement measures. My aim is to take a decision on the review in mid-2011.

Conclusion

I plan to ensure that a decision can be taken on the current DELTA and ERH initiatives within the present government's term in office. However, safety and due care will be the prime considerations and this letter is a contribution to that. In the coming period, I shall proceed to flesh out and implement the conditions outlined in this letter.

Yours sincerely,

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