ÖKOBÜRO
ALLIANCE OF THE ENVIRONMENTAL MOVEMENT

Lifetime Extension of Nuclear Power Plants

Toolkit for Public Participation

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ÖKOBÜRO is the alliance of the Austrian Environmental Movement. It consists of 20 Austrian organizations engaged in environmental, nature, and animal protection like GLOBAL 2000 (Friends of the Earth Austria), FOUR PAWS, BirdLife Austria, and WWF Austria. ÖKOBÜRO works on the political and legal level for the environmental movement.

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Content

1. INTRODUCTION

1.1. Transboundary assessment and public participation in nuclear activities in general

The environmental impact of large-scale projects in a country do not just stop at its borders. Whenever it is reasonably expectable for a project to have effect on the environment of another state, national procedures on the assessment of environmental impacts are not sufficient. This applies particularly to Nuclear Power Plants (NPPs), where accidents have unproportionally severe effects on people and the environment. This is becoming more and more relevant, as NPPs which were originally designed for an operating time of 30 to 40 years, continue to be used for generating power, exceeding their functional life by years. This is called LTE (lifetime extension).

From a legal aspect, there are several conventions and regulations that try to tackle these issues. Especially relevant in this context are the Aarhus Convention, the Espoo Convention, and, for countries within the European Union, the EIA Directive. All these legal sources aim to limit adverse environmental impact of such major projects, enabling the public to participate. Public participation is a key element of larger environmental procedures. The concerned public, such as neighbours, community initiatives and NGOs, have the right to express their opinion, possible fears, and suggestions for improvement.

1.2. Lifetime extension – definition and purpose

As sated above, many national governments try to continue to use NPPs by extending their operational period instead of investing in other, potentially more sustainable power sources. LTE, then, often starts long before the originally designed lifetime is reached. The concept of LTE is also called PLEX (Planned Lifetime Extension) or LTO (Long-Term Operation).

National legal frameworks differ in the treatment of lifetime extensions of NPPs. Some states provide publicly accessible assessment procedures before extending the lifetime of a NPP, whereas others only require the approval of the responsible authority. Often, regular safety evaluations are required in order to continue operations of a NPP and no expiry date was fixed in the original operation license. International regulatory frameworks like the Espoo Convention want to face this heterogenic situation by giving mutual solutions, e.g., requiring extensions of expired time-limited licenses or the issuing of a new one.

It must be noted that there have been essential changes regarding the aging of nuclear power plants in the last decades. Among these are the implementation of stress test results after the catastrophe of Fukushima, power uprates (which entail the reduction of safety) and several safety upgrade programmes.

1.2.1. Approach under the Espoo Convention

In general, the terminology plays an important role to understand the concept of LTE. Nonetheless, legal frameworks have different approaches and understandings of certain essential terms. As all applicable legal frameworks try to regulate it, one might say, that there is still some kind of LTE concept which is commonly agreed on by all Parties.

In the Espoo Convention case regarding the Ukrainian NPP Rivne, LTE concerned "the extension of the lifetime of an NPP originally designed to operate for 30 years for a further 20 years", but this is not the only constellation. In any case, LTE is to be considered a "nuclear reactors" activity according to Appendix I to the Espoo Convention, which means that "nuclear reactor" case law applies to the LTE.

Following the lifetime extension of the NPP Rivne, more and more LTE cases were brought before the Espoo Implementation Committee as subsidiary body to review compliance with the Convention. Therefore, the Parties to the Convention adopted a Guidance on the Applicability of the Convention to the Lifetime Extension of Nuclear Power Plants at their seventh Meeting in December 2020 (the so-called "LTE Guidance"). This Guidance describes the following possible scenarios of LTE:

1. The end date of a time limited licence has been reached, but the nuclear power plant is intended to continue operation
2. The NPP has a time unlimited licence, but the design life of irreplaceable safety critical structures, systems and components has been reached
3. A periodic safety review is carried out in support of the decision-making process for a lifetime extension
4. Modification of a nuclear power plant not covered by the existing authorization to operate and therefore requiring a licence modification

The LTE Guidance elaborates that lifetime extensions are all within the scope of the Convention. While in most cases they are to be considered a major change to an activity, in certain constellations (e.g., if the operation has previously been terminated), LTE can also be an activity at its own. The LTE Guidance further notes that the extended lifetime of a NPP generally has similar (transboundary) impacts like a new NPP. In the four scenarios, a transboundary EIA is thus necessary, unless significant adverse transboundary impacts can be excluded. Only in very rare cases, a state might conclude that, due to the minimal nature and scale of an LTE, the Espoo Convention is not applicable.

1.2.2. Definition in other frameworks

The International Atomic Energy Agency (IAEA) established the term LTO (Long Term Operation). It includes all forms of "operation beyond an established time frame defined by the licence term, the original plant design, relevant standards or national regulations". Like in the Espoo framework, the element "established time frame" does not refer to any specific case, like the expiry of the license, but covers different situations of operations beyond established timeframes.

In 2019, the Nuclear Energy Agency (NEA) of the OECD issued the report "Legal Frameworks for Long-Term Operation of Nuclear Power Reactors", which gives an overview of countries' different approaches to LTO. Instead of coming up with another term, the

report acknowledges the variety of terms in different countries (so-called "slash approach"), be it long-term, extended, or continued operation. Yet, it introduces some "generic" terms, that are mostly based on IAEA documents. The definition of the term "operating time" or "lifetime" according to the OECD guidance is "the period during which an authorized facility is used for its intended purpose, until decommissioning or closure."

2. LEGAL FRAMEWORK

2.1. Espoo Convention

The Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) is the legal basis for the assessment of transboundary environmental impacts. It requires for certain listed activities that are likely to have significant transboundary impact, including the operation of nuclear reactors, to undergo an assessment procedure that includes public participation. The public of a possibly affected country thus has the right to make comments on and to express objections to proposed activities.

The Convention provides for two bodies: The Espoo Implementation Committee (Espoo IC) and the Meeting of the Parties (Espoo MoP). The Espoo IC represents a contact point for the contracting Parties and members of the public. It also prepares decisions on the implementation of the Convention to be adopted by the Espoo MoP. For the application of the Espoo Convention on LTE of NPPs, see above, 1.2.1.

2.2. Aarhus Convention

The Aarhus Convention regulates access to information, public participation in decision-making and access to justice in environmental matters. In its Annex I, it lists certain activities which require assessments procedures open to participation by the concerned public. The list includes nuclear power plants.

The Aarhus Convention Compliance Committee (ACCC) monitors the implementation of the Convention and prepares findings. On the basis of these findings, the Meeting of the Parties to the Aarhus Convention (Aarhus MoP) than decides on a Party's compliance with the Convention.

The *concerned public* according to the Convention are natural persons or organisations who are "affected or likely to be affected by" or who "have an interest in" the procedure. As noted by the ACCC, the scope of the concerned public is relatively broad. Environmental NGOs are members of the concerned public without having to prove their interest. Only states who provide for effective participation during the whole decision-making process fulfil their obligations according to the Convention. Participation must take place at a stage early enough to guarantee for the authority to make a decision open to different outcomes.

Changes or extensions to certain activities also fall under the provisions of the Convention, requiring public participation according to article 6 Aarhus Convention. The ACCC demands special consideration of the identification of the public concerned when decision-making on ultra-hazardous activities like NPPs.

In the event of projects with transboundary impact, the public concerned is also allocated outside the territory of the Party. The Party of origin, which is mostly the state where a project is carried out, is responsible to comply with the requirements of the Aarhus Convention. The Convention demands a certain level of effort by the responsible Party to interact with the other concerned states.

2.3. EU law

Besides the contracting states, the EU is also a Party to the Aarhus and Espoo Conventions. Like other states on national level, the EU must thus integrate the Conventions' provision in its legal framework.

When it comes to public participation, the most important Directive of the European Union on the permission of NPPs is the EIA Directive. Its objective is to establish a system of broad consent and impact assessment when it comes to projects that are likely to have a significant impact on the environment. The environmental impact assessment (EIA) aims at implementing the Aarhus and the Espoo Conventions. If a project is expected to have significant effects on the environment in another member state, a transboundary EIA must be carried out.

The EIA Directive applies to the assessment of the environmental effects of those public and private projects which are likely to have significant effects on the environment. The original construction of a project as well as changes or extensions of an already permitted project must undergo an EIA, if the project is listed in the Annex, such as nuclear reactors.

As the Aarhus Convention determines, the public concerned is granted participatory rights within EIA procedures, which also applies to non-governmental organisations promoting environmental protection. Opinions and comments of the public must be gathered at an early stage to allow the authority to make a reasoned decision. In a case regarding the Belgian NPP Doel, the European Court of Justice (ECJ) ruled that extending the operational work of a NPP significantly (combined with major renovation works to bring the NPP in line with safety standards) is comparable to when the NPP was first put in service. This means that states must apply the broad assessment rules of EIA.

Another EU framework of interest for nuclear activities is the Habitats Directive. It requires an impact assessment to take place whenever a project is thought to have effects on an area protected under the Habitats Directive or Birds Directive. The aim of this Directive is to maintain or restore natural habitats and species of wild fauna and flora of a common interest at favourable conservation status. The application of the Habitats Directive in the case of NPP is similar to what was said above on the EIA: An assessment is necessary, if a project will not be carried out under the same conditions as initially permitted, or scientific developments and new safety standards are implemented together with major upgrading work.

2.4. National law and interrelations

The UNECE Conventions as well as the EU directives provide a certain legal framework that must be transposed into national law accordingly. Public participation and assessment requirements are therefore usually included in national EIA acts and other general environmental and procedural legislation to be applied by national authorities and courts. Under certain circumstances, if a state has failed to implement EU law correctly, courts must apply EU provisions directly if they grant rights for individual persons.

National law can also set additional requirements to be applied when the lifetime of a nuclear power plant is extended. This may, inter alia, include water protection criteria, safety instructions to implement nuclear safety, or construction regulations.

3. RELEVANT PROCEDURES

3.1 Notification and transboundary EIA

The Espoo Convention provides a procedural framework to be followed by states performing nuclear activities as well as states possibly affected by a nuclear activity. These rules are the basis for the public in neighbouring or close countries to participate in a procedure.

3.1.1. Involved Parties

As the Espoo Convention applies to transboundary EIA, procedures usually involve different Parties to the Convention. The state under whose jurisdiction a proposed activity – such as LTE – is envisaged to take place is called "Party of origin". The state or states likely to be affected by the transboundary impact of a proposed activity are called "affected Parties". Especially in case of nuclear activities, where impacts in case of accidents can be far-reaching, effected Parties do not always need to have a direct border with the Party of origin. Parties of origin are therefore obliged to identify all states which could potentially be affected.

The public of an affected Party has the right to comment on the proposed activity. Opportunities provided to the public of the affected Party must be equivalent to those of the Party of origin. This includes all consulted persons or organisations, such as competent regional or local competent or statutory environmental authorities, non-governmental organizations (NGOs), local community groups, individuals, etc.

According to the LTE Guidance, wide transboundary notifications must also take place, if a state does not have sufficient information to definitely conclude whether significant transboundary impacts are likely. According to the Espoo Implementation Committee, notification is necessary unless a significant transboundary impact is excluded.

3.1.2. Procedure between states

The formal and mandatory start of a procedure according to the Espoo Convention is notification, which may or may not be preceded by informal contacts between states. The notification is usually sent to an official Espoo point of contact, which will then pass it to the responsible authority. The notification must be sent at the latest when the public in the Party of origin is being informed of the national EIA process. States must, however, send the notification as early as possible, favourably before the scoping (i.e. the identification of issues to be examined in the EIA). The timing of notification may also depend on the Party of origin's national regulations on EIA.

Notifications must, at minimum, include the following:

a) Information on the proposed activity (scope, scale, description, location rationale including maps, time-frame, expected environmental impacts and mitigation measures, etc.), including any available information on its possible transboundary impact and, if already available, the EIA documentation (EIA report or environmental impact statement)

b) The nature of the possible decision
c) An indication of a reasonable time within which the affected Party shall acknowledge receipt of the notification and indicate whether it intends to participate in the environmental impact assessment procedure

Within the set timeframe, the affected Party must respond and indicate whether it desires to participate in the environmental impact assessment procedure. If it does so, the Party of origin must (if it has not already done so) provide relevant information regarding the EIA procedure, as well as on the proposed activity and its possible significant adverse transboundary impact. The notification procedure therefore usually includes the following stages:

1. Notification of the proposed activity to the affected Party
2. Request for and transfer of information from the affected Party
3. Public notification of the proposed activity, EIA process and opportunities for public participation and consultation.

Parties must also agree in which language the notification and relevant documents must be submitted. This and other notification details can also be directly regulated between certain Parties to the Espoo Convention. E.g. in 2005, such a bilateral agreement between Slovakia and Austria entered into force.

3.1.3. Perspective of the public

It is the responsibility of both Party of origin and affected Party to ensure that the public of the affected Party in the areas likely to be affected is informed of the proposed LTE activity. When a notification is received, the authorities in the potentially affected Party may be required by their own national legislation to consult with regional or local competent authorities, statutory environmental authorities, and members of the public. The timeframe for response set by the Party of origin must allow for the following:

- transmission of documents to the authorities in the affected Party,
- arrangements for informing the public,
- an equivalent time period for public participation, and
- the receipt and transfer of comments from the affected Party to the authorities in the Party of origin.

If the Party responds positively to an invitation to take part in the EIA procedure, the affected Party should also provide information about the way(s) in which public participation may most effectively be carried out within its territory. In any case, notifications must be sent to the competent authorities of the affected Parties before the final decision about LTE is made. This way affected Parties have the opportunity to inform members of their public. The extent to which there is scope for involving the public of the Party of origin in the screening and scoping stages of the EIA procedure for a specific project depends on the provisions within the national EIA legislation and procedures.

All involved states must provide reasonable time frames for the public to participate in the different phases of transboundary EIA. Deadlines must allow sufficient time for informing the public and for the public to prepare and participate effectively during the transboundary EIA procedure. Time limits for receiving the public responses usually range from 30 to 40 days for the EIA programme and from 40 to 60 days for the EIA report.

The Party of origin and the affected Party make arrangements for collecting the comments from the public and sending them to the Party of origin. If necessary, they must translate the comments of the public so that the competent authority of the Party of origin can understand them. Statements must usually be submitted to the responsible authority of the affected Party which then transfers them to the Party of origin. In some cases, Parties of origin also provide ways to directly submit statements, e.g. via online surface. However, the competent authorities of both Parties – Party of origin and affected Party – should have all information dealing with this procedure (including the comments or objections of the public of the affected Party).

The public in the areas likely to be affected is entitled to express comments and opinions on the proposed activity when all options are open before the final decision on this activity is made. The views of the public expressed in the participation procedure must then be taken into account by the decision-making authority in Party of origin. The final decision, including possible rights to appeal it, should be made available to the authorities of the affected Parties.

3.1.4. Technical arrangements

The details of participation for the public in the affected Party depend on its national regulations on participation procedures. This concerns e.g. the minimum timeframes, the way information is published (location and media) and in which way statements can be submitted. Other nationally defined important aspects include translation, public comments or objections and financial aspects.

For effective participation, the public must be able to understand the information. Therefore, if the public in an affected Party is not sufficiently conversant with the language of the Party of origin, relevant documents must be translated for public participation. As a minimum, the non-technical summary and those parts of the EIA documentation that are necessary to provide an opportunity to the public of the affected Party to participate (e.g., transboundary impacts) must be translated into the national language. In case of more than one national language, the Parties agree into which language the documentation should be translated.

The opportunity to study the EIA documentation and to make notes must be free of charge. This can be ensured through the establishment of a convenient location where the information can be kept in an accessible form and consulted at reasonable hours. Yet, the authority can impose reasonable charges for copies or other photocopying services consistent with the main aim of providing for effective public participation.

In certain cases, no notification has taken place in accordance with the provisions of the Espoo Convention and the public of a Party considers that it would be affected by a significant adverse transboundary impact of a proposed activity. In these cases, the affected public should be able to apply to its competent authority to enter into a process of discussions with the Party of origin on whether there is likely to be a significant adverse transboundary impact. The public must have possibilities to request the competent authorities of the concerned Parties to allow public participation in a transboundary EIA procedure according to the Espoo Convention.

3.2. Public Participation under the Aarhus Convention

The ACCC has found in different cases that – regardless of the questions whether it can be considered a project on its own – LTE implies a change in the operating conditions of an NPP. States must therefore apply public participation requirements according to article 6 Aarhus Convention appropriately.

Following international safety standards, periodic safety reviews (PSRs) must be conducted on a regular basis. Their objective is to ensure the adequacy and effectiveness of the arrangements and the structures, systems, and components (equipment) that are in place to ensure plant safety. The extent to which the plant conforms to current national and/or international safety standards and operating practices, safety improvements and timescales for their implementation, and the extent to which the safety documentation, including the licensing basis, remains valid must also be assessed within a PSR. State authorities must review the PSR report prepared by the operating organization and the proposed safety improvements and identify any issues they wish to raise (for example, whether further safety improvements need to be considered). Therefore, public participation requirements of apply equally to that determination.

Whether in a domestic or transboundary context, the ultimate responsibility for ensuring that the public participation procedure complies with the Convention's requirements lies with the competent authorities of the state of origin.

The following sections describe criteria to be met within public participation procedures. In this regard, the entire public concerned must be given equal opportunities to participate.

3.2.1. Adequate, timely and effective notification

The public notification of a planned LTE must describe clearly all the opportunities for the public to participate and the time frames regarding those opportunities. An overview of the public participation procedure (e.g., how to submit comments and a summary of most important information) should also be provided. Besides the contact details of the body or person(s) from whom relevant information can be obtained, precise information about where and when it is available for examination should be provided.

If the various forms of written notification (online, newspaper etc.) are not provided to the public on the same date, the time frames for the public to participate should be calculated from the latest date that the written notification reaches the public concerned.

All those who potentially could be concerned must have a reasonable chance to learn about the planned LTE and their possibilities to participate. The means of notification must fit the needs of the people identified as the public concerned. Public notice through radio, television, and social media (Facebook, Twitter, blogs etc.), may be used in areas where these are popular forms of communication to supplement, but does not replace other forms of notification. Especially regarding controversial issues such as nuclear power, the size and complexity of a project, a well as the cultural context in which the project or activity is located or may affect and the needs of any more vulnerable groups must be taken into account.

The notification and all accompanying information must remain available to the public throughout the entire public participation procedure so that members of the public learning of the procedure later in the process still have access to all relevant information to

participate effectively. It should also remain available to the public for the duration of the period for any administrative or judicial review procedures regarding the final decision under national law (see section 3.3.).

Additional notification might be necessary, when there is additional information which could not be provided with the original notification. States must address language issues, e.g., by providing translations if the public concerned does not speak the language of the documentation or by enabling representative organizations to relay the notification to their communities in their own language (or a widely recognized regional lingua franca such as English for the EU region).

3.2.2. Reasonable timeframes

Reasonable timeframes must not only be provided for notification issues, but also to enable the public concerned to become acquainted with the documentation. This period should be long enough to allow the public to request additional information, that it considers may be relevant to the decision-making on the proposed activity. The timeframes must also be broad enough to enable the public to submit any comments, information, analyses, or opinions that it considers relevant.

The way in which comments are to be submitted must also be born in mind, for example, if comments are required to be submitted by post in writing. In these cases, the postmark of comments sent by post should be taken as the date of submission. Timeframes must also consider generally applicable administrative time frames in the country (e.g., time frames for making an information request and appealing a refusal).

Authorities must calculate the beginning and end date of time frames with care, taking into account public holidays – in the country of origin as well as the affected country. For example, if the end date of a given time frame would fall on a public holiday, the following working day should be used. Wherever possible, the main holiday seasons (such as summer or late December) must be avoided.

3.2.3. Public participation when all options are open

In some cases, LTE might not only require one assessment procedure, but rather many different kinds of decision (e.g., according to safety criteria, waste management, nature protection or construction provision, etc.). In this case of tiered decision-making the following aspects of effective public participation must be considered:

- There should be at least one stage in the decision-making process when the public can participate effectively on whether LTE as proposed activity should go ahead at all (the zero option).
- In addition, at each stage of a tiered decision-making process, the public should have the opportunity to participate in an early and effective manner on all options being considered at that stage.
- Information about the decision-making in the earlier tiers should be available.
- When in a tiered decision-making process new information subsequently sheds doubt on decisions made in the earlier tiers or stages or severely undermines their justification it should be possible to reopen these decisions.

Public participation must take place "when all options are open". This means, inter alia, that a formal decision on the issue has not yet been taken by a public body and decision-

maker have not promised to constituents that they will pursue or avoid particular options. It is also impermissible that a public authority has already concluded contracts or agreements with private parties related to a decision on LTE prior to public participation.

If, on the other hand, public participation is provided at the very early stages of the procedure, this must be supplemented with opportunities to participate also at the later stage when all the relevant information/documentation has been gathered and prepared and the public authorities are able to take the final decision.

3.2.4. Encouraging developers to engage with the public concerned beforehand

States must encourage developers to engage with the public concerned beforehand, e.g., with adequate guidance, to identify the public concerned, to enter into discussions and to provide information before applying for a permit. Such a dialogue, however, does not substitute the public participation procedure to be carried out by the competent public authority once the permit application has been made.

3.2.5. Access to all relevant information

Access to information is an essential prerequisite for effective public participation. This means that all information relevant to the decision-making that is available to the public authorities must also be made available to the public concerned. This principle applies regardless of quality and regardless of whether the public authority considers the information to be accurate, comprehensive, or up to date. This includes raw data from monitoring stations, even if not yet validated or made available in its final form.

At minimum, the full application for the decision to permit the LTE and all relevant information assembled during the procedure, including all attachments to the application required by law must be disclosed. This includes, e.g., the full final EIA report, including all annexes; all relevant documentation providing additional information about the characteristics of the proposed activity, all relevant maps, all relevant opinions, statements or certificates issued by other public authorities or other statutory consultees, references to all relevant legislation, relevant plans, programmes or policies , previous permits and relevant decisions for the same NPP as well as refusals of permits, and all comments, information, analyses or opinions submitted by the public.

The minutes, transcripts and/or recordings from any public hearings or meetings held with respect to LTE decisions must be considered information relevant to the decision-making.

Only certain information might be exempted from disclosure. This includes material in the course of completion or concerning internal communications of public authorities. Information may also be held back for the confidentiality of the proceedings of public authorities, if such confidentiality is provided for under national law as well as to protect international relations, national defence, or public security. However, all grounds for the refusal of information must be interpreted restrictively. It is not permissible that states declare whole categories of environmental information unconditionally as confidential. If circumstances change over time, so that the exemption from disclosure would no longer apply, the information should be made available to the public as soon as it is no longer confidential. In particular, the original application for the permit and EIA reports and their annexes must be disclosed in their entirety.

All relevant information must be accessible for examination at the seat of the competent public authority and, if feasible, electronically, e.g., via a publicly accessible websites with both a user-friendly search function and an accessible archive of the most important documents from past procedures. If the seat of the competent authority is located far away from the place of activity (e.g., more than two hours away by public transport), the information should additionally be accessible at a suitable easily accessible location(s) in the vicinity of the NPP. Information must be provided during usual working hours on all working days throughout the entire period of the public participation procedure.

Information must be provided without barriers and non-technical summaries prepared by the applicant in simple, user-friendly, and understandable language. This implies, as a minimum, the EIA documentation and permit documentation, must be available. However, providing non-technical summaries without providing access also to the full technical documentation is not sufficient.

In accordance with national law, there should be no charge for the public to have access to examine the information relevant to the decision-making and no charges for requesting information not provided. In case fees for copies are charged, a schedule of these charges may be levied in advance. The public must receive copies of the information in the form requested (e.g., in electronic or paper form), unless it is reasonable for the public authority to make it available in another form. The public must also receive the information in the language requested, if possible.

All information must be made available for examination as soon as it becomes available to the public authorities. It must remain available throughout the entire public participation procedure, including for the duration of the period for any administrative or judicial review procedures.

3.2.6. Procedures for the public to submit comments

The public is entitled to submit any comments, information, analyses or opinions that it considers relevant for LTE. This possibility must be free of charge and must not require undue formalities. Unlike other participatory rights for the *concerned* public in LTE procedures, the right to submit comments is granted to the public *generally*, without proof of residence, citizenship nor domicile.

States must also provide possibilities to submit comments in electronic form, without undue formalities regarding electronic signature. While online consultations can complement face-to-face public meetings and hearings, they should not fully replace them.

Oral meetings must be organized at a time that is suitable for the public concerned to attend (e.g., outside of business hours or during the weekend) and outside the main holiday seasons. Each hearing should be limited to no more than eight hours per day. If feasible, the physical hearing should be supplemented by technologies such as audio-conferencing or videoconferencing to enable members of the public who cannot physically attend the hearing to participate.

3.2.7. Taking due account of the outcome of public participation

Like under the Espoo Convention, a public participation procedure requires that the public is aware, heard and its views are taken into account. This applies equally to the comments submitted by the general public and the concerned public. The process for taking the

comments, information, analyses, or opinions of the public into account must be fair and not discriminatory.

Comments may not only relate to environmental concerns but also to other private or public issues (e.g., the public is entitled to submit economic or other analyses whether or not they relate to environmental concerns). Although it is not required that comments are reasoned, it is highly recommended to elaborate them so the public authority can gain a deeper understanding of them.

The official statement of reasons to be published along with the final decision must then include a discussion of how the public participation outcomes were taken into account. This includes, as a minimum:

- A description of the public participation procedure and its phases
- All comments received
- How the comments received have been incorporated into the decision, identifying clearly which comments have been accepted in the final decision, where and why, and which have not and why not.

3.2.8. Prompt notification and access to the decision

States must inform the public promptly about the decision that has been taken and how to access the text of the decision, together with the reasons and considerations on which it is based. Authorities must also prepare a statement summarizing the reasons and considerations on which the decision is based. The text of the decision along with the statement of reasons and considerations on which it is based must be provided in a publicly accessible place on a long-term basis.

The right to be informed of the decision is also granted to the general public and not only to the public concerned.

Information about the possibilities to appeal the LTE decision should be provided to the public together with the decision. If a member of the public concerned can prove that it did not receive adequate notice due to a failure of the public authority or by force majeure, there must be a possibility for the timeframe for the review procedures to be restarted.

3.3. Access to Justice related to public participation

If decisions are taken under a public participation procedure according to the Aarhus Convention, the concerned public has the right to challenge their conformity with legal provisions. Apart from this national legal review, also other legal remedies on international and EU level exist for individuals and organisations to take action against the breach of environmental law related to the lifetime extension of NPPs.

3.3.1. National legal review procedure under the Aarhus Convention

The Aarhus Convention ensures for the public concerned to have access to justice to appeal court decisions whenever a case is subject to the provisions of the Convention. It lays down minimum procedural guarantees, as it requires for review procedures to provide adequate and effective remedies, to be conducted in a fair, equitable and timely way and to not

impose excessive costs on the parties. Adequacy means that reliefs must ensure the intended effect of the review procedure. To be effective, remedies need to enable real and efficient enforcement. An element of the effective remedy is also, as explicitly mentioned by the Convention, to grant an injunctive relief where appropriate. The requirements of fairness, equity and timeliness primarily try to ensure that the exercise of rights is not impossible or excessively difficult. Other aspects are the impartiality of decision-making bodies, the equal application of procedures on all persons, the information of the public of the review's outcome and an appropriate duration. Finally, cost systems of assessment procedures must be reasonable in an objective and a subjective sense. In an objectively and subjectively appropriate cost system, courts should therefore pay sufficient attention to the public interest of nature with respect to the apportioning of costs and also consider the personal situation of the applicant.

As mentioned before, in the EU, the main regulatory framework to implement the Aarhus and Espoo Conventions is the EIA directive. Although at that time, the EIA Directive itself did not contain provisions on access to justice, the European Court of Justice (CJEU) stated already in 1996 that "concerned individuals" must be allowed to go to court to challenge a decision denying the necessity of an EIA. When the Aarhus Convention was adopted in 2003, a specific provision for access to justice was inserted into the EIA Directive granting the public concerned an independent review procedure before court or a different body to challenge the substantive or procedural legality of decisions, acts or omissions subject to the public participation provisions of the EIA Directive. This includes decisions on EIAs vitiated by errors, decisions not to carry out and EIA to assess a particular project as well as final permitting decisions.

Standing

Standing is the prerequisites a person must fulfil to bring a case before court and to claim a right. According to the Aarhus Convention, national states are allowed to open access to court to anyone. Yet, most states issued restrictive legislation on the entitlement to challenge court decisions. For standing to challenge an LTE decision according to the Aarhus Convention, it is necessary to be member of the public concerned. As mentioned above, this means to be affected of likely to be affected by, or have an interest in, the decision to be taken. The criteria of sufficient interest and impairment of a right are to be determined by requirements of national law, in accordance with the Convention's objective to give the public concerned wide access to justice. The Aarhus Convention forbids states to establish discriminatory provisions in this context. States are allowed to introduce criteria regarding the interest of the applicant, but effective access to justice must be ensured. They must not limit their scope on certain isolated factors (e.g., distance to an activity), but need to consider all relevant factors of a project that might affect an applicant's interest.

Standing must not be restricted to those individuals who participated in a prior procedure leading to the adoption of a decision. On the other hand, being a prior participant indicates standing in a procedure.

The definition of "the public concerned" also includes non-governmental organisations promoting environmental protection, this creates a *de lege* standing for NGOs meeting the relevant national criteria. States are barred from imposing excessive burden on NGOs

though recognition criteria. The prohibition of discrimination applies also to NGOs. States are therefore prohibited to deny status to foreign NGOs.

Scope of review
The scope of review is understood as the range of legal arguments and provisions that courts must consider. Members of the public have the right to "challenge the substantive or procedural legality" of decisions, acts or omissions. Procedural legality relates to the violation of a procedure set out in law, whereas substantive legality refers to violations of the substance of law.

The public concerned may challenge such decisions, acts or omissions on the ground of conflictions with rules of national law implementing EU environmental law. Therefore, also claims that go beyond the directive can be raised. National provisions that limit the grounds of review to violations only of norms that serve environmental protection are considered impermissible. In the contrary, the scope of review shall encompass any provision that conflicts national law – even when there is not direct connection to the environment. Regarding EU Member States this includes national law implementing EU law and directly applicable EU law.

Another limitation to the legislation by the member states is that applicants in court procedures may not be limited to the arguments they raised in the preceding administrative proceedings.

3.3.2. International legal review

Complaints with the Espoo Implementation Committee
The Implementation Committee monitors the compliance with the Espoo Convention by the contracting Parties. Submissions can be made by Parties that are concerned about another Party's compliance with the Convention. The submission must contain supporting information about these concerns. Parties can also make submissions on their own lacking compliance with the obligations under the Convention (so-called "self-referral").

Another form of review can be started by the Implementation Committee on its own when the Committee becomes aware of Party's non-compliance ("Committee Initiative"). The public plays can provide the information on which the Committee bases its initiative on. The Committee is allowed to act on the grounds of any information – including by NGOs or private companies. It will, however, only act if certain criteria are met:

- The source of the information is known.
- The information has a relation to activities listed in the appendix I to the Convention. These are activities that are likely to have a significant adverse transboundary impact, including nuclear activities.
- The alleged non-compliance must be based on a profound suspicion.
- The information relates to the implementation of the Convention's provisions.
- Committee time and resources are available.

Complaints to the Espoo IC should provide further input on the source of the information, the Party of origin, Parties affected or likely to be affected, whether the proposed activity fall under the appendix I to the Convention, the likely significant adverse transboundary

impact of the activity, the provisions of the Convention that are thought to be violated, as well as a description of the facts of the case and any further useful information.

The Implementation Committee evaluates compliance with the Espoo Convention regarding procedural, technical or administrative matters. Arguments raised by members of the public can be of legal and/or technical nature. If the Committee is confronted with technical questions, it must develop the necessary expertise to evaluate a case, i.e. seek services of scientific experts and other technical advice or consult other relevant sources.

Communications to the ACCC

The ACCC was established to monitor the implementation of the Aarhus Convention. It consists of nine independent experts and decides on alleged breaches of the Convention. This mechanism also provides for individuals and NGOs to submit entries and claim violations – by so-called "communications". So far, three communications have been submitted by the contracting parties and 190 by members of the public. The Secretary of the Aarhus Convention can also become active on its own. The ACCC develops findings and recommendations based on these entries and issues reports to the MoP on the compliance with the Convention and its implementation by the parties.

The ACCC has the following options when dealing with a complaint:

- To state that no breach of the Convention was detected
- To state that a Party has violated the Convention
- To state that a Party does not comply with certain provisions of the Convention in general
- To develop recommendations and other measures, which must be accepted by the meeting of the contracting parties. The ACCC is also authorized to give recommendations or to take "soft measures" on its own, if the concerned Party agrees.

Every individual or group/NGO is allowed to submit a communication to the ACCC, also concerning a different state as long as the concerned state is Party to the Convention. The communication must contain a description of the violation by the state. Communications to the ACCC may only be brought if the communicant has exhausted all legal remedies on national level. If legal remedies are available on national level and have not been brought, the communication is found to be inadmissible.

Communicants do not need to be represented by an advocate or lawyer in UNECE proceedings. However, review procedures regarding communications from the public usually take several years and require quite some time and effort. Communicants may request financial aid for their participation in hearings concerning their communications and the UNECE bears necessary travel costs. However, since the COVID-19 pandemic, there is mostly also a possibility to participate in meetings online.

3.3.3. Other complaint mechanisms

Complaint to the European Commission

As mentioned above, LTE also falls within certain EU regulatory frameworks, such as the EIA or Habitats Directives. The European Commission is responsible for EU Member States to comply with EU law. It can file a complaint to the CJEU if actions of a certain Member

State conflict with EU contracts. Individuals or organizations that come to believe that a Member State does not implement EU law or does not apply it correctly can issue a complaint to the European Commission. It is not necessary for the applicant to be directly concerned.

The only prerequisite for an admissible complaint is its reference to the violation of EU law. This is the case when

- EU law such as directives, regulations, or decisions are not implemented in national law or implemented in a false or incomplete way
- Authorities apply EU law wrongly or ignore it
- Authorities neglect EU law although it is directly applicably because of lacking implementation by the member state

There are no special formal requirements or deadlines. It is recommended to give a detailed description of the alleged breach of EU law and the facts of the case. The complaint must be complete and precise and should include already taken measures. The European Commission provides a complaint form for online submissions.

The European Commission is not obliged to take action. It will examine the admissibility of the complaint and contact the concerned Member State informally if it identified a breach of EU law. If the Member State does not provide remedy, the European Commission will issue a statement to the Member State according to Art 258 TFEU and the Member State is allowed to comment. The purpose of this procedure is to settle things without turning to the CJEU. The Commission is also free to drop the procedure. This happens, for example, when the Member State assures legal or administrative reforms. Complaint procedures with the EC usually require a great amount of time.

The ECtHR

The European Court of Human Rights (ECtHR) decides on individual applications or interstate cases on the alleged violation of rights granted by the European Convention on Human Rights (ECHR) and its protocols. The ECHR does not specifically contain environmental rights. The ECtHR still addresses the environment in its jurisdiction, as human rights may be affected by environmental issues. With regard to the lifetime extension of nuclear power plants, this could e.g. be the right to life and family (articles 2 and 8 ECHR), which also include the right to health, or the right to an effective remedy (article 13 ECHR).

Two types of complaints are admissible to the ECtHR:

- Interstate cases, by which a contracting state sues another contracting state
- Applications by individuals, which can be submitted by individuals or groups of individuals, companies or NGOs which consider themselves violated in their rights

Applications must fulfil certain criteria to be admitted to court:

- Procedures are only initiated against states that ratified the ECHR.
- Applications may only be taken to the ECtHR after domestic remedies are exhausted.
- Applications must be submitted within six months after the last-instance decision in the national state.
- Applicants must be affected personally and directly by the breach of the ECHR and suffer from a significant disadvantage.

4. LTE CASES

Case-law is a key factor when it comes to interpretings the UNECE Conventions' requirements in practise. Although LTE of NPPs may have a slightly different shape or structure in every country, generally applicable rules can be drawn from cases already decided on international level.

4.1. Cases under the Espoo Convention

4.1.1. Ukrainian NPP Rivne

The first occasion when the lifetime extension of a NPP was broadly discussed on UNECE level arose regarding the Ukrainian NPP Rivne. Information on the case had been submitted to the Espoo Implementation Committee by the NGO Ecoclub in 2011. At that time, a final decision was already taken regarding two nuclear reactors of the NPP.

The Committee agreed that the extension of the lifetime of an NPP originally designed to operate for 30 years for a further 20 years represented an activity that would require a comprehensive EIA of its effects according to the Convention – regardless of whether it was treated as a major change to an existing activity or a new activity, and regardless of whether originally it had been subject to such an EIA or not. The Committee considered that there could be many reasons why Parties to the Convention would decide that the final decision on a proposed activity should be issued only for a limited period of time. When the limited lifetime expired, the Party of origin would have to re-evaluate such reasons and make a decision whether to extend the initial period of time or not.

The Committee also considered that the re-evaluation should have been conducted after having properly and comprehensively assessed the environmental impact, including transboundary impact, of the activity subject to extension through the license renewal. It concluded that in absence of a transboundary EIA documentation arguing to the contrary Ukraine could not exclude the significant transboundary impact of the proposed activity. Ukraine therefore should have notified the possibly affected Parties.

The Espoo MoP endorsed the findings of the Committee that the extension of the lifetime of the NPP, subject to the proceedings, after the initial license had expired, should be considered a proposed activity under the Espoo Convention and is consequently subject to the provisions of the Convention. The MoP also decided that Ukraine was in non-compliance with its obligations under the Convention with respect to the general legal and administrative framework applicable in the decision-making for the extension of the lifetime for nuclear reactors. The Ukrainian Government was requested to complete the transboundary EIA procedure with affected Parties wishing to participate in that procedure.

4.1.2. Pending Espoo cases

After the MoP decision on NPP Rivne in 2014, numerous cases concerning the LTE of different NPPs have been brought before the Espoo IC. Their evaluation was delayed due to the adoption of the UNECE Guidance on the Applicability of the Espoo Convention to the

Lifetime Extension of Nuclear Power Plants. The Espoo IC currently continues its work on these numerous pending cases. It also evaluates compliance of Parties with the Convention even in situations where a decision on the activity in question has already been taken by the Party concerned.

NPP Kozloduy in Bulgaria
Information regarding the lifetime extension of units 5 and 6 of Kozloduy nuclear power plant in Bulgaria, 3 km from the border with Romania, was gathered further to the information from the Romanian NGO Actiunea pentru Renasterea Craiovei. Serbia considers itself potentially affected by the LTE and requested Bulgaria to provide a notification regarding the activity.

NPPs Doel and Tihange in Belgium
Regarding Belgium, information was gathered on the lifetime extensions of units 1 and 2 of Doel NPP and unit 1 of Tihange NPP through the laws of 18 of December 2013 and 18 June 2015, respectively. Following recent EU and national jurisdiction, Belgium in the meantime contacted all potentially affected Parties inviting them to confirm their interest in taking part in transboundary consultations regarding Doel. Further to positive responses from Austria, Ireland, Germany, Luxembourg, the Netherlands, Poland and Sweden, Belgium had initiated a transboundary procedure with those Parties and provided them with the EIA documentation. Therefore, the Committee considered that there was no need for it to continue its consideration regarding NPP Doel.

The Committee noted that Belgium has not taken any steps to initiate a transboundary procedure under the Convention regarding the modernization works at unit 1 of Tihange NPP. With reference to its 2015 screening procedure and the EIA documentation prepared by it in the context of the transboundary procedure for units 1 and 2 of Doel NPP, Belgium maintained that those works, in its view, would cause no significant adverse transboundary impact. For further evaluations, the Committee requested Belgium to provide information regarding the activity based on the checklist prepared by the Committee in the light of the LTE Guidance as well as relevant individual decisions and the content of the investment plan.

NPP Dukovany in the Czech Republic
The Committee also continued the consideration of the LTE of four units at Dukovany NPP. Czechia and the four NGOs that had brought the matter to the Committee's attention in 2016 were asked to provide further information. This includes the question whether Czechia has carried out a screening procedure with the purpose of establishing whether an EIA was needed and, if so, details on the procedure an whether Czechia has evaluated an overall increase in total production of radioactive waste and spent fuel associated with the LTE.

Multiple NPPs in France
From Greenpeace France the Committee had received information regarding the planned LTE of 32 units of eight nuclear power plants in France. In the interests of efficiency of proceedings, the Committee requested France to provide it only with information regarding units 1 and 2 of Tricastin NPP and units 2 and 4 of Bugey NPP, as well as to answer some additional questions. The Committee emphasized that, when a Party decided to apply a

multistage procedure for a LTO of a NPP, providing first for a generic phase covering multiple NPPs/units with common technical characteristics and then for a subsequent specific phase focusing on each individual plant or unit, it must ensure that its screening decision was made at a stage covering all impacts, including those resulting from operational states, as well as those resulting from accidents. A similar approach should apply to the scoping of the EIA documentation. Greenpeace France was also requested to submit further information.

NPP Borssele in the Netherlands
The Committee also continued to consider the LTE of NPP Borssele in the Netherlands. Despite numerous reminders by the secretariat, the Netherlands had not responded to the Committee's letter, due to a change of focal point. The Committee's requests for information, including information regarding the activity based on the checklists prepared by the Committee in the light of the criteria proposed by the LTE Guidance with a view to gathering, structuring, and evaluating information on all matters under its consideration related to the LTE of nuclear power plants was now reiterated.

NPP Almaraz in Spain
Regarding the LTE of two units of Almaraz NPP, the Committee had received from the Portuguese political party, Pessoas-Animais–Natureza, expressing concerns about the non-application of the Convention by Spain. To enable its further deliberations at its next session, the political party was requested provide more detailed information about the activity.

Various NPPs in Ukraine
Deliberations of the Committee also concerned the LTE of 12 power units located at the Rivne, South Ukrainian, Zaporizhzhya and Khmelnitsky NPPs in Ukraine. According to information from Austria, Belarus, Germany, Poland, the Republic of Moldova, Romania, and Slovakia, the Committee noted that the transboundary consultations regarding the South Ukrainian and Zaporizhzhya NPPs with the potentially affected Parties were still ongoing. The Committee noted that a situation where a final decision regarding the activity was made while transboundary consultations with and public participation in the affected Parties were ongoing constituted non-compliance with the Convention. Ukraine was requested to ensure that the transboundary procedure concerning the LTE of the South Ukrainian and Zaporizhzhya NPPs was completed with all the affected Parties in full compliance with the Convention.

4.2. Recent Aarhus Cases

4.2.1. LTE at Borssele NPP

The communicant alleged in its communication of 6 May 2014 that the Netherlands would not comply with the public participation requirements of article 6 Aarhus Convention by extending the lifetime of the NPP Borssele. In 2006, the Dutch Government had concluded an agreement with the operator to continue the operating period 2033 at the maximum. This was followed by an amendment of the Dutch Nuclear Energy Act in 2010 according to

which the licenses for the NPP would be revoked with effect from 31 December 2033. Since 1973, the operating license for Borssele had been amended several times, each time with an EIA and public participation. In 2012, the Minister of Economic Affairs announced the preliminary decision to grant the extension of the design lifetime stating that no EIA would be necessary, because the extension did not concern an extension or modification of the design. According to the communicant, the public consultation was limited to the issue of technical safety, excluding issues relating to the potential impact on the environment and neither the agreement of 2006 nor the amendment of the Nuclear Energy Act in 2010 were subject to public participation procedures.

The ACCC disagreed with the Netherlands that the fact that the 1973 license was for an "indefinite" period means that the 2013 license amendment extending the design lifetime until 2033 was not a change in the plant's operating conditions. As the ACCC stated, the permitted duration of an activity is clearly an operating condition. The ACCC then explained that this led to the applicability of article 6(10) with requirement to apply the public participation provisions of article 6(2)-(9) *mutatis mutandis*, i.e. "with the necessary changes", and *where appropriate*. This, however, does not mean that a Party has complete discretion to determine whether or not it was appropriate to provide for public participation. Plus, the discretion as to the "appropriateness" of the application of the provisions of article 6 must be considered to be even more limited if the update in the operating conditions might itself have a significant effect on the environment.

The ACCC thus considered that, except in cases where a change to the permitted duration is for a minimal time and obviously would have insignificant or no effects on the environment, it is appropriate for extensions of duration to be subject to the public participation provisions of article 6. The ACCC recalled that this implies that when public participation is provided for, the authority must be neither formally nor informally prevented from fully turning down an application on substantive or procedural grounds. The agreement of 2006, however, created an enforceable contractual obligation on the public authorities not to interfere with the plant's operation until 2033. The ACCC thus concluded that, by not having at any stage provided for public participation, meeting the requirements of article 6, where all options were open, in regard to setting the end date for the operation of Borssele NPP, the Netherlands had failed to comply with the Aarhus Convention.

4.2.2. Lifetime extension of the NPP Dukovany

In 2015 and 2016, the operating licenses of the different reactors of the Czech NPP Dukovany expired. The licenses were then extended for an indefinite time, with the public unable to participate in the proceedings or appeal the decisions. Following a complaint by ÖKOBÜRO and GLOBAL 2000 (Friends of the Earth Austria), the ACCC reviewed to what extent these LTE decisions would have required public participation and option for legal review.

The ACCC noted that the public is entitled to participation rights in the procedure for granting an unlimited license. The Committee also dealt with the periodic safety reviews (PSRs) that a nuclear reactor must undergo every ten years. Here, too, the Czech Republic must now provide for public participation according to article 6 (10) of the Aarhus

Convention. In addition, legal review for the public must be provided in decisions issued under the Czech Atomic Energy Act which require public participation.

The Aarhus MoP endorsed the ACCC's findings in October 2021. The Czech Republic must now adapt its national law accordingly, so that, when the operating conditions of a permit issued under the Czech Atomic Act are adapted, public participation measures will be applied mutatis mutandis and where appropriate. This includes, but is not limited to, the reconsideration of the duration of the permit or the 10-year PSRs. The Czech Republic must further provide that concerned members of the public, including environmental NGOs, have access to a review procedure to challenge the substantive or procedural legality of decisions, acts and omissions under the Czech Atomic Act related to such procedures.

4.2.3. Pending ACCC cases

A case regarding the lifetime extension of the two reactors of the Almaraz NPP in Spain for another eight years is still pending before the ACCC. Another pending case again concerns the Dutch NPP Borssele, arguing that in the case of license changes to the Borssele nuclear power plant (KCB) in 2016 and 2018, the decisions were not informed by public participation on environmental issues covering the period of operation of the NPP, due to noncompliance with the Convention before the decision to change the operation period in 2013.

A case regarding the Belgian NPP Tihange was found inadmissible as the communication was not supported by sufficient corroborating information and thus not further evaluated by the ACCC. Specifically, the ACCC considered that neither the communication itself nor the additional information provided sufficient information to enable the ACCC to properly examine the allegations made in the communication.

5. List of Abbreviations

ACCC ..... *Aarhus Convention Compliance Committee*
EC..... *European Commission*
ECHR ..... *European Convention on Human Rights*
ECtHR..... *European Court of Human Rights*
CJEU ..... *European Court of Justice*
EIA ..... *Environmental Impact Assessment*
Espoo IC ..... *Espoo Implementation Committee*
IAEA ..... *International Atomic Energy Agency*
LTE ..... *lifetime extension*
MoP / MOP..... *Meeting of the Parties*
NEA ..... *Nuclear Energy Agency*
NPP ..... *Nuclear Power Plant*
OECD ..... *Organisation for Economic Co-operation and Development*
UNECE ..... *United Nations Economic Commission*

6. Sources and Relevant Links

4.1. Legislation

- UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention): https://unece.org/environment-policy/public-participation/aarhus-convention/text
- Espoo MOP Decision III/2 on Review of Compliance: https://unece.org/DAM/env/documents/2019/ece/Restart/IC/decision.III.2.e.pdf
- UNECE Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention): https://unece.org/environment-policyenvironmental-assessment/text-convention
- Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, as amended (EIA Directive): https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02011L0092-20140515
- Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive): https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A01992L0043-20130701
- European Convention on Human Rights (ECHR): https://www.echr.coe.int/documents/convention_eng.pdf

4.2. Case-law

- Overview of submissions to the Espoo Implementation Committee: https://unece.org/submissions-overview
- Overview of initiatives by the Espoo Implementation Committee: https://unece.org/environment-policy/environmental-assessment/committee-initiative-overview
- Espoo MOP Decisions: https://unece.org/environment-policyenvironmental-assessment/decisions-taken-meetings-parties
- Report of the 51st Meeting of the Espoo Implementation Committee (with reports on pending cases): https://unece.org/sites/default/files/2021-10/ece_mp.eia_ic_2021_6_adv_unedited_version.pdf
- Compilation of ACCC findings: https://unece.org/sites/default/files/2021-12/Compilation_of_CC_findings_14.12.2021_eng.pdf
- Decisions of the Meeting of the Parties to the Aarhus Convention and information on implementation : https://unece.org/env/pp/cc/implementation-decisions-meeting-parties-compliance-individual-parties
- Case-law of the Aarhus Convention Compliance Committee 2004-2014: https://unece.org/DAM/env/pp/compliance/CC_Publication/ACCC_Case_Law_3rd_edition_eng.pdf
- Search form for case-law of the European Court of Justice: https://curia.europa.eu/juris/recherche.jsf?language=en
- ÖKOBÜRO, "Casebook Nuclear Advocacy – Case-law on International Regulations in the Nuclear Sector" (2022): https://www.oekobuero.at/files/334/br_6_6_casebook_nuclear_advocacy_okoburo_2020.pdf

4.3. Literature

- UNECE Guidance on the Applicability of the Espoo Convention to the Lifetime Extension of Nuclear Power Plants (2020): https://unece.org/sites/default/files/2021-08/Guidance_LTE_NPP_2106311_E_WEB-Light.pdf
- UNECE Guidance on notification according to the Espoo Convention (2009): https://unece.org/DAM/env/documents/2009/eia/ece.mp.eia.12.pdf
- UNECE Guidance on Public Participation in Environmental Impact Assessment in a Transboundary Context (2006): https://unece.org/DAM/env/documents/2006/eia/ece.mp.eia.7.pdf
- UNECE Good Practice Recommendations on the Application of the Espoo Convention to Nuclear Energy-related Activities (2017): https://unece.org/DAM/env/eia/Publications/2017/1734724_ENG_web.pdf
- UNECE Maastricht Recommendations on Promoting Effective Public Participation in Decision-making in Environmental Matters prepared under the Aarhus Convention (2014): https://unece.org/DAM/env/pp/Publications/2015/1514364_E_web.pdf
- UNECE Implementation Guide to the Aarhus Convention (2nd edition, 2014): https://unece.org/DAM/env/pp/Publications/Aarhus_Implementation_Guide_interactive_eng.pdf

- Jerzy Jendrośka, "Applying Aarhus and Espoo Conventions in Nuclear Decision-making – Application of the Espoo Convention to Nuclear Energy-related Activities" (2017): https://www.unece.org/fileadmin/DAM/env/documents/2017/EIA/MOP7/Side_Events/JJ-_Application_of_Aarhus_and_Espoo.pdf
- IAEA, Periodic Safety Review for Nuclear Power Plants, IAEA Safety Standards Series No. SSG-25 (2013): https://www.iaea.org/publications/8911/periodic-safety-review-for-nuclear-power-plants
- ÖKOBÜRO/GLOBAL 2000, "Environmental Impact Assessment on Lifetime Extensions of Nuclear Power Plants after ECJ Judgement C-411/17" (2019): https://www.oekobuero.at/files/409/oekobuero_paper_on_eia_for_npp_lte.pdf
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- ÖKOBÜRO, "International Case-Law in Nuclear Matters – Brief overview of the international and European case-law regarding access to information and public participation regarding nuclear power plants" (2022): https://oekobuero.at/files/416/international_nuclear_case-law_2020.pdf
- Technical arguments and background for use of the ESPOO Guidance: http://www.joint-project.org/upload/file/Non-Paper_Espoo_Guidance.pdf

4.4. Other links

- Information on the format of notification under the Espoo Convention: https://unece.org/fileadmin/DAM/env/eia/notification.htm
- Documents on ACCC cases and information on communications: https://unece.org/env/pp/cc/communications-from-the-public
- Online form for complaints to the European Commission: https://ec.europa.eu/assets/sg/report-a-breach/complaints_en/
- Information on applications to the European Court of Human Rights: https://www.echr.coe.int/Pages/home.aspx?p=applicants&c=
- ÖKOBÜRO website on nuclear advocacy: https://oekobuero.at/en/topcs/climate-energy-biodiversity/nuclear-advocacy/
- Friends of the Earth website on nuclear power: https://foe.org/projects/nuclear/