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## Economic Commission for Europe

Meeting of the Parties to the Convention  
on Environmental Impact Assessment  
in a Transboundary Context

Meeting of the Parties to the Convention  
on Environmental Impact Assessment in  
a Transboundary Context serving as the  
Meeting of the Parties to the Protocol on  
Strategic Environmental Assessment

### Implementation Committee

#### Fifty-seventh session

Geneva, 29 August–1 September 2023

Item 5 of the provisional agenda

#### Committee initiatives

## **Findings and recommendations regarding compliance by Belgium with its obligations under the Convention in respect of the lifetime extension of unit 1 of Tihange nuclear power plant**

**Prepared by the Implementation Committee**

### *Summary*

The present document contains findings and recommendations prepared by the Implementation Committee under the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) and its Protocol on Strategic Environmental Assessment further to the Committee initiative concerning compliance by Belgium with its obligations under the Convention in respect of the lifetime extension of unit 1 of Tihange nuclear power plant. The Committee finalized at its fifty-sixth session (Geneva, 2–5 May 2023) the findings and recommendations, taking into consideration comments and representations from Belgium and Germany in accordance with paragraph 9 of its structure and functions.<sup>a</sup>

In accordance with rule 13 of the operating rules of the Implementation Committee,<sup>b</sup> the secretariat issued those findings and recommendations as an official document for the Committee to refer to, and for their transmission to the Parties involved and, subsequently, to the Meeting of the Parties to the Convention at its ninth session (Geneva, 12–15 December 2023) for its information and to be taken into account when considering the related draft decision.

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<sup>a</sup> Available at <https://unece.org/sites/default/files/2023-04/Implementation%20Committee%20structure%20functions%20procedures%20rules.e%202020%20%281%29.pdf>

<sup>b</sup> Ibid.

## I. Introduction — the Committee's procedure

1. On 14 March 2016, the Implementation Committee under the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) and its Protocol on Strategic Environmental Assessment received information from the German Federal States of North Rhine-Westfalia and Rhineland-Palatinate expressing concerns about compliance by Belgium with its obligations under the Convention with respect to the lifetime extensions of units 1 and 2 of Doel nuclear power plant and unit 1 of Tihange nuclear power plant.<sup>1</sup>
2. In the information submitted, the German Federal States alleged, among other things, that Belgium had failed to comply with articles 1–7 of the Convention by not conducting an environmental impact assessment procedure prior to its decision to authorize the extension of the lifetime of the nuclear power plant units.
3. The Committee began its consideration of the information provided at its thirty-sixth session (Geneva, 5–7 September 2016), taking note of the information and requesting Belgium and Germany to clarify, among other things, whether the Committee should consider the information brought before it as an official submission by Germany.<sup>2</sup>
4. At its thirty-seventh session (Geneva, 12–14 December 2016), the Committee considered the clarifications provided by the Governments of Belgium and Germany on 14 and 15 November 2016, respectively, in response to the Committee's request of 19 September 2016, and the additional information provided by the two German Federal States on 26 October 2016. It noted the confirmation by Germany that the complaint by the two Federal States should not be considered as an official submission by Germany. The Committee agreed to request Belgium to provide further clarifications.<sup>3</sup>
5. Following information received from Belgium on 18 July 2017, from the German Federal States of North Rhine-Westfalia and Rhineland-Palatinate on 15 February 2017 and from the German Nature and Biodiversity Conservation Union on 11 March, 24 March and 17 August 2017, the Committee, at its thirty-ninth session (Geneva, 5–7 September 2017), agreed to seek further clarifications from Belgium and Germany.<sup>4</sup>
6. Following the request by Belgium from 27 October 2017 to the Committee to await the final outcome of the legal proceedings before the Court of Justice of the European Union and the Constitutional Court of Belgium concerning units 1 and 2 of Doel nuclear power plant before drawing any conclusions or making any recommendations, and due to the then-ongoing preparations of the *Guidance on the Applicability of the Convention to the Lifetime Extension of Nuclear Power Plants* (the Guidance),<sup>5</sup> which was later endorsed by the Meeting of the Parties to the Convention at its eighth session (Vilnius (online), 8–11 December 2020) through decision VIII/6 (ECE/MP.EIA/30/Add.2–ECE/MP.EIA/SEA/13/Add.2), the Committee did not consider the matter further before its fiftieth session (Geneva, 4–7 May 2021).
7. At its fiftieth session, the Committee noted that the Court of Justice of the European Union, in its judgment of 29 July 2019 concerning the Belgian law extending the operating life of units 1 and 2 of Doel nuclear power plant, had concluded that, in accordance with the European Union Environmental Impact Assessment Directive,<sup>6</sup> a transboundary environmental impact assessment had to be carried out prior to the lifetime extension of those

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<sup>1</sup> Letter from the German Federal States of North Rhine-Westfalia and Rhineland-Palatinate, dated 8 March 2016, received by the Implementation Committee on 14 March 2016.

<sup>2</sup> ECE/MP.EIA/IC/2016/4, para. 46.

<sup>3</sup> ECE/MP.EIA/IC/2016/6, paras. 44–47.

<sup>4</sup> ECE/MP.EIA/IC/2017/4, paras. 45–47.

<sup>5</sup> United Nations publication, ECE/MP.EIA/31.

<sup>6</sup> Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, *Official Journal of the European Union*, L 26 (2012), pp. 1–21.

units.<sup>7</sup> The Committee agreed to request further information from Belgium, including whether Belgium had taken any steps to rectify its possible non-compliance with the Convention following the judgment.<sup>8</sup>

8. At its fifty-first session (Geneva, (hybrid), 4–7 October 2021), the Committee examined the response from Belgium, dated 26 July 2021. It noted that, further to the decision of the Constitutional Court of Belgium of 5 March 2020, Belgium had initiated a transboundary procedure under the Convention regarding units 1 and 2 of Doel nuclear power plant with all Parties who had expressed their interest in taking part. The Committee therefore agreed to close the consideration of the matter regarding those two units. It also noted that Belgium had taken no steps to initiate a transboundary procedure regarding unit 1 of Tihange nuclear power plant and agreed to request further information from Belgium.<sup>9</sup>

9. Based on the information made available to it since 2016 and the criteria of the Guidance, the Committee, at its fifty-second session (Geneva (online), 29–31 March 2022), decided to begin a Committee initiative further to paragraph 6 of the Committee’s structure and functions in respect of unit 1 of Tihange nuclear power plant. It preliminarily concluded that the activity fell within the scope of the Convention and that there was a profound suspicion of non-compliance by Belgium with its obligations under the Convention regarding that activity. Further to paragraph 9 of the Committee’s structure and functions, the Committee invited Belgium and Germany to take part at its fifty-third session (Geneva (online), 10–13 May 2022) in order to present information and opinions regarding the transboundary procedure for the activity. The Committee prepared a non-exhaustive list of questions on which it would base its discussions with the Parties concerned during the hearing and invited the Parties concerned to provide written replies by 30 April 2022.<sup>10</sup>

10. At the request of Belgium and Germany, the Committee rescheduled the hearing to its fifty-fourth session (Geneva (hybrid), 4–7 October 2022) and invited both Parties to provide written answers to its list of non-exhaustive questions by 15 August 2022. Belgium and Germany responded to the questions in writing on 14 July and 15 August 2022, respectively. The secretariat shared the responses of both Parties with the other Party. The Committee received comments from the Parties concerned regarding each other’s responses on 20 September 2022.<sup>11</sup>

11. The Committee, in the absence of the member nominated by Luxembourg, welcomed the delegations of Belgium and Germany to its fifty-fourth session and invited them to present information and opinions on the matter. It then questioned the two delegations. It welcomed the information provided by the Parties during the session, which mainly confirmed the contents of their written replies. The Committee concluded that it had no further questions for the Parties concerned.<sup>12</sup>

12. The Committee completed its draft findings and recommendations at its fifty-fifth session (Geneva (online), 31 January–3 February 2023).<sup>13</sup> It transmitted the draft to the Parties concerned for comments or representations by 31 March 2023. At its fifty-sixth session (Geneva, 2–5 May 2023) it finalized the findings and recommendations, taking into consideration the comments received by Belgium and Germany, dated 30 March 2023. The findings and recommendations would be referred to in the draft decision on compliance to be submitted to the Meeting of the Parties to the Convention at its ninth session (Geneva, 12–15 December 2023). Any recommendations would also be included in the draft decision itself.

<sup>7</sup> Court of Justice of the European Union, *Inter-Environnement Wallonie ASBL and Bond Beter Leefmilieu Vlaanderen ASBL v. Conseil des ministres*, Case No. C-411/17, Judgment, 29 July 2019.

<sup>8</sup> ECE/MP.EIA/IC/2021/4, paras. 62–66.

<sup>9</sup> ECE/MP.EIA/IC/2021/6, paras. 69–74.

<sup>10</sup> ECE/MP.EIA/IC/2022/2, paras. 32–42.

<sup>11</sup> ECE/MP.EIA/IC/2022/4, paras. 10–13.

<sup>12</sup> ECE/MP.EIA/IC/2022/7, paras. 32–35.

<sup>13</sup> ECE/MP.EIA/IC/2023/2, para. 26, available at [https://unece.org/sites/default/files/2023-02/ece\\_mp.eia\\_ic\\_2023\\_2\\_adv\\_version.pdf](https://unece.org/sites/default/files/2023-02/ece_mp.eia_ic_2023_2_adv_version.pdf).

## II. Summary of facts, information and issues

13. This section summarizes the main facts, information and issues considered to be relevant to the question of compliance, as presented by Belgium and Germany in their correspondence to the Committee and during the hearing of 5 October 2022, as well as information provided by the German Federal States of North Rhine-Westphalia and Rhineland-Palatinate and the German Nature and Biodiversity Conservation Union.

### A. Nature of the activity

14. Tihange nuclear power plant is situated in the province of Liège (Walloon Region, Belgium), near the village of Tihange in Belgium, along the Meuse River. It is located 60 km from the border with North Rhine-Westphalia, 80 km from the border with Rhineland-Palatinate and 39 km from the border with the Netherlands. The plant is operated by the Belgian company Electrabel. It consists of three pressurized water reactors with a total power output of around 3,000 megawatt electric (MWe), accounting for about 25 per cent of total electricity production in Belgium. Unit 1 entered into commercial operation in 1975, unit 2 followed in 1983 and unit 3 in 1985.

15. The licence of 5 September 1974 for unit 1 of Tihange nuclear power plant was not time-limited initially. On 31 January 2003, the Belgian Parliament passed a law codifying the national policy of Belgium to phase out nuclear energy for industrial electricity generation and subsequently limiting the operational period of existing nuclear power plants to 40 years.<sup>14</sup> Specifically, according to said law, operation of unit 1 of Tihange nuclear power plant needed to be halted by December 2015.

16. By a law of 18 December 2013 several amendments to the law of 31 January 2003 were introduced.<sup>15</sup> A new timetable for the phasing-out of nuclear power was established. The new law extended the lifetime of unit 1 of Tihange nuclear power plant from 40 years to 50 years, with a planned shutdown on 1 December 2025. The law of 18 December 2013 remains in force at the time of writing.

17. In January 2015, upon invitation of the Government of Belgium and the Federal Agency for Nuclear Control, the International Atomic Energy Agency (IAEA) provided a peer review mission on safe long-term operation to review programmes/activities of unit 1 of Tihange nuclear power plant and issued recommendations.<sup>16</sup>

18. On 27 September 2015, in line with the law of 18 December 2013, the operation licence of the nuclear power plant was modified by a royal decree<sup>17</sup> invoking a decision by the Federal Agency for Nuclear Control stipulating that the implementation of the action plan elaborated by the operator in 2012 was a prerequisite for the further operation of the plant, according to the recommendations of the IAEA mission.

### B. Information and issues

19. In the information they provided, the German Federal States alleged that Belgium had failed to undertake a transboundary environmental impact assessment procedure according to the Convention with respect to the decision-making on the planned extension of the lifetime of unit 1 of Tihange nuclear power plant. According to them, Belgium had failed to comply with articles 1–7 of the Convention. Similarly, Germany stated that lifetime extensions of nuclear power plants fell within the scope of application of the Convention and had therefore to be notified to all potentially affected Parties. Germany considered that a

<sup>14</sup> Law of 31 January 2003 on the gradual phasing out of nuclear energy for the industrial production of electricity.

<sup>15</sup> Law of 18 December 2013, amending the Law of 31 January 2003 on the gradual phasing out of nuclear energy for the industrial production of electricity.

<sup>16</sup> International Atomic Energy Agency report available at [https://fanc.fgov.be/nl/system/files/salto-rapport\\_tihange\\_1.pdf](https://fanc.fgov.be/nl/system/files/salto-rapport_tihange_1.pdf).

<sup>17</sup> Royal decree No. ANPP-0011846, 27 September 2015.

significant adverse transboundary impact was likely in respect of the lifetime extension of unit 1 of Tihange nuclear power plant and considered itself a potentially affected Party. Germany clarified that, under its environmental impact assessment legislation, the right to seek a notification from a Party of origin fell within the competency of the Federal States.

20. Germany emphasized that, in the case of an extended operation of a nuclear power plant, significant risks might not only occur in the plant, for example, due to the ageing of technical components, conceptually limited retrofitting options, and a changed state of science and technology, but also in the area surrounding the plant because of potential environmental and climate effects. Since the start of operation of unit 1 of Tihange nuclear power plant in 1975, the landscape and environment and related factors (water, air, waste, biodiversity, soil) around the plant had changed, along with the climate and settlement. The fact that there were technical and economic limits to increasing safety through retrofits demonstrated, according to Germany, that the ageing processes went hand-in-hand with an increased risk of malfunctions and accidents.

21. Belgium asserted that the Belgian authorities had not taken any decision that fell within the scope of the Convention. According to Belgium, the operating licences of its nuclear reactors were issued for an unlimited period, were still currently in force and none of which limited the lifetime of the nuclear reactors. It further stated that the laws of 2013 and 2015 only modified the end date for electricity generation in some Belgian nuclear power plants without affecting, in any way, the lifetime of the nuclear reactors. According to Belgium, the laws in question in no way constituted an individual permit or authorization to operate a nuclear unit or to produce electricity.

22. Belgium referred to the ruling of the Constitutional Court of Belgium stating that “the Law of 2003 and its subsequent amendments were the result of an economic and energy policy choice of the Belgian Government, and not of any international mandatory legal requirement”.<sup>18</sup>

23. Belgium alleged that technical improvements and modifications implemented over the past years and those to be implemented in the near future did not relate to a supposed lifetime extension of the nuclear reactors. Said improvements and modifications were furthermore not deemed to be a “major change” by the competent authorities.

24. Belgium pointed out that units 1 and 2 of Doel nuclear power plant, for which a transboundary environmental impact assessment was being carried out following a respective ruling of the Court of Justice of the European Union, was situated close to the border with the Netherlands (3 km), whereas the unit 1 of Tihange nuclear power plant was situated at a much longer distance from the nearest border (39 km from the border with the Netherlands) and that a screening report in 2015 had confirmed that modernization works at unit 1 of Tihange nuclear power plant did not have a significant transboundary effect. Furthermore, the nuclear planning zone for unit 1 of Tihange nuclear power plant would not extend into foreign soil, as was the case at units 1 and 2 of Doel nuclear power plant. In conclusion, if transboundary effects for routine operations and accidents were already limited for units 1 and 2 of Doel nuclear power plant (at 3 km from the border), the same would hold even more true for 1 unit of Tihange nuclear power plant (at 39 km from the border) given the equivalent safety conditions of the plant and the significantly longer distance from foreign borders. According to Belgium, significant adverse transboundary effects were, therefore, not expected from the site of unit 1 of Tihange nuclear power plant.

25. Belgium referred to the decision of the Implementation Committee at its fifty-first session to abstain exceptionally and provisionally<sup>19</sup> from applying rule 5 of its operating rules regarding the issue of conflict of interest and requested the Committee to function in conformity to the rules decided upon by the Meeting of the Parties. It stated that “it is not for the Implementation Committee to change this rule”.<sup>20</sup>

<sup>18</sup> Constitutional Court of Belgium, *Inter-Environnement Wallonie ASBL and Bond Beter Leefmilieu Vlaanderen ABSL v. Conseil des ministres*, Judgment No. 82/2017, 22 June 2017.

<sup>19</sup> ECE/MP.EIA/IC/2021/6, paras. 56–58, available at [https://unece.org/sites/default/files/2022-01/ece\\_mp.eia\\_ic\\_2021\\_6\\_e.pdf](https://unece.org/sites/default/files/2022-01/ece_mp.eia_ic_2021_6_e.pdf).

<sup>20</sup> Letter from Belgium to the Committee, dated 14 July 2022, page 1.

26. Lastly, Belgium considered that the Guidance could not be applied retroactively to the review of compliance by Belgium with its obligations under the Convention with respect to cases initiated by the Committee before the adoption of the Guidance by the Meeting of the Parties in 2020.

### III. Consideration and evaluation

#### A. General observations

27. The Committee gathered information allowing it to identify in a sufficiently accurate manner the main facts and events, and to evaluate the application of the Convention. It also referred to the clarifications that it had sought from Belgium since 2016, prior to beginning its initiative, on the application of the Convention by Belgium with respect to the lifetime extension of unit 1 of Tihange nuclear power plant.

28. In determining whether to launch a Committee initiative, in accordance with paragraph 6 of the Committee's structures and functions, the Committee took into account, inter alia, the following criteria, based on rule 15 of the Committee's operating rules:

- (a) The source of the information, the German Federal States of North Rhine-Westfalia and Rhineland-Palatinate, was known and not anonymous;
- (b) The information related to nuclear power stations and other nuclear reactors, an activity listed in appendix I to the Convention;
- (c) The information was the basis for a profound suspicion of non-compliance with respect to the extension of the lifetime of nuclear reactors;
- (d) The information related to the implementation of Convention provisions;
- (e) Committee time and resources were available.

29. Reviewing the information gathered in the light of the Convention since 2016 from Belgium and Germany and considering the Guidance, the Committee concluded that it had sufficient evidence for its deliberations about compliance by Belgium with its obligations under the Convention regarding the lifetime extension of the nuclear power plant unit in question. Although not all information was delivered to it in English and some information only via web links,<sup>21</sup> the Committee acknowledged the willingness of the Party of origin to deliver as much information as necessary for the Committee's deliberations.

30. Furthermore, the Committee observed that, when considering a case of possible non-compliance by a Party with its obligations under the Convention, in line with paragraph 6 of the Committee's structures and functions, the Committee was not bound by rulings of national courts or other national or international bodies, as those were not applicable sources to be taken into account when interpreting obligations under the Convention in line with articles 31 and 32 of the Vienna Convention on the Law of Treaties.

31. The Committee reiterated its previously expressed view set out in the report on its fifty-first session (see para. 25 above), to abstain exceptionally and provisionally from applying rule 5 of its operating rules regarding the issue of conflict of interest, specifying that the reference was made to rule 5 (2).

#### B. Legal basis

32. Belgium deposited its instrument of ratification of the Convention on 2 July 1999 and the Convention entered into force 90 days later, on 30 September 1999.

<sup>21</sup> Rule 11 (7) of the Committee's operating rules: "The information should consist of original documents and their English translation. The Committee may choose not to consider documentation referred to by the Parties via web links."

33. Appendix I, item 2 (b), to the Convention identifies among proposed activities to which it applies: “Nuclear power stations and other nuclear reactors, including the dismantling or decommissioning of such power stations or reactors (except research installations for the production and conversion of fissionable and fertile materials, whose maximum power does not exceed 1 kW continuous thermal load).”

34. In the context of its initiative, the Committee examined the relevant provisions of the Convention in articles 2 (3) and 3 (1), and their application; in doing so, it considered the *Guidance on the Applicability of the Convention to the Lifetime Extension of Nuclear Power Plants*.

## C. Main issues

### 1. Application of the Convention

35. The activity concerns the lifetime extension of unit 1 of Tihange nuclear power plant, involving the modification of the operation licence in 2015 and the preparation for long-term operation of the unit.

#### 1.1. Application of the Guidance

36. The Committee noted the opinion of Belgium that the Guidance was not applicable to the licence modification since it was only endorsed by the Meeting of the Parties in 2020 and had no retroactive effect. However, the Committee stressed that the Guidance only interprets the Convention to support its practical application. It neither imposes new obligations on the Parties nor expands the application of the Convention’s articles. As recommended by the Meeting of the Parties at its eighth session, the Committee considers the Guidance when performing its functions.<sup>22</sup> It does so with a view to ensuring consistent interpretation of the Convention regarding new and pending lifetime extension cases. Therefore, the Committee also considers the Guidance in cases that were already under its review.

37. The Committee emphasized that there were no reasonable grounds for Belgium to believe that the Convention would not be applicable to the lifetime extension of nuclear power plants. In its findings and recommendations of 2014 regarding Ukraine, the Committee had already found that the extension of the lifetime of reactors 1 and 2 of Rivne nuclear power plant after the initial licence had expired was to be considered as a proposed activity under article 1 (v) and was consequently subject to the provisions of the Convention.<sup>23</sup> This was before Royal decree No. ANPP-0011846 of 27 September 2015 was issued. Furthermore, at its seventh session (Minsk, 13–16 June 2017), the Meeting of the Parties to the Convention established an ad hoc working group precisely to discuss and provide guidance on that issue.<sup>24</sup>

38. The activity constituted a situation in which the licence was originally not time-limited, however, in 2003, the Belgian Parliament passed a law codifying the national policy of Belgium to phase out nuclear energy for industrial electricity generation and subsequently limiting the operational period of existing nuclear power plants to 40 years. Specifically, according to the law, operation of unit 1 of Tihange nuclear power plant had to be halted by December 2015. The Committee noted that, in the absence of the extension of the operational period of unit 1 of Tihange nuclear power plant by the Belgian Parliament, the production of electricity by the unit would have had to be suspended and could not have been continued.

39. By the law of 18 December 2013 that date was modified, extending the operation of unit 1 until 1 December 2025. In 2015, in line with that law, the operation licence of the nuclear power plant was modified by a royal decree. The Committee, therefore, considered that the activity was related to a specific situation described in the Guidance, namely, the

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<sup>22</sup> Decision VIII/6, para. 5.

<sup>23</sup> See ECE/MP.EIA/IC/2014/2, annex, para. 59

<sup>24</sup> See ECE/MP.EIA/23/Add.1–ECE/MP.EIA/SEA/7/Add.1, decision VII/3–III/3, annex, item I.9; and ECE/MP.EIA/27/Add.1–ECE/MP.EIA/SEA/11/Add.1, decision IS/2, paras. 4–9.



nuclear power plant had a time-unlimited licence but the time of operation was limited by law.<sup>25</sup>

40. The licence was amended also due to specific requirements resulting from international missions, which were implemented by an action plan elaborated by the operator.<sup>26</sup> That action plan was – according to the recommendations of the IAEA mission – made a prerequisite for the further operation of the plant by the amended licence (see para. 18 above).<sup>27</sup>

41. In the light of the above, the Committee concluded that the Guidance was applicable to the lifetime extension of unit 1 of Tihange nuclear power plant as the activity was related to specific situations described in chapter II, section C, of the Guidance, namely, situations 2, in paragraph 27 (the nuclear power plant has a time-unlimited licence, but the design life of irreplaceable safety-critical structures, systems and components has been reached) and 5, in paragraph 33 (the nuclear power plant has a time-unlimited licence but the time of operation is limited by law).

## **1.2. Major change to an activity (art. 1 (v) and appendix I, item 2 (b), to the Convention)**

42. The Committee recalled its previous opinion that the continued operation beyond the originally authorized lifetime of a nuclear reactor was covered by appendix I, item 2 (b).<sup>28</sup> It also took note of the conclusion in the Guidance, endorsed by the Meeting of the Parties, that “[l]ifetime extensions must ... be considered to be within the scope of the Convention, even though they are not explicitly mentioned in the list of activities.”<sup>29</sup>

43. The Committee noted the opinion of Belgium that technical improvements and modifications implemented over the past years and those to be implemented in the near future did not relate to a supposed lifetime extension of the nuclear reactor and that those improvements and modifications were furthermore not deemed to be a “major change” by the competent authorities.

44. While the Committee agreed that the Convention allowed its Parties flexibility to implement their obligations differently, it emphasized that such implementation practices must remain within the limits of the Convention’s obligations and their interpretation.<sup>30</sup> The endorsement of the Guidance by the Meeting of the Parties can be regarded as subsequent practice of the Parties regarding the interpretation of the Convention, in line with article 31 (3) (b) of the Vienna Convention on the Law of the Treaties.

45. The Committee scrutinized, in particular, the detailed description of the works carried out by the operator in accordance with its 2012 action plan (see para. 40 above). It noted that, although the action plan had not foreseen major changes in the construction or capacity of the nuclear power plant, the plan required the operator to carry out a comprehensive refurbishment of all electrical and mechanical parts of unit 1, including the replacement and modernization of a very large number of mechanical and electrical components in order to enhance the design of the reactor and to handle the physical ageing and obsolescence of its structures and components.

46. In this context, the Committee considered that while physical works implemented for ageing management were not necessarily to be regarded as major change, they might be of relevance when implemented to justify a lifetime extension. The Committee noted again that

<sup>25</sup> *Guidance on the Applicability of the Convention*, situation 5, para. 33.

<sup>26</sup> See Rapport de synthèse Long Term Operation - Centrale nucléaire de Tihange 1, 15 December 2020, available at <https://afcn.fgov.be/fr/dossiers/centrales-nucleaires-en-belgique/exploitation-long-terme-lto-des-centrales-nucleaires>.

<sup>27</sup> Royal Decree No. ANPP-0011846, 27 September 2015.

<sup>28</sup> ECE/MP.EIA/IC/2014/2, annex, para. 37.

<sup>29</sup> ECE/MP.EIA/31, para. 37.

<sup>30</sup> See also ECE/MP.EIA/IC/2020/4, annex, para. 11: “While the Convention allowed its Parties flexibility regarding application of its procedures within diverse national contexts, that flexibility was limited by each Party’s duty to comply with the Convention, and to implement it effectively and in keeping with its purpose.”

according to the modification authorization of the Federal Agency for Nuclear Control of 2 September 2015, those comprehensive physical works constituted a prerequisite for a further safe operation of the unit in line with the recommendations of the IAEA documented in the report on its peer review mission on safe long-term operation (see paras. 17-18 above).

47. The Committee considered the interpretation in the Guidance that even physical works or modifications in the operating conditions of a smaller scale may amount to a major change.<sup>31</sup>

48. The Committee had already expressed its opinion that all physical works and modifications in the operating conditions should be considered by the competent authority when deciding on the applicability of the Convention. Those should not be limited to works and modifications that altered the design and changed the technology of the production process or normal operation.<sup>32</sup> In addition, it clarified that physical works were not limited to the construction of new buildings. Therefore, activities to modernize, modify and replace structures, systems and components of unit 1 of Tihange nuclear power plant were considered as physical works. The Committee, therefore, concluded that those various changes, including physical works within the nuclear power plant and modifications in the operating conditions, amounted to a major change.

49. In the light of the above and based on the information made available to it, the Committee concluded that the activity constituted a major change to an activity listed in appendix I to the Convention, and therefore was subject to the Convention.

### 1.3. Likely significant adverse transboundary impact

50. The Committee noted the opinion of Belgium that the long-term operation of unit 1 of Tihange nuclear power plant did not lead to a change in the likely significant adverse transboundary impacts. The Committee recalled its previous opinion that, when assessing the likelihood of significant adverse transboundary impacts during the screening<sup>33</sup> procedure, all impacts were relevant and not only any additional ones compared to those occurring from the plant's operation before the lifetime extension.<sup>34</sup> In forming its opinion, the Committee had considered the Guidance, which states that, generally, the extended lifetime of a nuclear power plant has impacts that are similar to those of a new nuclear power plant considered in its initial operation.<sup>35</sup>

51. The Committee recalled its previously expressed opinion that impacts caused by the activity during usual operation as well as impacts caused by an accident need to be taken into account.<sup>36</sup> The Committee also considered that, according to the Guidance, impacts resulting from operational states, including normal operation and anticipated operational occurrences, as well as impacts resulting from accidents, including accidents within the design bases and within the design extension conditions, as well as beyond design basis accidents need to be identified.<sup>37</sup>

52. The Committee considered that, owing to the required comprehensive refurbishment foreseen by and implemented according to the action plan to ensure operation of unit 1 until 2025, the activity should be regarded – in terms of risks and significance of its adverse environmental impact – as being of a comparable scale to the initial commissioning of a new unit at the power plant.

<sup>31</sup> *Guidance on the Applicability of the Convention*, para. 47.

<sup>32</sup> ECE/MP.EIA/IC/2022/2, para. 25.

<sup>33</sup> The Committee uses the term “screening” as explained in the *Good Practice Recommendations on the Application of the Convention to Nuclear Energy-related Activities* (United Nations publication, ECE/MP.EIA/24), para. 9: “The purpose of screening under the Convention is to determine whether a proposed activity or a major change to an activity listed in appendix I to the Convention is likely to cause a significant adverse transboundary impact.”

<sup>34</sup> ECE/MP.EIA/IC/2022/2, para. 27.

<sup>35</sup> *Guidance on the Applicability of the Convention*, para. 58.

<sup>36</sup> ECE/MP.EIA/IC/2016/2, para. 62; and ECE/MP.EIA/2019/14, para. 94.

<sup>37</sup> *Guidance on the Applicability of the Convention*, para. 58.

53. The Committee further recalled its previous opinion, that if accidents, especially beyond design basis accidents, occur at nuclear power plants, the likelihood of significant adverse transboundary impacts can be very high.<sup>38</sup> In the light of the existing experience from the very rare but severe accidents that have occurred in nuclear power plants in the past, it considered that a distance from the activity of 39 km from the border with the Netherlands and 60 km from the border with Germany was not sufficient to exclude a possibility of occurrence of significant adverse transboundary impacts from the activity on the environment of Germany and the Netherlands.

54. In the light of the above, the Committee concluded that Belgium had not identified all likely significant adverse transboundary impacts of the proposed activity when making its screening decision, i.e., when assessing the application of the Convention thereto.

## **2. Requirement to undertake an environmental impact assessment (art. 2 (3))**

55. The Committee noted that as unit 1 of Tihange nuclear power plant had operated since 1974 – before the Convention’s existence – the Convention did not apply to the original licence. Based on the information available to it, the Committee noted that no environmental impact assessment procedures had been undertaken prior to the issuance of the original licence, nor to the issuance of the lifetime extension licence.

56. In light of the above, the Committee considered that Belgium did not comply with the requirement of article 2 (3) of the Convention to undertake an environmental impact assessment prior to the decision to authorize the lifetime extension.

## **3. Requirement to notify potentially affected Parties (art. 3 (1))**

57. Having determined that the lifetime extension of unit 1 of Tihange nuclear power plant fell within the scope of the Convention, the Committee considered that Belgium was required to notify potentially affected Parties in accordance with article 3 (1) of the Convention.

# **IV. Findings**

58. Having considered the above, the Committee adopts the following findings, with a view to bringing them to the attention of the Meeting of the Parties for formal adoption in accordance with paragraph 13 of the appendix to decision III/2 (ECE/MP.EIA/6, annex II).

## **1. Application of the Convention**

59. The Committee finds that the implementation of a number of measures included in the long-term operation action plan of 2012, which was a prerequisite for the licence for long-term operation granted in 2015, amounted to a major change to an activity listed in appendix I to the Convention.

60. Having considered the Guidance as a tool for determining the application of the Convention, the Committee finds that the activity is a lifetime extension, falling under the specific situations set out in chapter II, section C, of the Guidance (see para. 41 above)

61. The Committee finds that Belgium had not identified all likely significant transboundary impacts when limiting the scope of the screening decision to additional impacts caused by changes implemented to prepare the units for long-term operation. Consequently, Belgium did not assess all significant adverse transboundary impacts of operational states and accidents of the continued operation beyond 2015.

## **2. Environmental impact assessment (art. 2 (3))**

62. The Committee finds that Belgium was in non-compliance with article 2 (3) of the Convention when it prepared unit 1 of Tihange nuclear power plant for long-term operation and renewed the licence in 2015 to authorize the continued operation without undertaking a prior transboundary environmental impact assessment in accordance with the Convention.

<sup>38</sup> ECE/MP.EIA/IC/2016/2, para. 62; and ECE/MP.EIA/2019/14, para. 94.

### 3. Notification of potentially affected Parties (art. 3 (1))

63. The Committee finds that Belgium was in non-compliance with article 3 (1) of the Convention by not notifying Germany as a potentially affected Party about the lifetime extension of unit 1 of Tihange nuclear power plant in 2015.

## V. Recommendations

64. The Committee recommends that the Meeting of the Parties:

(a) Endorse the findings of the Implementation Committee that, in accordance with the information provided to the Committee, Belgium was in non-compliance with articles 2 (3) and 3 (1) of the Convention by extending the lifetime of unit 1 of Tihange nuclear power plant and preparing the unit for long-term operation without applying the Convention;

(b) Welcome the fact that Belgium committed itself to notifying possibly affected Parties in accordance with article 3 (1) of the Convention ahead of any future lifetime extension of other units of Tihange nuclear power plant;

(c) Request Belgium to ensure that the Convention is fully applied in the context of any future decision-making regarding Tihange nuclear power plant, including that:

(i) All impacts of operational states and accidents are properly taken into account during the environmental impact assessment procedure;

(ii) When considering whether the lifetime extension constitutes a major change, the activities implemented to prepare for long-term operation prior to the last licence modification are taken into account;

(iii) Belgium notifies, in accordance with article 3 (1) of the Convention, any Party that it considers may be affected, including Germany;

(d) Recommend that Belgium follow the good practice recommendations of the Meeting of the Parties that, given the great public concern and national interests involved when it comes to nuclear energy-related activities, a wide notification, i.e., beyond neighbouring Parties, could prevent later misunderstandings and potential disputes.<sup>39</sup>

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<sup>39</sup> Good Practice Recommendations on the Application of the Convention to Nuclear Energy-related Activities (ECE/MP.EIA/2017/10), para. 28, endorsed by the Meeting of the Parties at its seventh session (Minsk, 13–16 June 2017), through decision VII/6.