

**DECISION OF THE AGENCY FOR THE COOPERATION OF ENERGY  
REGULATORS No 02/2015**

**of 16 April 2015**

**ON THE INVESTMENT REQUEST INCLUDING CROSS-BORDER COST ALLOCATION  
FOR THE LITHUANIAN PART OF THE INTERCONNECTION BETWEEN ALYTUS (LT)  
AND THE LITHUANIA/POLAND BORDER  
PROJECT OF COMMON INTEREST NO 4.5.1**

THE AGENCY FOR THE COOPERATION OF ENERGY REGULATORS,

HAVING REGARD to the Treaty on the Functioning of the European Union,

HAVING REGARD to Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators<sup>1</sup>,

HAVING REGARD to Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009<sup>2</sup>, and, in particular, Article 12(6) thereof,

HAVING REGARD to the consultation with the project promoter and the National Regulatory Authorities concerned,

WHEREAS:

**1. PROCEDURE**

**1.1 Investment request and proceedings before National Regulatory Authorities**

- (1) On 31 October 2013, Litgrid AB (Lithuania), promoter of the project of common interest ("PCI") No 4.5.1 ("the project promoter"), submitted, with reference to Article 12(3) of Regulation (EU) No 347/2013, an investment request for the Lithuanian (LT) part of the interconnection linking Alytus (LT) to the Polish system with a transfer capacity of 500 MW<sup>3</sup> ("LitPol Link") to Valstybinė kainų ir energetikos kontrolės komisija, the National Regulatory Authority ("NRA") of Lithuania. This investment request included the

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<sup>1</sup> OJ L 211, 14.8.2009, p. 1,

<sup>2</sup> OJ L 115, 25.4.2013, p. 39.

<sup>3</sup> See Section 3.2.

following documents: summary data relevant for the cross border cost allocation (“CBCA”) request, evidence of maturity, preliminary investment decision, a detailed technical description of the project, a detailed implementation plan, a short description of the permitting process, a project specific cost-benefit analysis (“CBA”), a business plan and financing strategy. Further, the investment request was accompanied by evidence that, on 28 October 2013, the project promoter consulted Polskich Sieci Elektroenergetycznych S.A. (“PSE S.A.”), the Transmission System Operator (“TSO”) of Poland and received its reply on 30 October 2013.

- (2) On 15 January 2014, a meeting took place between the NRAs and TSOs of Lithuania and Poland. At the meeting, it was agreed that a task force coordinated by the project promoter should be organised for updating the CBA with new data from the European Network of Transmission System Operators for Electricity (“ENTSO-E”) and with regard to remarks by the Polish TSO. The Lithuanian NRA requested the project promoter to update the CBA accordingly.
- (3) On 19 March 2014 and on 31 March 2014, the project promoter consulted the Polish TSO on the principles of the CBA and on an updated version of the CBA respectively. The replies from the Polish TSO were received on 2 April 2014 and on 11 April 2014 respectively.
- (4) On 4 April 2014, the project promoter consulted the TSOs of the ENTSO-E Baltic Sea Regional Group with the exception of the Danish and Estonian TSOs, i.e. the TSOs of Finland, Latvia, Norway, Poland and Sweden, as well as the German TSO 50Hertz Transmission GmbH (“50Hertz”).
- (5) On 17 April 2014, the project promoter updated various elements of the investment request, including the Business Plan (“updated Business Plan”), the CBA (“updated CBA”), the CBCA proposal (“updated CBCA proposal”), and submitted them, together with evidence of having consulted the TSOs of Finland, Latvia, Norway, Poland and Sweden as well as the German TSO 50Hertz, to the following NRAs: Valstybinė kainų ir energetikos kontrolės komisija, the NRA of Lithuania, Urząd Regulacji Energetyki, the NRA of Poland, Energiavirasto, the NRA of Finland, Bundesnetzagentur, the NRA of Germany, Sabiedrisko Pakalpojumu Regulēšanas Komisija, the NRA of Latvia, Energimarknadsinspektionen, the NRA of Sweden and Norges vassdrags- og energidirektorat, the NRA of Norway.
- (6) The investment request accompanied by the updated Business Plan, the updated CBA and the updated CBCA proposal was received by the Lithuanian NRA on 18 April 2014, by the Polish NRA on 22 April 2014, by the Finnish NRA on 23 April 2014, by the Latvian NRA on 23 April 2014, by the Norwegian NRA on 24 April 2014, by the Swedish NRA on 24 April 2014 and by the German NRA on 25 April 2014.
- (7) On 16 May 2014, the project promoter provided the German NRA with a German translation of the investment request.

- (8) On 26 May 2014, the project promoter provided the NRAs of Sweden, Norway, Germany, Poland, Finland, Latvia and Lithuania with evidence of having consulted TransnetBW GmbH, Tennet TSO GmbH and Amprion GmbH, three German TSOs.

## **1.2 Proceedings before the Agency**

- (9) On 28 November 2014, the Agency received via email a letter, of the same date, from the Lithuanian NRA, notifying that *“no agreement was reached within six months of the date on which the investment request was received by the last NRA concerned, namely as of 26 May 2014”*. On 9 December 2014, the Agency received by post the original version of this letter complemented by attachments including *“all relevant factual information regarding LitPol Link.”*
- (10) On 18 December 2014, the Agency published a notice to third parties inviting them to send observations, by 9 January 2015, on the notification from the Lithuanian NRA regarding the investment request.
- (11) On 13 January 2015, the Agency held a hearing with the project promoter.
- (12) Between 20 January 2015 and 23 January 2015, the Agency held hearings with the NRAs of Germany, Lithuania, Poland, Finland, Latvia and Sweden.
- (13) On 24 February 2015, the Agency held a hearing with the project promoter and the NRAs of Lithuania, Poland, Finland, Germany, Latvia and Sweden, as well as with the TSOs of Poland, Finland, Germany, Latvia and Sweden.
- (14) Between December 2014 and April 2015, the Agency sent several requests for information to NRAs and TSOs of Finland, Germany, Latvia, Lithuania, Poland and Sweden, pursuant to Article 12(6), third subparagraph, of Regulation (EU) No 347/2013.
- (15) On 14 April 2015, the Agency consulted the project promoter and the Lithuanian NRA on the cost allocation.
- (16) On 15 April 2015, the Agency received from the Lithuanian NRA the last piece of relevant information sought pursuant to Article 12(6), third subparagraph, of Regulation (EU) No 347/2013.

## **2. THE AGENCY’S COMPETENCE TO DECIDE ON THE INVESTMENT REQUEST**

- (17) Pursuant to Article 12(6) of Regulation (EU) No 347/2013, the Agency shall decide on an investment request including the cross-border cost allocation, as well as the way the costs should be reflected in the tariffs, where the NRAs concerned have not reached an agreement on the investment request within six months from the date on which the request was received by the last of the NRAs concerned, or upon a joint request of the NRAs concerned.

- (18) Here, the Agency received no joint request by the NRAs concerned for a decision on the investment request, but a notification by the Lithuanian NRA that no agreement was reached within six months of the date on which the investment request was received by the last NRA concerned. According to the information from the other NRAs, which received the investment request, not all NRAs shared the view of the Lithuanian NRA, though none of them claimed that an agreement on the investment request was reached. Thus, it is first to be assessed if the Litgrid AB's "request for the allocation of investment costs while implementing the LitPol Link Project" is an investment request under Article 12(6) of Regulation (EU) No 347/2013 and if the concerned NRAs had not reached an agreement on it within six months.

**2.1. Investment request pursuant to Article 12 of Regulation (EU) No 347/2013**

*Investment request including a request for a cross-border cost allocation and accompanying documents*

- (19) Pursuant to Article 12(3) of Regulation (EU) No 347/2013, an investment request shall include a request for CBCA, accompanied by a project specific CBA, a business plan and, if the project promoters agree, a substantiated proposal for a CBCA. In conjunction with Article 12(2) of the same Regulation, the investment request shall also concern a PCI falling under the categories listed in Annex II.1(a), (b) or (d) thereof.
- (20) Litgrid AB's request of 31 October 2013 "for the allocation of investment costs while implementing the LitPol Link Project", as updated by 17 April 2014, refers to Article 12 of Regulation (EU) No 347/2013, notably paragraph (3) thereof, and requests the allocation of the investment costs of LitPol Link.
- (21) The request is accompanied by a project-specific CBA and a business plan.
- (22) Some stakeholders claimed that the CBA carried out by the project promoter was not consistent with the methodology drawn up pursuant to Article 11 of Regulation (EU) 347/2013, as the geographical scope of the assessment was limited to the Baltic Sea region instead of covering the whole EU area. In the Agency's view, this claim does not appropriately take into account that Annex V.10 of Regulation (EU) No 347/2013 specifies that "the methodology shall define the analysis to be carried out (...). The area for the analysis of an individual project shall cover all Member States and third countries, on whose territory the project shall be built, all directly neighbouring Member States and all other Member States significantly impacted by the project". Modelling of a part of the European system can therefore be sufficient. Here, the Agency finds that the project promoter could limit the geographical scope of the CBA to the Baltic Sea region, in line with ENTSO-E's approach to CBA in the Ten-Year Network Development Plan 2014 ("TYNDP 2014")<sup>4</sup>.

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<sup>4</sup> ENTSO-E: "10-year Network Development Plan 2014" (as revised version as of December 2014)

- (23) The request relates to PCI No 4.5.1 pursuant to Annex VII.B of Regulation (EU) No 347/2013, which falls under the energy infrastructure category of Annex II.1(a) of the same Regulation as it consists of a high-voltage overhead transmission line, designed for a voltage above 220 kV.
- (24) Therefore, the Agency considers that the Litgrid AB's request is an investment request which includes a request for CBCA, a project-specific CBA, and a business plan. The Litgrid AB's request also concerns a PCI falling under the categories listed in Annex II.1(a), (b) or (d) of Regulation (EU) No 347/2013.

***Sufficient maturity***

- (25) Pursuant to Article 12(3) of Regulation (EU) No 347/2013, a project promoter shall submit an investment request as soon as the project has reached sufficient maturity.
- (26) In the Agency's view, sufficient maturity of the project has to be reached when an investment request is submitted. Thus, the Agency considered the maturity of the LitPol Link with regards to the time of the submission of the investment request on 31 October 2013, and – in relation to the CBA calculations – also with regards to the updates on 17 April 2014. For this purpose, the considerations regarding sufficient maturity as outlined in Section 2.1 of the Agency's Recommendation No 07/2013<sup>5</sup> (page 5) were taken into account by the Agency. The considerations refer to sufficient certainty and high-level of confidence with regards to the expected costs and benefits, good knowledge of the factors affecting expected costs and benefits, the start date of the permitting procedures and the upcoming start date of construction.
- (27) The Agency finds that the investment request exhibits the following main features in terms of certainty of the expected costs and benefits, as well as of the factors affecting them:
- The uncertainty ranges of capital costs are estimated to be less than plus or minus five percent<sup>6</sup>. The large part of the investment costs is determined on the basis of contracts which have been already signed.
  - The CBA included preliminary results for Vision 1, which was developed for the ENTSO-E's TYNDP 2014<sup>7</sup>. These results have been obtained in the framework of the (ongoing) calculations for such a TYNDP. Upon request of the Lithuanian and the

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[https://www.entsoe.eu/Documents/TYNDP%20documents/TYNDP%202014/141031%20TYNDP%202014%20Report\\_.pdf](https://www.entsoe.eu/Documents/TYNDP%20documents/TYNDP%202014/141031%20TYNDP%202014%20Report_.pdf)

<sup>5</sup> Agency's Recommendation No 07/2013 of 25 September 2013 regarding the cross-border cost allocation requests submitted in the framework of the first Union list of electricity and gas projects of common interest [http://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Pages/Recommendations.aspx](http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Pages/Recommendations.aspx)

<sup>6</sup> CBA of October 2013, page 30, as also confirmed in the Updated CBA, page 9.

<sup>7</sup> ENTSO-E's TYNDP 2014

[https://www.entsoe.eu/Documents/TYNDP%20documents/TYNDP%202014/141031%20TYNDP%202014%20Report\\_.pdf](https://www.entsoe.eu/Documents/TYNDP%20documents/TYNDP%202014/141031%20TYNDP%202014%20Report_.pdf)

Polish NRAs, the project promoter provided, in April 2014, an updated CBA. The analysis underpinning the updated CBA for Visions 1 and 4 of the ENTSO-E's TYNDP 2014 identifies benefits of the LitPol Link. Assumptions are defined and total results for these visions are calculated by ENTSO-E, thus – in principle – providing the best confidence for these results<sup>8</sup>.

- The factors affecting expected benefits are known by the assumptions of ENTSO-E's TYNDP 2014.
- (28) In this respect, some stakeholders argued that certainty on the benefits is not shown. The Agency rejects this view because, in line with the agreement between the Lithuanian and the Polish NRAs and TSOs, the benefits have been updated with calculations carried out in the framework of the ENTSO-E's TYNDP 2014, thus providing – at least in principle – the best certainty on the benefits.
- (29) According to Annex 1 of the investment request (Summary data relevant for CBCA request), the permitting procedure commenced in Lithuania and in Poland in January 2010, thus well before the submission of the investment request.
- (30) Further, according to the same Annex 1 of the investment request, the construction of LitPol Link was to start in April 2014. In October 2013, the construction was thus to begin soon.
- (31) With regard to the construction, some stakeholders argued that the investment request would not fall under the title of Article 12 of Regulation (EU) No 347/2013, which refers to “enabling investments”, as LitPol Link was already under construction in April 2014. The Agency cannot share this view. The maturity of LitPol Link with regards to the construction criteria needs to be assessed based on the project's status at the time of the submission of the investment request, i.e. on 31 October 2013, and by that date the construction had not yet started. Further, the rejection of the investment request solely on the grounds of the project's progress would in fact run counter to the intention of enabling investments, as it would discourage project promoters from continuing the implementation of a sufficiently mature project in a timely manner.
- (32) For these reasons, the Agency considers LitPol Link as having reached sufficient maturity.

#### ***Consultations with TSOs***

- (33) Pursuant to Article 12(3) of Regulation (EU) No 347/2013, a project promoter shall submit an investment request after having consulted the TSOs from the Member States to which the project provides a significant net positive impact.
- (34) Prior to the submission of the CBA in October 2013, the project promoter did not have a complete understanding of the project's impacts and therefore of the project's net positive

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<sup>8</sup> ENTSO-E's TYNDP 2014, pp. 199-200.

- impacts. However, it consulted the Polish TSO on the CBA and prepared the CBA based on the joint work of all the ENTSO-E Baltic Sea Regional Group TSOs.
- (35) Prior to the submission of the updated CBA in April 2014, the project promoter consulted the following TSOs of the ENTSO-E Baltic Sea Regional Group: the TSOs of Finland, Latvia, Norway, Poland and Sweden, as well as the German TSO 50Hertz, on an updated version of the CBA.
- (36) As explained in more detail below (see Section 3.5), according to the Agency's assessment of the positive benefits of LitPol Link, the latter provides a significant positive impact on Norway, Lithuania, Sweden and Poland, while positive impacts in other countries are significantly lower. With this in mind, the countries with a significant net positive impact, and to which Regulation (EU) No 34772013 applies, could at most be the EU Member States Lithuania, Sweden and Poland<sup>9</sup>. As mentioned above, the TSOs of Sweden and Poland were consulted – among others – by the project promoter.
- (37) In view of this assessment, the claims raised by some stakeholders that the consultation by the project promoter was incomplete due to, on the one hand, the Estonian TSO not being consulted despite Estonia being identified in the updated CBA as a country to which the project could provide a net positive impact and, on the other hand, to the project promoter not having provided further information upon the request of the German TSOs Amprion GmbH, TenneT TSO GmbH and TransnetBW GmbH, are irrelevant. According to the Agency's assessment, Estonia and Germany are not countries to which LitPol Link provides a significant net positive impact. Since the TSOs of Estonia and Germany are not from Member States to which the project could provide a significant net positive impact, it was not necessary to consult them.
- (38) Some stakeholders claimed that the project promoter should have consulted the TSOs of Finland, Germany and Sweden before the submission of the investment request in October 2013. The Agency has however no evidence that in October 2013 Litgrid AB was in a position to identify EU Member States to which LitPol Link could provide a significant net positive impact. The project promoter's CBA of October 2013 indicated in particular no significant net positive impact for Finland, Germany and Sweden. On this basis, the Agency rejects the view that the project promoter should have consulted the TSOs of those countries before the submission of the investment request in October 2013. In this respect, the Agency also notes that the outcome of the additional consultation of TSOs in April 2014 had been available before the investment request was referred to the Agency, so that the Agency was in any case able to consider it for the decision on the investment request.
- (39) Some stakeholders considered the April 2014 consultation to be inadequate, claiming that it was conducted under a false impression that there would not be a request for CBCA with financial contribution from non-hosting countries. In the Agency's view, this objection is not relevant as Regulation (EU) No 347/2013 does not require that a CBCA proposal is

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<sup>9</sup> Norway is not an EU Member State and Regulation (EU) No 347/2013 is currently not applying to Norway.

consulted on in any case; a CBCA proposal is also not an absolutely mandatory element of an investment request pursuant to Article 12(3) of Regulation (EU) No 347/2013. Lastly, even if a CBCA proposal is submitted by the project promoter, it is for the concerned NRAs to decide on the cost allocation.

- (40) Some stakeholders considered that the April 2014 consultation by the project promoter was inadequate due to the limited scope and content of the consultation documents, as well as due to the deadline given to some of the consulted TSOs to respond. The Agency does not share this view. The project promoter consulted on an updated version of the CBA, which was prepared on the basis of the joint work of all the ENTSO-E Baltic Sea Regional Group TSOs, including those of Poland and Sweden. Accordingly, the information necessary to verify and comment on the CBA was already available to those TSOs. Further, some TSOs responded by the deadline set for the consultation, which suggests that a timely reply was in principle possible. Moreover, the consulted TSOs had also the opportunity to comment on the investment request in the proceedings before the Agency.
- (41) Therefore, the Agency concludes that, prior to the submission of the investment request, the project promoter did consult all TSOs from the EU Member States identified by the project promoter, on the basis of the information available, as those to which the project could provide a significant net positive impact.

***Submission of the investment request to the NRAs concerned***

- (42) Pursuant to Article 12(3) of Regulation (EU) No 347/2013, the investment request shall be submitted to all the NRAs concerned.
- (43) The project promoter submitted the investment request to the NRAs of Lithuania, Poland, Finland, Latvia, Norway, Sweden and Germany.
- (44) As already mentioned, and explained in more detail below (see Section 3.5), in the Agency's view the EU Member States to which the project provides a significant net positive impact, in addition to Lithuania which is hosting LitPol Link, can be at most Sweden and Poland. With regard to Section 2.3 of the Agency's Recommendation No 07/2013, the Agency considers therefore that at most the NRAs of those three Member States are concerned.
- (45) Since the Agency did not find a further Member State, beyond those which received the investment request, which would host LitPol Link or to which the project would provide a significant net positive impact, the Agency concludes that the investment request has been submitted to all the NRAs concerned.

***Submission of the investment request by 31 October 2013***

- (46) Pursuant to Article 12(3), fourth subparagraph, of Regulation (EU) No 347/2013, project promoters shall, by 31 October 2013, submit their investment request for projects included in the first Union list.



- (47) The investment request was submitted to the Lithuanian NRA on 31 October 2013, following the project promoter's consultation of the Polish TSO.
- (48) In this context, some stakeholders argued that the investment request was not submitted to all concerned NRAs by 31 October 2013 and that not all TSOs of the EU Member States to which LitPol Link provides a significant net positive impact were consulted prior to the submission of the investment request in October 2013. As already mentioned, the Agency has no evidence of Litgrid AB being in a position, in October 2013, to identify EU Member States to which LitPol Link could provide a significant net positive impact; the project promoter's CBA of October 2013 indicated in particular no significant net positive impact for Poland (page 69 and page 71) or Sweden (page 46). In 2014, the project promoter sent the investment request also to other NRAs and consulted additional TSOs, only because of new findings following a request by the Lithuanian NRA (as agreed with the Polish NRA on 15 January 2014) to update the CBA of the investment request with regard to new essential elements which arose in the meanwhile, namely updated results on ENTSO-E's Visions (1 and 4). Against this background, the Agency finds that the submission of the investment request on 31 October 2013 is relevant and that this investment request should not be rejected on the basis of information which became available only later or on the basis of the project promoter's subsequent submission which was requested by the Lithuanian NRA.
- (49) Further, the Agency notes that the first Union list was adopted by Commission Delegated Regulation (EU) No 1391/2013<sup>10</sup>. On 31 October 2013, this Regulation was not final, i.e. pending endorsement, at least, by the Council, pursuant to Article 16(5) of Regulation (EU) No 347/2013. It was published in the Official Journal on 21 December 2013, entering into force in January 2014. Thus, while Article 12(3), fourth subparagraph, of Regulation (EU) No 347/2013 states that project promoters shall submit their investment request for projects included in the first Union list by 31 October 2013, there was in fact no Union list within the meaning of Article 12(3), fourth subparagraph, of Regulation (EU) 347/2013, in force on 31 October 2013 and as a consequence no projects included in such list to which the deadline of 31 October 2013 could apply. Therefore, in the Agency's view, the deadline of 31 October 2013 established by Article 12(3), fourth subparagraph, of Regulation (EU) 347/2013 would in no case void Litgrid AB's investment request.

***No exemption pursuant to Article 12(9) of Regulation (EU) No 347/2013***

- (50) Pursuant to Article 12(9) of Regulation (EU) No 347/2013, projects are not eligible for an investment request and CBCA if they have received an exemption from Article 16(6) of Regulation (EC) No 714/2009<sup>11</sup>, from Article 32 and Article 37(6) and (10) of Directive

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<sup>10</sup> Commission Delegated Regulation (EU) No 1391/2013 of 14 October 2013 amending Regulation (EU) No 347/2013 of the European Parliament and of the Council on guidelines for trans-European energy infrastructure as regards the Union list of projects of common interest, OJ L 349, 21.12.2013, p. 28.

<sup>11</sup> OJ L 211, 14.8.2009, p. 24.

2009/72/EC<sup>12</sup> pursuant to Article 17 of Regulation (EC) No 714/2009, or under Article 7 of Regulation (EC) No 1228/2003<sup>13</sup>.

(51) According to the Agency information, LitPol Link did not receive any of such exemptions.

***Completeness of the investment request in the light of the Agency's Recommendation No 07/2013***

(52) Further, the Agency considered also completeness of the investment request with respect to the criteria set out in Section 1.1 (page 2-4) of the Agency's Recommendation No 07/2013.

(53) The project promoter provided, in Annex 2 of the investment request, evidence of the sufficient maturity of LitPol Link.

(54) The project promoter provided, in Annex 3 of the investment request, information that the preliminary investment decision of LitPol Link was made in an Interoperators Agreement of 1 December 2011 between the project promoter and PSE S.A.

(55) The project promoter provided, in Annex 4 of the investment request, a detailed technical description of the project, including a description of the rationale behind the choice of the technology.

(56) The project promoter provided, in Annex 5 of the investment request, a detailed implementation plan, which serves as substantial and consistent evidence of the progress achieved in the development of LitPol Link.

(57) The project promoter provided, in Annex 6 of the investment request, a short description of the status of the project permitting process in Lithuania and in Poland, including a detailed schedule.

(58) The project promoter provided, in Annex 7 of the investment request, evidence of the TSO consultations and their outcome.

(59) The project promoter provided, in Annex 8 and in the updated Annex 8 of the investment request, a project specific CBA.

(60) The project promoter provided, in Annex 8 (page 59-61) and in the updated Annex 10 (page 6) of the investment request, an analysis of the expected inter-transmission system operator compensation (ITC) revenues.

(61) The project promoter provided an analysis of other revenues, namely the congestion income, in Annex 9 (page 7-9) and in the updated Annex 10 (page 6) of the investment request.

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<sup>12</sup> OJ L 211, 14.8.2009, p. 55.

<sup>13</sup> OJ L 176, 15.7.2004, p.5.

- (62) The project promoter provided, in Annex 9 and in the updated Annex 10 of the investment request, a business plan and financing strategy.
- (63) On the basis of the above, the Agency concludes that the investment request fulfils the requirements for completeness according to the criteria set out in the Agency's Recommendation No 07/2013.

## **2.2. No agreement by the concerned NRAs**

- (64) Overall, the project promoter submitted the investment request to the Lithuanian NRA as well as to the NRAs of Finland, Germany, Latvia, Norway, Poland and Sweden. The NRA of Germany, as the last among the recipient NRAs, received the investment request with the updated Business Plan, the updated CBA, and a proposal for CBCA, on 25 April 2014 in English and on 16 May 2014 in German. The NRAs of Lithuania, Poland and Sweden received the same documentation on 18 April 2014, 22 April 2014 and on 24 April 2014, respectively.
- (65) According to the information sent by the Lithuanian NRA to the Agency on 28 November 2014, and complemented on 9 December 2014, which was confirmed by the information sent to the Agency, in January 2015, by the NRAs of the EU Member States to which the investment request was addressed, the NRAs of Finland, Germany, Latvia, Lithuania, Norway, Poland and Sweden did not reach an agreement on the investment request for LitPol Link.
- (66) Some stakeholders argued that the six-month period to reach an agreement on the investment request could not have started yet due to the incompleteness or inadmissibility of the investment request. In this respect, the Agency refers to its findings in recitals (52) to (63) above. The Agency does not share the stakeholders' concerns on this aspect and does not therefore consider them as preventative of the six-month period starting on 16 May 2014 at the latest. The latter was the date on which the last of the NRA recipients of the investment request with updated elements received it. 16 May 2014 is in any case more than six months before the date when the Agency was notified that an agreement among the concerned NRAs was not reached. The Agency notes, in this context, that Article 12(6) of Regulation (EU) No 347/2013 does not specify the reasons which may hinder an agreement. The absence of an agreement may therefore also be due to conflicting views on the completeness or admissibility of the investment request.
- (67) With regard to the date of 16 May 2014 on which the last NRA recipients of the investment request with updated elements, i.e. the German NRA, received it, six months had elapsed by 27 November 2014. Moreover, in view of the Agency's finding that at most the NRAs of Lithuania, Poland and Sweden may be considered as "concerned", the six-month period started in fact at the latest on 24 April 2014 and accordingly expired (also) before 28 November 2014. In either case, the concerned NRAs did not reach an agreement within a six-month period by 28 November 2014. The same would be true for the date which the Lithuanian NRA considered to trigger the start of the six-month deadline, i.e. 26 May 2014.

(68) Thus, the Agency finds that the concerned NRAs did not reach an agreement on the investment request within six months.

### **2.3. The Agency's conclusion on its jurisdiction**

(69) For the above reasons, the Agency is of the view that the Litgrid AB's investment request concerning LitPol Link is a relevant investment request under Article 12(6) of Regulation (EU) No 347/2013 and that the concerned NRAs did not reach an agreement on this investment request within six months, and that therefore the Agency shall act pursuant to Article 12(6) of Regulation (EU) No 347/2013.

## **3. ASSESSMENT OF THE INVESTMENT REQUEST**

### **3.1 The context of the Baltic power system**

(70) The power system of the Baltic countries (Estonia, Latvia and Lithuania) is currently not directly connected to the Continental European system. It is asynchronously connected with the Nordic power system via the Estlink I and the Estlink II cables (Estonia - Finland). It is synchronously interconnected with the IPS/UPS system (Integrated Power System / Unified Power System of Russia).

(71) According to ENTSO-E's TYNDP 2014, three interconnection projects between Lithuania and Poland will contribute to the synchronisation of the power system of the Baltic States with the Continental European networks. They are included in the 2030 reference grid: "LitPol Link stage 1"<sup>14</sup> (500 MW), "LitPol Link stage 2"<sup>15</sup> (500 MW), and the PCI No 4.3 "Estonia/Latvia/Lithuania synchronous interconnection with the Continental European networks"<sup>16</sup> (600 MW).

(72) According to ENTSO-E's TYNDP 2014 and according to information provided by the project promoter during consultation meetings, the implementation of the synchronous operation is expected by 2023<sup>17</sup>.

(73) The main objectives for developing physical infrastructure in the region, according to the CBA and the updated CBA (page 28), are:

- to enable market integration and efficient market functioning;

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<sup>14</sup> ENTSO-E's TYNDP 2014, p. 198.

<sup>15</sup> ENTSO-E's TYNDP 2014, p. 201.

<sup>16</sup> ENTSO-E's TYNDP 2014, p. 206.

<sup>17</sup> As indicated in the national Lithuanian investment plan ([http://www.litgrid.eu/uploads/files/dir156/dir7/10\\_0.php](http://www.litgrid.eu/uploads/files/dir156/dir7/10_0.php)), a feasibility study on the integration of the Baltic States to the EU internal electricity market concluded that 2025 would be a more realistic date for synchronisation.

- to reinforce the reliability of the transmission networks in Poland and Lithuania, as the transmission networks in North–Eastern Poland and in Southern Lithuania will be strengthened (with construction of additional power lines and substations);
- together with power generation development, to enhance energy security in the region;
- to contribute to the stability and economic growth of countries in the Baltic Sea Region;
- to connect the Baltic power system to Continental Europe and to allow energy transfer between these countries.

### **3.2 Description of the subject of the investment request**

#### **3.2.1 The project promoter’s proposal**

- (74) According to the updated Business Plan and to the updated CBA, LitPol Link is expected to be commissioned by December 2015.
- (75) The physical infrastructure will be located in Lithuania. According to the updated CBA (pages 16 and 17), LitPol Link includes 51 km of a double-circuit 400 kV overhead line from the Alytus transformer substation to the Lithuania–Poland border, a new 400 kV substation in Alytus, a new 500 MW Back to Back (“B2B”) high voltage direct current converter station, and the reconstruction and expansion works of the existing 330 kV Alytus substation<sup>18</sup>.
- (76) According to the updated CBA (page 17), LitPol Link also includes the reinforcement of the Lithuanian internal grid, through the construction of a new 53 km double-circuit 330 kV overhead line between Kruonis and Alytus, “to make possible planned power transfer capacity between Poland and Lithuania” (page 16).
- (77) According to the updated CBA (pages 16-18), the Polish part of the whole project includes about 112 km of the double-circuit 400 kV overhead line from the Lithuania – Poland border to the new Elk Bis substation in Poland, as well as additional lines, substations and reinforcements in Poland.

#### **3.2.2 The Agency’s analysis of the scope of LitPol Link for the purpose of cost allocation**

- (78) Annex VII.B.4 of Regulation (EU) No 347/2013<sup>19</sup> defines PCI No 4.5.1. as “LT part of interconnection between Alytus (LT) and LT/PL border”.

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<sup>18</sup> This last element is included for providing a complete project description, however, as clarified by the project promoter, it is not part of the investment request.

<sup>19</sup> OJ L 349, 21.12.2013, p. 28.

- (79) Pursuant to Annex VII.A.2 of Regulation (EU) No 347/2013, substations and back-to-back stations in electricity are considered as part of the PCIs and are not mentioned explicitly in the Union list of PCIs, if they are geographically located on the transmission line.
- (80) On the basis of these provisions and on the basis of the investment request, the Agency considers the following items of LitPol Link as relevant for the purpose of cost allocation, pursuant to Article 12 of Regulation (EU) No 347/2013:
- double-circuit 400 kV overhead line from Alytus to the Lithuania–Poland border;
  - 400 kV substation in Alytus;
  - 500 MW B2B station.
- (81) The Kruonis – Alytus 330 kV line is not covered by the scope of PCI No 4.5.1 as defined in Annex VII of Regulation (EU) No 347/2013, or by any other PCI listed in the same Annex VII. Therefore, the Agency deems this line as not relevant for a cost allocation pursuant to Article 12 of Regulation (EU) 347/2013.

### **3.2.3 The Agency’s analysis of the scope of LitPol Link for the purpose of cost benefit analysis**

- (82) The Agency considers that, as already proposed by the project promoter and previously done by ENTSO-E in its TYNDP 2014, a meaningful CBA must refer to a complete project, i.e. a project that delivers the interconnection with 500 MW capacity between the existing grids of the two countries (Lithuania and Poland), as the realisation of only a part of the interconnection would not deliver any benefit.
- (83) Differently from the investment request (see footnote 18), the Agency considers that the expansion works in the 330 kV Alytus substation are in the scope of CBA calculations; otherwise transmission of electricity (and delivery of benefits) would not be possible.
- (84) On the contrary, the Agency considers that the construction of a new 53 km double-circuit 330 kV overhead line between Kruonis and Alytus should be excluded from the scope of the project for the purpose of CBA calculations pursuant to Regulation (EU) No 347/2013.
- (85) According to the updated CBA (page 26), the result of the N-1 analysis, without the new Kruonis - Alytus line, shows that the system would remain within operational security limits for a 500 MW transit from Lithuania to Poland. However, the project promoter stated that critical conditions may occur in the case of an outage of the 330 kV line Alytus - Lietuvos E, in relation to transits through the (only remaining) interconnection line with Belarus, i.e. Alytus – Grodno (Belarus). According to the information received from the project promoter, operational measures are already in place, to be executed following the possible outage of the 330 kV Alytus - Lietuvos E line, dependent on the power transfer on the 330 kV Alytus – Grodno line, to avoid stress situations (and security of supply risks) in the 330 kV and 110 kV networks in the area of the Belarus – Lithuanian border.

- (86) The Agency also observes that, while the presence of the new Kruonis - Alytus line may facilitate the availability of 500 MW transfer capacity in the case of an outage of the Alytus – Lietuvos E line, this situation may however occur in very rare situations. According to information received from the project promoter, unavailability of lines in Lithuania, excluding planned unavailability, occurs only in 0.3 % of the time, thus with a very limited impact on market integration.

### **3.3 Costs of LitPol Link**

#### **3.3.1 The project promoter's proposal**

- (87) The project promoter provides, in the updated CBA, a detailed breakdown of costs of LitPol Link in Lithuania.
- (88) The updated CBA<sup>20</sup> shows capital expenditures (“CAPEX”) amounting to 115.0 million Euro and operational expenditures (“OPEX”) amounting to 117.7 million Euro, both expressed in 2013 net present value (“NPV”) terms.
- (89) CAPEX are related to the preparatory phase, land purchase and servitudes, transmission line design and construction, B2B design and construction, other network elements and the Kruonis – Alytus line.
- (90) According to clarifications received from the project promoter, OPEX include the cost of losses, the operational cost for repair (labour) and for materials, insurance costs and property taxes.
- (91) All operational costs provided by the project promoter assume an economic lifetime of 20 years for LitPol Link.
- (92) In the updated CBA, the project promoter also provides the costs of the Polish part of the whole project, including CAPEX and OPEX in Poland.

#### **3.3.2 The Agency's analysis of capital expenditures of LitPol Link in Lithuania**

- (93) Taking into consideration the adjustment to the scope of the project mentioned above, and based on the most recent cost data provided by the project promoter, the Agency analysed the capital expenditure of each investment item, and deemed it necessary to perform adjustments.
- (94) The Agency included all pre-grant costs in the CBA calculations before grants. For clarity, grants are considered as an additional monetary effect in the CBA calculations (see Section 3.5 of this Decision) and not as a cost decrease.

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<sup>20</sup> Cost Benefit Analysis, Table 10 in page 31.

- (95) Preparatory Costs: the project promoter included aggregated costs for both stages of LitPol Link in the CBA calculations. As the investment request only refers to stage 1 of interconnection between Lithuania and Poland, only half of the costs are included in the Agency's calculations, under the assumption that these costs are equally spread between the two phases.
- (96) Land Purchase: the project promoter included "Land Purchase" costs for both stages of LitPol Link project in the CBA calculations. As the investment request refers only to stage 1 of the interconnection between Lithuania and Poland, only costs related to this stage are included in the Agency's calculations.
- (97) Rights of Way: the project promoter included the costs related to both the double-circuit 400 kV Alytus – border line and the double-circuit 330 kV Kruonis – Alytus line in the CBA calculations. Following the adjusted scope of the project, rights of way costs related to the 330 kV line Kruonis - Alytus are excluded from the Agency's calculations.
- (98) 330 kV Alytus substation: as indicated in Section 3.2, while the project promoter does not include any cost related to the expansion works in the 330 kV Alytus substation in the CBA calculations, the Agency considers that, for the purpose of CBA calculations, these costs should be included, otherwise transmission of electricity (and delivery of benefits) would not be possible<sup>21</sup>.
- (99) The Agency deems appropriate to refer the CBA calculations to the present year (2015), in line with the ENTSO-E guidelines<sup>22</sup> and the Agency's Recommendation No 07/2013. This is also the year of commissioning of LitPol Link.
- (100) The 2015 NPV of CAPEX of LitPol Link in Lithuania (base case<sup>23</sup>) is, according to the Agency's above mentioned analysis, 119.70 million Euro.

### **3.3.3 The Agency's ex-ante analysis of efficiently incurred investment costs**

- (101) The main investment items contributing to more than 95 percent of the CAPEX of LitPol Link are the B2B and the double-circuit 400 kV overhead line from Alytus to Lithuania – Poland border.
- (102) For either of these investment items, the level of efficiently incurred costs is not straightforward to determine since:

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<sup>21</sup> For clarity, this implies that two different amounts of CAPEX are calculated in this Decision: one for the purpose of being allocated, another (higher) one to be added to the OPEX and determine the costs in the CBA.

<sup>22</sup> ENTSO-E Guidelines on CBA, version of 5 February 2015.  
<https://www.entsoe.eu/Documents/SDC%20documents/TYNDP/ENTSO-E%20cost%20benefit%20analysis%20approved%20by%20the%20European%20Commission%20on%204%20February%202015.pdf>

<sup>23</sup> Sensitivity cases are also presented in the rest of this Decision.



- no B2B stations are currently installed in Lithuania (and no B2B stations have been recently installed across Europe);
- no 400 kV lines are currently in operation in Lithuania, with the highest network voltage being 330 kV.

(103) The costs of high-voltage direct-current converter stations were considered by the Agency as reference for B2B stations due the somewhat comparable technology.<sup>24</sup> Furthermore, the range of unit investment costs for 400 kV lines in North-East Poland, as provided by the Polish TSO, was considered by the Agency as reference for the 400kV line. The Agency observes that the cost of the proposed 400 kV line in Lithuania is about 45%-65% below the range of unit investment costs in Poland.

(104) Furthermore, upon the Agency's request, the Lithuanian NRA informed the Agency that Lithuanian legislation requires project promoters to follow a public procurement procedure in order to procure network elements, thus ensuring that the investment costs are incurred efficiently. The Lithuanian NRA also noted a high level of competition among the participants in the public procurement procedure for the LitPol Link network elements, which provides some guarantee that the LitPol Link costs are efficient.

(105) On the basis of the above, the Agency considers the planned capital expenditures for LitPol Link to be efficiently incurred. For the purpose of cost allocation (i.e. excluding the expansion works in the 330 kV Alytus substation which amounts to 11.03 million Euro), the 2015 NPV of investment costs (before grants) of LitPol Link in Lithuania amounts to 108.67 million Euro.

### **3.3.4 The Agency's analysis of operational expenditures of LitPol Link**

(106) According to the Agency's Opinion No 01/2014<sup>25</sup>, confirming the Agency's Position on "ENTSO-E Guideline for CBA of Grid Development Projects", of 30 January 2013<sup>26</sup>, all costs should reflect 25 years of operation. Therefore, in the Agency's calculations operational costs are included for a period of 25 years.

(107) According to all (drafts and final) versions of the "ENTSO-E Guideline for CBA of Grid Development Projects"<sup>27</sup>, variation of losses is one of the benefits (B4) and not an

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<sup>24</sup> The design (especially the voltage) is different but the technology of the LitPol Link B2B and the HDVC converter stations (conversion AC to DC to AC) is the same.

<sup>25</sup> Agency's Opinion No 01/2014 of 30 January 2014 on "ENTSO-E Guideline for CBA of Grid Development Projects"

[http://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Opinions/Opinions/ACER%20Opinion%2001-2014.pdf](http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2001-2014.pdf)

<sup>26</sup>

[http://www.acer.europa.eu/Official\\_documents/Position\\_Papers/Position%20papers/ACER%20Position%20ENTSO-E%20CBA.pdf](http://www.acer.europa.eu/Official_documents/Position_Papers/Position%20papers/ACER%20Position%20ENTSO-E%20CBA.pdf)

<sup>27</sup> ENTSO-E's Guideline for Cost Benefit Analysis of Grid development Projects as of 12 June 2013 (available version for submission of the investment request in October 2013) and ENTSO-E's Guideline for Cost Benefit

operational cost. To avoid double-counting effects between costs and benefits, the Agency excludes the cost of losses from OPEX.

- (108) According to information provided by the project promoter, after the synchronisation of the Baltic system with Continental Europe (expected in 2023), the B2B converter station will no longer be needed for interconnection purposes with Poland and will thus be used for interconnection with Belarus. Therefore, the Agency excludes the operational costs (repair, materials and insurance) of the B2B converter station after the expected year of synchronisation, i.e. after year 2023, from the CBA calculations.
- (109) The Agency also excludes costs for property taxes from the CBA calculations as they represent a payment within the same country (Lithuania) without any impact on the Lithuanian economic balance.
- (110) According to the Agency's analysis, taking into account the aforementioned adjustments, the 2015 NPV of OPEX of LitPol Link in Lithuania (base case) amounts to 6.67 million Euro.

### **3.3.5 The Agency's assessment of the total costs of LitPol Link in Lithuania**

- (111) According to the Agency's analysis, the 2015 NPV of total costs of LitPol Link in Lithuania (base case) amounts to 126.37 million Euro.

## **3.4 Assumptions and use of ENTSO-E scenarios**

### **3.4.1 The project promoter's proposal**

- (112) The updated CBA includes the analysis of LitPol Link according to the assumptions characterising ENTSO-E's Visions 1 and 4, as defined in ENTSO-E's TYNDP 2014. The project promoter qualifies Vision 1 as the "reference primary scenario" and Vision 4 as the "secondary scenario"<sup>28</sup>. At the date of submission of the updated CBA on 18 April 2014, ENTSO-E had not yet completed the analysis of results for Visions 2 and 3<sup>29</sup>. The analysis relate to the study year 2030, in line with the ENTSO-E's TYNDP 2014, which presents only four Visions for year 2030.

### **3.4.2 The Agency's views on the study years**

- (113) According to the Agency's Recommendation No 07/2013, *'CBA results are provided for the reference TYNDP scenario (top down 2020 scenario) and sensitivity analysis (related to variation of major assumptions). Additional results can be provided as long as they are*

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Analysis of Grid development Projects as of CBA methodology as of 14 November 2013 (available version for submission of the updated CBA in April 2014)

<sup>28</sup> Updated Cost Benefit Analysis, page 21.

<sup>29</sup> Letter by Litgrid AB (SD-2802, 17.6.2014)

*derived from scenarios, sensitivity analyses and planning cases considered in the TYNDP.*<sup>30</sup>

(114) Furthermore, in its Opinion No 01/2014, the Agency suggested that ENTSO-E evaluates:

- long-term uncertainties, mainly through scenario-based analyses;
- near-term uncertainties, mainly through sensitivity or probabilistic analyses.

(115) In relation to the above, the Agency observes that the ENTSO-E's TYNDP 2014 does not include a reference estimate (or any other estimate) for the year 2020, or a reference estimate for the year 2030, thus leaving the level of confidence of the calculated benefits uncertain.

(116) Given the complexities in preparing the data modelling for an additional study year, the Agency believes that a project promoter cannot be obliged to carry out such an analysis, considering that it had not been performed by ENTSO-E in the first place. In addition, it remains questionable whether a single project promoter alone possesses all the necessary information to produce the necessary regional (or pan-EU) model.

### **3.4.3 The ENTSO-E's TYNDP 2014 Visions for year 2030**

(117) For the purposes of ENTSO-E's TYNDP 2014, ENTSO-E developed four scenarios for the year 2030 based on the respective Visions (Visions 1 to 4). According to ENTSO-E<sup>31</sup>, *“the basic assumption concerning the Visions is that they differ enough so that the actual future evolution of the assessed parameters shall safely lie between the pathways of these four Visions. Two Visions (Visions 1 and 3) are created according to a ‘bottom-up’ approach while two Visions (Visions 2 and 4), are developed through a ‘top-down’ approach. The Visions are not forecasts and there is no probability attached to them. The Visions are based on previous ENTSO-E and regional market studies, public economic analyses and existing European documents”*.

(118) According to ENTSO-E:

- *“The four Visions differ mainly with respect to the trajectory toward the Energy roadmap 2050: Visions 3 and 4 maintain a regular pace until 2050, whereas Visions 1 and 2 assume a slower start then an acceleration after 2030. Fuel and CO<sub>2</sub> prices favour coal (resp. gas) in Visions 1 and 2 (resp. Visions 3 and 4)”<sup>32</sup>.*
- *“Vision 1 fails to meet the EU goals for 2030 but in the present context of economic downturn, it is a plausible, even if a non-desirable, scenario. Compared to the present days, the consumption and generation mix have evolved by less than in other Visions*

<sup>30</sup> Agency's Recommendation No 07/2013, p.10.

<sup>31</sup> ENTSO-E SOAF 2014, p.128

<sup>32</sup> ENTSO-E's TYNDP 2014, p.36

*entailing a lower pressure for more market integration and interconnection capacity<sup>33</sup>. Installed capacity of renewable energy sources (“RES”) increases, reaching 41% penetration during the period 2015-2030”<sup>34</sup>.*

- *“Vision 2 is similar to Vision 1 with respect to consumption and generation mix. Hence it fails as well to meet the EU goals for 2030 [...]. Compared to Vision 1, it builds on more European cooperation and the reference situation assumes more interconnection capacity”<sup>35</sup>.*
- *“Vision 3 reflects an ambitious path [...] achieving overall 50% of European load supplied by RES in 2030. Thus Vision 3 meets the EU goals by 2030. However in this Vision, every country tends to secure its own supply independently from the other, resulting probably into an overinvestment in generation assets at European level”<sup>36</sup>.*
- *“The fourth scenario, Vision 4, reflects an ambitious path towards the 2050 European energy goals, with 60% of load supplied by RES in 2030”<sup>37</sup>.*

#### **3.4.4 The main concerns for each Vision (as per ENTSO-E)**

(119) According to ENTSO-E:

- *“Vision 4 requires additional investigation of the specific investment needs it may entail and simplified grid modelling may have been resorted to whenever needed<sup>38</sup>. Because of the high ambitions regarding RES development, Vision 4 required more investigation efforts compared to Vision 1 and 3 (and practical measures to answer some investment needs specific to Vision 4 are yet to be devised in the framework of the preparation of TYNDP 2016)”<sup>39</sup>.*
- *“The main outputs for Vision 1 and Vision 2 appear similar at the pan-European level, although the breakdown per country shows differences. Vision 2 assessments have hence been performed last in the process, with often fewer resources allotted from the Regional Groups”<sup>40</sup>.*
- *“Some additional reinforcements are still to be designed to cover investment needs specific to the most ambitious scenarios of RES development by 2030. The set of projects of pan-European significance is still to be completed in order to meet the energy revolution proposed in Vision 4; with its validation first in October 2013,*

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<sup>33</sup> ENTSO-E’s TYNDP 2014, p.39

<sup>34</sup> ENTSO-E’s TYNDP 2014, p.41

<sup>35</sup> ENTSO-E’s TYNDP 2014, p.42

<sup>36</sup> ENTSO-E’s TYNDP 2014, p.45

<sup>37</sup> ENTSO-E’s TYNDP 2014, p.49

<sup>38</sup> ENTSO-E’s TYNDP 2014, p.49

<sup>39</sup> ENTSO-E’s TYNDP 2014, p.55

<sup>40</sup> ENTSO-E’s TYNDP 2014, p.55

*Vision 4 could only be used to assess the portfolio of already identified projects. Investment needs investigation in this Vision requires additional input and feedback from stakeholders (more precise locations of generation especially) so that a more comprehensive picture of the grid infrastructure can be supplied”<sup>41</sup>.*

### 3.4.5 Discrepancies in the ENTSO-E published TYNDP data on Visions

(120) ENTSO-E published the input and output data files of ENTSO-E’s TYNDP 2014<sup>42</sup>. An analysis of these data reveals a series of discrepancies concerning countries of the Baltic Sea Region. Most of the discrepancies are found in Visions 2, 3 and 4, thus rendering Vision 1 the most ‘reliable’ in terms of data assumptions. Examples of the discrepancies found in ENTSO-E’s datasets include:

- i. capacity factors greater than 1 (e.g. for Finland in all Visions for gas, hard coal and lignite units);
- ii. missing data on electricity generation and installed capacities for Sweden (in Visions 2 and 3);
- iii. zero production from wind capacities in Sweden, Norway, Finland, Estonia, Latvia and Lithuania and zero production from solar capacities in Finland, Sweden, Estonia, Latvia and Lithuania (Vision 3);
- iv. inconsistent data for Germany (energy generated from zero installed capacity), especially in Vision 2;
- v. inconsistent data for Latvia (energy generated from zero installed capacity), especially in Visions 3 and 4.

(121) On 27 March 2015 ENTSO-E confirmed the presence of discrepancies in items (iii) and (iv) above, and provided the Agency with explanations for the other items, as being related to the way in which cogeneration plants are modelled and how their installed capacity and generation output are subsequently reported.

(122) With regard to the ENTSO-E data, some stakeholders contended that the credibility of the ENTSO-E data assumptions remained low. The Agency, while reaffirming its recommendations to ENTSO-E to improve the TYNDP modelling assumptions and approach further<sup>43</sup>, considers that the ENTSO-E’s TYNDP 2014 dataset is the best

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<sup>41</sup> ENTSO-E’s TYNDP 2014, p.70

<sup>42</sup> <https://www.entsoe.eu/major-projects/ten-year-network-development-plan/tyndp-2014/Pages/default.aspx>

<sup>43</sup> Agency’s Opinion No 21/2014 of 19 December 2014 on the draft ENTSO-E Scenario Outlook and Adequacy Forecast 2014-2030 and Agency’s Opinion No 01/2015. of 29 January 2015 on the ENTSO-E draft Ten-Year Network Development Plan 2014. [http://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Opinions/Opinions/ACER%20Opinion%2021-2014.pdf](http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2021-2014.pdf)

available set of assumptions for infrastructure development in Europe. Furthermore, on 17 March 2015, ENTSO-E did not reply positively to an Agency's request to perform calculations with different assumptions, thus constraining the possible use of alternative assumptions and the calculation of sensitivity results. However, it should be noted that final ENTSO-E results became available in July 2014 (after the submission of the updated CBA in April 2014) and were used in the Agency's analysis. Nevertheless, the final results are only slightly different from the preliminary results used in the updated CBA<sup>44</sup>.

- (123) Further, some stakeholders expressed concerns that the assumptions underpinning the ENTSO-E Baltic Sea Regional Group studies differ from the assumptions of the pan-European market studies carried out at ENTSO-E level (including in terms of interconnection capacity at the Lithuania – Poland border and of treatment of the neighbouring countries in the IPS/UPS system). The Agency observes that the ENTSO-E pan-European market studies were set up, for the first time, in the ENTSO-E's TYNDP 2014 process to define parameters and datasets and to provide the boundary conditions for the regional market studies. It was then up to the regional market studies (in particular, of the ENTSO-E Baltic Sea Regional Group for the interconnections between Lithuania and Poland) to investigate further the perspective projects and thus the perspective transfer capacities and to carry out the regional market studies for the purpose of benefit calculation. Furthermore, the approach for a more detailed modelling in the Baltic Sea Regional Group with regards to Belarus and Russia appears to be particularly appropriate in light of the provision of Annex V.10 of Regulation (EU) No 347/2013: *“The area for the analysis of an individual project shall cover all Member States and third countries, on whose territory the project shall be built, all directly neighbouring Member States [...]”*.

#### **3.4.6 The views of the Lithuanian and the Polish NRAs and TSOs on ENTSO-E's Visions**

- (124) According to PSE S.A.<sup>45</sup>, valuation of the project should be done in conditions which are – to the extent possible – close to the conditions defined as "Business-as-Usual". Vision 1 is built on a bottom-up principle, which, to the highest level of the four Visions, reflects analogy with the current functioning of the energy market in Europe mapped for 2030. Other ENTSO-E's TYNDP 2014 Visions (i.e. Visions 2 to 4) are developed based on assumptions, which, in an artificial and unrealistic way, increase effectiveness of projects. Thus, in PSE S.A.'s opinion, given the nature of energy markets, the development scenario elaborated in Vision 1 seems more appropriate for the project evaluation.
- (125) The Polish NRA<sup>46</sup> is of the opinion that Vision 1 is most suitable for CBCA. Moreover, during a meeting held on 9 April 2014 between the European Commission and the Estonian, Latvian, Lithuanian and Polish NRAs, it was stated that the CBCA request

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[http://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Opinions/Opinions/ACER%20Opinion%2001-2015.pdf](http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2001-2015.pdf)

<sup>44</sup> For example, in the case of Lithuania, the difference of SEW is below one percent.

<sup>45</sup> Letter of February 27, 2015.

<sup>46</sup> E-mail to the Agency, 2 March 2015

should indicate the most likely scenario clearly and that ‘averaging’ of Visions, which are extremely divergent, should not be performed.

(126) According to the project promoter and the Lithuanian NRA, the key aspects which lead to consider Vision 1 as the base scenario, are:

- Vision 1 assumes modest economic growth and thus lower overall demand growth;
- Vision 1 assumes reasonable CO<sub>2</sub> prices (31 Eur/t), thus keeping coal before gas in the merit-order dispatch of power plants;
- Vision 1 assumes reasonable (‘sustainable’) RES development rates;
- Vision 1 assumes moderate penetration of electric vehicles and smart grids development.

(127) According to the Lithuanian NRA, Vision 1 is a ‘realistic scenario’<sup>47</sup> as it is based on the following assumptions:

- modest economic and electricity demand growth;
- low [compared to other Visions] forecasted CO<sub>2</sub> prices;
- no anticipation of a significant shift from coal to gas in power generation.

(128) The Agency notes that the Latvian NRA supports Vision 1, while the Finnish, German and the Swedish NRAs do not challenge it, but rather criticise the approach of choosing only one scenario.

(129) In this context, some stakeholders argued that the results of the four ENTSO-E Visions should be averaged for the purpose of CBCA. The Agency rejects this view as, in order to average the results of the four Visions, the future scenarios characterising them should be considered as equally probable. This is not the case as stated by ENTSO-E itself (“*the visions are not forecasts and there is no probability attached to them*”) and as commented by the stakeholders in Lithuania and Poland.

(130) Further, some stakeholders claimed that the ENTSO-E Visions are not fit for the purpose of CBCA. ENTSO-E did not provide a reference TYNDP scenario for the year 2020, as suggested in the Agency’s Recommendation No 07/2013, so as to increase stakeholders’ confidence in the TYNDP results, including for the purpose of CBCA. Still, the Agency considers that the ENTSO-E’s TYNDP 2014 is the best available set of results for infrastructure development in Europe and that a project promoter cannot be obliged to develop new sets of scenarios, if ENTSO-E had not done it in the first place.

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<sup>47</sup> Letter No.R2-2651 (2014-10-23)

### 3.4.7 The Agency's conclusions on the use of scenarios

(131) Based on the above facts and analysis, the Agency concludes that Vision 1 currently constitutes the best available source of information to be used for the purposes of analysing the investment request for LitPol Link, as it combines the following features:

- it is the most 'complete' (and longest assessed) Vision according to ENTSO-E (ENTSO-E admits that *'additional reinforcements are still to be designed to cover investment needs specific to the most ambitious scenarios of RES development by 2030'*);
- it constitutes the Vision with the minimum amount of discrepancies identified in the ENTSO-E input and output datasets for the countries of the Baltic Sea Region;
- it is the Vision supported as the most realistic one by the Lithuanian and Polish NRAs;
- it is the Vision for which no concerns have been raised by stakeholders with regards to its validity.

(132) Furthermore, under current circumstances (lack of ENTSO-E reference results at year 2020 and lack of ENTSO-E reference results at year 2030), the Agency does not deem appropriate to 'average' the results of the Visions, given that not all Visions' calculations are at the same level of completeness and quality.

## 3.5 Benefits and other economic effects

### 3.5.1 The project promoter's assessment of benefits

(133) The updated CBA includes an analysis of the LitPol Link benefits in line with all (drafts and final version) of the "ENTSO-E Guideline on CBA of Grid Development Projects". The benefits attributable to the project are calculated with a "with and without approach" as the difference between the results with LitPol Link (500 MW transfer capacity between Lithuania and Poland, in the absence of the other two Lithuania - Poland interconnections) and without (no interconnections, no transfer capacities) LitPol Link.

(134) In Lithuania, the following benefits are assessed:

- Indicator B1 Security of supply ("SoS"). The updated CBA (page 38) mentions that security of supply can be calculated by using the Loss of Load Probability or the Expected Unserved Energy indicators. It concludes that the *"ENTSO-E analysis showed no big influence into SoS for LitPol link project, but it is so only because it was market based analysis done with the MAPS model (the model does not take into account sufficiently real network scheme). However [...] one can see that SoS is increasing. [...] Therefore, security of supply is also increased, which is additional, however at this stage not monetised"*;



- Indicator B2 Social and economic welfare (“SEW”), composed of consumer surplus, producer surplus and congestion rents. SEW is calculated by the BID / BID3 market model, applied by the ENTSO-E Baltic Sea Regional Group. The NPV of SEW variation in Lithuania in Vision 1 is 135.6 million Euro;
  - Indicator B3 Integration of RES. The updated CBA (page 41) concludes that *“integration of RES is not a focus of this project [LitPol Link]”* and that *“monetisation of RES integration in terms of CO<sub>2</sub> emission reduction is included in calculation of the SEW indicator”*;
  - Indicator B4 Variation in losses – energy efficiency. According to the updated CBA (pages 42 and 43), variation in losses is calculated by the Siemens PTI Power System Simulator network model, applied by the ENTSO-E Baltic Sea Regional Group for the asynchronous system of the Baltic countries (Estonia, Latvia and Lithuania). The calculations are performed by (8760) hourly simulations. The monetisation of losses is achieved using marginal prices of electricity from market studies. The increase in losses in Lithuania in Vision 1 in the year 2030 is 170.0 GWh/year, including the variation in losses on the Nordbalt link being 100% attributed to Lithuania, which corresponds to a (negative) benefit of -10.2 million Euro/year and a (negative) NPV of losses variation of -128.9 million Euro;
  - Indicator B5 Variation in CO<sub>2</sub> emissions. The updated CBA (page 45) notes that *“the monetisation of CO<sub>2</sub> emission reduction is included in the calculation of the SEW indicator”*;
  - Indicator B6 Technical resilience / system safety margin. The updated CBA (page 46) marks a “+” for the sub-indicator “failures combined with maintenance”, a “++” for steady state analysis as *“without LitPol Link power flow between Lithuania and Poland is impossible”* and a “0” for voltage collapse, as there is no voltage collapse possibility in Alytus;
  - Indicator B7 Robustness / flexibility. The updated CBA (page 48) displays a high mark (“5+”, compared to a maximum rank of “6+”) for this indicator, which encompasses the ability of LitPol Link to ensure that the system needs are met in future scenarios which differ from present projections.
- (135) Security of Supply is acknowledged by the project promoter as an important benefit: *“When taking into account lines and substations that are built or reconstructed due to this project, for example, the reconstruction of 330-400 kV voltage OHL and two new 400/220 kV substations, one can see that SoS is increasing because of these improvements”* (Updated CBA, page 38) and *“Even if the main driver to build the LitPol Link project is market integration, security of supply is also increased, which is additional and at this stage not monetised benefit for the Baltic Sea region”* (Updated CBA, Executive Summary, page 9).

- (136) The SEW benefit is assessed in other countries (Denmark, Estonia, Finland, Germany, Latvia, Norway, Poland, Sweden) and in other areas of the Baltic Sea Regional Group market modelling, with the BID market model<sup>48</sup>. Results are provided for the eight countries, leading to a total NPV of SEW in Vision 1 of 495.5 million Euro.
- (137) The benefit related to variation in losses is assessed in Estonia and in Latvia, with the same network model used for Lithuania, as well as in Poland (asynchronous system), where it is assessed by applying the market simulation results of the ENTSO-E Regional Group Continental Central Europe and by calculating the losses through a network model in four points in time, in line with the approach used by ENTSO-E. The annual power losses in Poland are multiplied by the average electricity price in Poland. While the impact of losses variation in Estonia and in Latvia is limited to a (negative) NPV of a few million euro, the NPV of losses variation (benefit) in Poland is +116.2 million Euro. The yearly variation in losses in the year 2013, in Vision 1, is a reduction of 153.3 GWh/year. Lastly, in the updated CBA (page 51) *“it is assessed that the transmission grid in other countries does not record sufficiently large changes of energy flow to generate significant losses variations”*.
- (138) The considerations regarding local improvements of security of supply are applicable also to Poland due *“for example to two new 400/220 kV substations”* (Updated CBA, page 38). Further, the indicator B6 identifies a “++” mark in Poland related to the voltage collapse criterion. According to the updated CBA (page 47), *“there are significant problems with voltage levels in the North-East Poland. The transmission network reinforcements solve this issue completely”*.
- (139) The conclusion of the updated CBA (page 51) is that *“social economic welfare results indicate that the projects (and its parts in Poland and Lithuania separately) is justified from the economic point of view. The presented results provide evidence concerning the existence of significant positive externalities, such as increase of SEW, reduction of greenhouse gases emissions, improvement of energy efficiency and solidarity”*.
- (140) According to the updated CBA (page 40), the project promoter performed a recalculation of the SEW benefits for year 2020, *“in proportion to the dynamic of electricity demand 2020-2030”*. According to the updated CBA (page 44), the project promoter performed a recalculation of losses benefits for year 2020 *“proportionally to electricity peak demand (losses) and the dynamic of weighted fuel prices 2020-2030 (marginal electricity prices and monetization of losses)”*.
- (141) According to the updated CBA (page 27), the results for the year 2030 and the recalculated results for the year 2020 have been used to estimate benefits for the period 2016-2035 in

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<sup>48</sup> The set of countries represented in the market modelling covers Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Norway, Poland, Sweden (in line with the TSO’s membership of the ENTSO-E Baltic Sea Regional Group), plus the modelling of perimeter areas including a specific modelling of Russia and Belarus, as described in the ENTSO-E Baltic Sea Regional Plan.

line with the ENTSO-E CBA methodology (extending 2020 results backwards, interpolating between 2020 and 2030, extending the results for 2030 forward).

- (142) According to the updated CBA (pages 28 and 52), the project promoter uses the assumption of 20 years (2016-2035) for SEW and losses benefits and a 4% real (social) discount rate. Monetary values are referred to the year 2013.
- (143) Some stakeholders criticised the lack of transparency and information about the CBA assumptions and results, in particular related to market modelling. The Agency observes that although the CBA updated by the project promoter is very detailed, some of its information might not have always been available in the clearest form. Specific requests for information and clarifications, as formulated in the preparation of this Decision, solved any lack of clarity about the CBA assumptions and results.

### **3.5.2 The Agency's analysis of benefits of LitPol Link in Lithuania**

- (144) The Agency has re-evaluated the benefits of LitPol Link in Lithuania over the period 2016-2040 (25 years), setting the reference year for NPV calculations to 2015. Furthermore, the Agency has used only the actual results for SEW and losses benefits for the year 2030, neglecting any recalculation of these for the year 2020. The benefits for the year 2030 were extended backward to the year 2016 and forward to the year 2040, as a (necessarily) simplified application of the interpolation rules in the ENTSO-E CBA methodology.
- (145) Regarding the definition of the so-called “with and without cases” for the purpose of benefit calculations, the Agency deems that the project promoter's (and ENTSO-E's) approach is appropriate, as the other interconnection projects between Lithuania and Poland will in any case be realised after LitPol Link.
- (146) Regarding the SEW benefits, the Agency requested and received from the project promoter the final results of ENTSO-E calculations for SEW at European level, as well as the disaggregated results by country (SEW, including consumer surplus, producer surplus and congestion revenues).
- (147) As a consequence of these adjustments, the (positive) NPV of SEW variation in Lithuania (base case) is 167.16 million Euro.
- (148) Next, regarding variation of losses, the Agency requested the disaggregation of losses increase in the B2B station (50.19 GWh/year, which are relevant only until the year – 2023 – of synchronisation of the Baltic power system with Continental Europe) and in the rest of the Lithuanian system. Regarding the latter (i.e. the losses of the rest of the Lithuanian system), the Agency detected the need for a correct attribution of losses on the Nordbalt cable to Sweden and to Lithuania (as the reduction in losses on Nordbalt was, in the project promoter's assessment, allocated only to Lithuania). The corrected amount of losses increase in the rest of the Lithuanian system is 132.79 GWh/year. Lastly, the Agency requested the project promoter to communicate and use the value of losses equal to the marginal price (cost) obtained for Lithuania in the ENTSO-E's TYNDP 2014 Vision 1

reference network (i.e. including all network reinforcements in the TYNDP). This value is 60.85 Eur/MWh.

- (149) Considering all these adjustments, the (negative) NPV of losses benefits in Lithuania (base case) is - 146.79 million Euro.
- (150) Taking into account the Agency's Opinion No 01/2014, confirming the Agency's Position on "ENTSO-E Guideline for CBA of Grid Development Projects", the Agency investigated the presence of a possible benefit in terms of avoided/deferred network investments. Indeed, the re-utilisation of the B2B converter station for the purpose of asynchronous interconnection with Belarus would avoid the future need to procure a B2B converter station. For the purpose of benefit calculation, the Agency assumes no variation in the (real) price of procuring the B2B and the same pattern of yearly expenses before its commissioning to take place in 2023.
- (151) As a result of these calculations, the (positive) NPV of benefits for the avoided/deferred transmission investments in Lithuania (base case) is 62.34 million Euro.
- (152) The Agency acknowledges that the benefits in terms of RES integration (energy price variation and CO<sub>2</sub> emissions) and CO<sub>2</sub> emissions are accounted for in the monetisation of the SEW benefit.
- (153) The Agency notes that benefits in Lithuania in terms of sharing of balancing services within a wider geographical area have been qualitatively identified by the project promoter in the updated CBA. However these benefits are not monetised.
- (154) The Agency also takes into account the comments from some stakeholders that *"the economic damage of loss of load is very high. Therefore even a small increase of SoS for Lithuania would have a high economic benefit in the range of a multi-digit -million Euro amount over the life time of Litpol Link"*<sup>49</sup>.
- (155) In light of the statements in the updated CBA about the improvements in security of supply in Lithuania, the Agency requested and received confidential information from the project promoter about the amounts of energy not supplied ("ENS")<sup>50</sup> in the transmission network in Lithuania in the years 2005-2013<sup>51</sup>. The average energy not supplied (including exceptional events) is slightly above 90 MWh/year.
- (156) In order to provide a concrete quantification of possible security of supply effects, when considering a relatively low value of lost load ("VOLL") in Lithuania such as 8000

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<sup>49</sup> Letter of 27 February 2015 in response to the Agency's consultation of stakeholders for LitPol Link.

<sup>50</sup> Energy not supplied ("ENS") is the same as the term "Expected Unserved Energy" used by the project promoter in the updated CBA.

<sup>51</sup> Part of this information (energy not supplied excluding exceptional events for the years 2005-2010) is publicly available in the 5<sup>th</sup> CEER Benchmarking Report on the Quality of Electricity Supply 2011 (table 2-10, page 32).

Eur/MWh not supplied<sup>52</sup>, a reduction in ENS of 50 MWh/year would determine a (positive) NPV of the SoS benefit equal to 6.25 million Euro. Such an amount of reduced ENS corresponds for example to reducing by less than half an hour a year the curtailment of the load normally supplied by the Alytus substation.

### 3.5.3 The Agency's analysis of benefits of LitPol Link (system-wide externalities)

- (157) Based on the Agency's assessment of the positive benefits (SEW, losses and avoided/deferred transmission investment costs), LitPol Link in Vision 1 provides a significant positive impact to Norway (261 million Euro), Lithuania (230 million Euro), Sweden (180 million Euro) and Poland (172 million Euro). Positive impacts in other countries of the ENTSO-E Baltic Sea Regional Group are significantly lower and their total amount is below 85 million Euro. The total amount of positive impacts in countries outside the ENTSO-E Baltic Sea Regional Group is below 65 million Euro.
- (158) One stakeholder stated that a proper CBA could identify other Member States with a positive net impact from the project. It is possible that more accurate modelling (e.g. on losses variations) could have identified other countries with (supposedly small) net positive impacts. However, in the Agency's view, the identification of countries with very small positive impacts is not necessary for the purpose of CBCA in general (see the Agency's Recommendation No 07/2013) and in particular in the case of this Decision.
- (159) In this context, one stakeholder commented that it is impossible to define the exact and final amount of positive benefit for each country in the Baltic Sea region. Some stakeholders commented that the variation in losses should have been calculated for all countries. The Agency considers that calculating an exact amount is a very challenging objective for CBA calculations, when considering the present level of uncertainties (and the lack of more robust mid-term calculations - e.g. for the year 2020 - by ENTSO-E). Furthermore, the calculation of exact amounts in other countries (including of supposedly small losses variation) turned out to be not relevant for allocating LitPol Link costs cross-border in this Decision.
- (160) As a conclusion, for Vision 1, monetised pan-European positive impacts (excluding security of supply improvements) are assessed in the order of 1000 million Euro, which is well above the cost of the whole interconnection cluster "*LitPol Link Stage 1*" (500MW) in ENTSO-E's TYNDP 2014<sup>53</sup>.
- (161) In view of this assessment, the Agency disagrees with a stakeholder comment that Vision 1 shows a negative European profitability for LitPol Link and thus that the project should not

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<sup>52</sup> The Agency is not aware of an estimate of VOLL for the Lithuanian power system. The abovementioned VOLL is the low estimate in "ENTSO-E Network Code on Demand Connection - FAQ - 21 December 2012" (page 74). [https://www.entsoe.eu/fileadmin/user\\_upload/library/resources/DCC/ENTSO-E\\_finalises\\_DCC/121221-DCC - Frequently Asked Questions.pdf](https://www.entsoe.eu/fileadmin/user_upload/library/resources/DCC/ENTSO-E_finalises_DCC/121221-DCC_-_Frequently_Asked_Questions.pdf)

<sup>53</sup> The estimated (investment) cost of interconnection cluster LitPol Link Stage 1 in the ENTSO-E's TYNDP 2014 is 510 million Euro in the ENTSO-E TYNDP 2014.

be built, as the comment may have been based on an incorrect understanding of the provisional calculations.

- (162) Concerning comment from some stakeholders that Vision 4, providing a wider benefit for Europe (being clearly positive, which was not the case for Vision 1 results), could have been used, the Agency does not consider that the supposedly wider benefit procured by a particular Vision is a good argument for deciding on the reference scenarios. The Agency's argumentation regarding the use of scenarios has been provided in Section 3.4 of this Decision.
- (163) Finally, the Agency does not consider relevant a stakeholder comment, stating that CBCA can only apply to projects that demonstrate a positive net value for all analysed TYNDP scenarios, because there is no such provision in Regulation (EU) No 347/2013 and because this interpretation would be contrary to the purpose of this Regulation to enable investments.

### **3.5.4 The project promoter's assessment of other economic effects**

(164) The investment request discusses two economic effects in addition to benefits:

- Amounts related to the ITC mechanism;
- Grants received by LitPol Link.

(165) The investment request includes an updated Annex 9 related to LitPol Link expected ITC revenues, which states that: "*in order to evaluate possible impact on Lithuanian TSO's financial results, some simplified assumptions and calculations regarding expected ITC revenue were done in the business plan*". The assumptions on ITC expected revenues are indeed provided in the updated Business Plan: after the commissioning of LitPol Link, Lithuania is expected to be increasingly transited by cross-border flows, thus determining an increase of the ITC revenues.

(166) The updated Business Plan (page 7) provided indications on two types of grants (national and EU) provided to LitPol Link.

(167) According to a clarification from the project promoter, ITC expected revenues and grants were incorporated in the updated CBA (page 52) as reduction in LitPol Link costs.

(168) In this context, one stakeholder commented that it seemed that the project promoter did not take into account the existence of an established compensation mechanism for energy transit between countries. The Agency observes that this apparent misunderstanding may have been due to limited explanations by the project promoter in the updated CBA on the deduction of ITC revenue. However, the revenue from ITC has been adjusted, clearly quantified and fully considered in this Decision.

### 3.5.5 The Agency's assessment of other economic effects

- (169) Notwithstanding its Recommendation No 05/2013<sup>54</sup>, the Agency considers the current framework for ITC to remain in place at the time of the expected commissioning of LitPol Link (December 2015). The current ITC framework includes a compensation for infrastructures (100 million Euro fund size, nominal) and a compensation for losses.
- (170) The Agency adjusted the simplified ITC calculations proposed by the project promoter, in relation to the economic lifetime (25 years), to the reference year for NPV calculations (2015), to the cap effect determined by a nominal fixed amount of the ITC infrastructure fund size and to the value of losses according to the ENTSO-E calculations for the year 2030.
- (171) As a result of this adjustment, the (positive) NPV of ITC revenues for Lithuania (base case) is 30.63 million Euro.
- (172) The Agency received clarification from the project promoter in relation to the grants provided to LitPol Link (including grants for the expansion works in the 330 kV Alytus substation, which is relevant for the purpose of CBA). Furthermore, the Agency considered 50% of the grants provided for the preparatory phase of interconnection between Lithuania and Poland (1000 MW) and referred the value of money to the year 2015.
- (173) As a result of new information and of the Agency's adjustment, the (positive) NPV of grants for Lithuania for the purpose of CBA (base case) is 7.58 million Euro.
- (174) The (positive) NPV of grants to be considered for the purpose of cost allocation (i.e. excluding grants for the expansion works in the 330 kV Alytus substation) is 3.39 million Euro.

### 3.5.6 The Agency's conclusions on the benefits and other economic effects

- (175) As indicated in Section 3.5.2 above, the (positive) NPV of monetised benefits is 83.47 million Euro and the non-monetised benefits, especially regarding security of supply, may be important.
- (176) As indicated in Section 3.5.5 above, the (positive) NPV of other economic effects in Lithuania is 38.21 million Euro.
- (177) As indicated in Section 3.5.3 above, the value of the monetised pan-European positive impact (excluding security of supply improvements) is assessed in the order of 1000

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<sup>54</sup> Agency's Recommendation No 05/2013 of 25 March 2013 on a new regulatory framework for the Inter Transmission System Operator Compensation.  
[http://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Recommendations/ACER%20Recommendation%2005-2013.pdf](http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Recommendations/ACER%20Recommendation%2005-2013.pdf)

million Euro. This amount is well above the cost of the whole interconnection cluster “LitPol Link Stage 1” in the ENTSO-E’s TYNDP 2014.

### 3.6 Net economic balance for Lithuania

(178) The Agency carried out an in-depth analysis of costs, benefits and other economic effects in Lithuania, including with the use of new parameters, values and information provided by the project promoter, as described in the previous Sections of this Decision.

(179) Based on this analysis, the Agency derived the costs, benefits and other economic effects presented in the following table.

<b>Impacts in Lithuania</b>	<b>Net present value (Million Euro year 2015)</b>
Total costs (CAPEX and OPEX)	-126.37
Positive benefits (excluding security of supply)	230.27
Negative benefits	-146.79
Expected ITC revenues	30.63
Grants already awarded	7.58
<b>Total economic effect (excluding security of supply)</b>	<b>-4.68</b>
Security of supply	Positive, estimated greater than 4.68
<b>Total economic effect</b>	<b>Positive</b>

### 3.7 Sensitivity analysis

(180) The Agency, upon consultation of the project promoter, carried out sensitivity analyses, by varying some key input elements of the LitPol Link economic assessment:

- Year of synchronisation of the Baltic countries with Continental Europe;
- Value of losses in Lithuania;
- Years of economic operation;
- Discount rate.

(181) The sensitivity analysis is limited to the impact on monetised values: costs, benefits and other monetary effects. The results are presented in the tables below.



<b>Sensitivity analysis on year of synchronisation with continental Europe</b>	<b>2023 (base case)</b>	<b>2025</b>	<b>2027</b>	<b>2029</b>
Impacts in Lithuania	NPV (M€ 2015)	NPV (M€ 2015)	NPV (M€ 2015)	NPV (M€ 2015)
Total costs (CAPEX and OPEX)	-126.37	-127.12	-127.80	-128.42
Positive benefits (excluding security of supply)	230.27	225.51	221.10	217.03
Negative benefits	-146.79	-151.00	-154.89	-158.49
Expected ITC revenues	30.63	30.63	30.63	30.63
Grants already awarded	7.58	7.58	7.58	7.58
<b>Total economic effect (excluding security of supply)</b>	<b>-4.68</b>	<b>-14.41</b>	<b>-23.38</b>	<b>-31.66</b>

<b>Sensitivity analysis on value of losses</b>	<b>60.85 Eur/MWh (base case)</b>	<b>-10%</b>	<b>+10%</b>
Impacts in Lithuania	NPV (M€ 2015)	NPV (M€ 2015)	NPV (M€ 2015)
Total costs (CAPEX and OPEX)	-126.37	-126.37	-126.37
Positive benefits (excluding security of supply)	230.27	230.27	230.27
Negative benefits	-146.79	-132.11	-161.47
Expected ITC revenues	30.63	29.02	32.24
Grants already awarded	7.58	7.58	7.58
<b>Total economic effect (excluding security of supply)</b>	<b>-4.68</b>	<b>8.39</b>	<b>-17.75</b>

<b>Sensitivity analysis on years of (economic) operation</b>	<b>25 years (base case)</b>	<b>20 years</b>	<b>30 years</b>
Impacts in Lithuania	NPV (M€ 2015)	NPV (M€ 2015)	NPV (M€ 2015)
Total costs (CAPEX and OPEX)	-126.37	-126.04	-126.63
Positive benefits (excluding security of supply)	230.27	208.53	248.14
Negative benefits	-146.79	-130.37	-160.29
Expected ITC revenues	30.63	27.06	33.45
Grants already awarded	7.58	7.58	7.58
<b>Total economic effect (excluding security of supply)</b>	<b>-4.68</b>	<b>-13.25</b>	<b>2.25</b>

<b>Sensitivity analysis on discount rate</b>	<b>4% real (base case)</b>	<b>3% real</b>	<b>5% real</b>
Impacts in Lithuania	NPV (M€ 2015)	NPV (M€ 2015)	NPV (M€ 2015)
Total costs (CAPEX and OPEX)	-126.37	-125.98	-126.81
Positive benefits (excluding security of supply)	230.27	254.11	209.60
Negative benefits	-146.79	-162.14	-133.62
Expected ITC revenues	30.63	33.99	27.75
Grants already awarded	7.58	7.53	7.64
<b>Total economic effect (excluding security of supply)</b>	<b>-4.68</b>	<b>7.50</b>	<b>-15.44</b>

(182) The results of the sensitivity analysis show that the impact of the expected year of synchronisation of the Baltic countries with Continental Europe (due to losses in the B2B, less savings from the B2B re-utilisation and to operational costs for the B2B) is quite substantial, while the variations in other input parameters, albeit significant, have less of an impact on the economic net balance of LitPol Link for Lithuania.

### 3.8 Cost allocation

#### 3.8.1 The project promoter's proposals

(183) The investment request included a proposal for CBCA. The proposal highlighted that "ENTSO-E by providing the data in its letter has stated that all assessment results are preliminary and are subject to possible changes without notification until official approval

*of the TYNDP 2014 in December 2014.”<sup>55</sup> Further, the proposal highlights that “the ENTSO-E CBA methodology is a subject to change, too, and further developments of it are suggested in the Opinion of the Agency No 01/2014 of 30 January 2014 on the ENTSO-E Guideline for Cost Benefit Analysis of Grid Development Projects. This implies that the future calculations and evaluation of this project might indicate different significant net beneficiaries, which diminishes the level of correctness of the current ENTSO-E results.”<sup>56</sup>*

- (184) While highlighting the aforementioned concerns and the “*significant influence on Lithuanian tariffs (...) in lack of cross border cost allocation decision and/or EU financing solution*”, the project promoter proposed to the NRAs to take a joint LitPol Link CBCA decision using the CBA Vision 1 results (as a conservative ENTSO-E scenario) and emphasizing “*the credibility of data used for such decision.*” The required compensation for Lithuania was equal to 97 million Euro, which was a calculated net negative benefit by the project promoter for Vision 1 in the updated CBA. The required cost allocation would be equal to 47.1 million Euro for Sweden, 38.1 million Euro for Norway and to 11.8 million Euro for Germany.
- (185) A (different) proposal for CBCA is however included by the project promoter in the updated CBA, which states (CBA conclusions, page 53) that “*due to the very wide net benefit ranges of both ENTSO-E visions for each country, it is difficult to define exact and final amount of positive net benefits for each country in Baltic Sea region, accordingly, at this stage it is very hard to accurately allocate cross-border costs to the beneficiaries based on preliminary ENTSO-E data used in this disaggregated Cost Benefit Analysis. It is important to underline, that it was already agreed earlier on the 1st of December 2011 by a joint Agreement by both TSO’s in Poland and Lithuania to divide project costs according to territorial principle, i.e. the project costs will be covered arising from development of its own transmission system*”.

### **3.8.2 The Agency’s analysis and conclusion**

- (186) The Agency carried out an in-depth analysis of costs, benefits and other economic effects in Lithuania, including with the use of new parameters, values and information provided by the project promoter, as described in the previous Sections of this Decision.
- (187) Based on this analysis, the Agency concludes that the amount subject to cost allocation is the difference between LitPol Link CAPEX before grants (108.67 million Euro) and LitPol Link grants (3.39 million Euro). Therefore, the amount of expected costs to be allocated is 105.28 million Euro.
- (188) Based on the aforementioned analysis, and taking into account the considerations related to improved security of supply (see Section 3.5 of this Decision) and to the net economic balance for Lithuania (see Section 3.6 of this Decision), the Agency concludes that there is

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<sup>55</sup> (updated) Annex 11: Cross-border Cost Allocation Proposal, p. 1.

<sup>56</sup> (updated) Annex 11: Cross-border Cost Allocation Proposal, p. 2.

no negative net benefit in Lithuania from LitPol Link. In line with the Agency's Recommendation No 07/2013, which states that "*compensations are provided only if at least one country hosting the project is deemed to have a negative net benefit*", the Agency concludes that there is no need for compensation from non-hosting countries and that the efficiently incurred investment costs of LitPol Link shall be allocated to Lithuania.

- (189) The project promoter estimated uncertainty ranges of capital costs (before grants) to be less than plus or minus five percent<sup>57</sup>, which corresponds to an upward/downward variation of 5.44 million Euro. The Agency considers that this (symmetrical and small<sup>58</sup>) uncertainty range does not change the above conclusion that no compensation from non-hosting countries is required and that the efficiently incurred investment costs of LitPol Link within the uncertainty range indicated above shall be allocated to Lithuania.
- (190) Finally, the Agency considers that any efficiently incurred investment costs above the sum of the expected capital expenditures plus the upward cost variation would be – at least partly – under control and responsibility of the project promoter. Therefore, it is deemed appropriate that such potential additional costs are borne by the project promoter.

### **3.9 Impact on network tariffs**

- (191) Taking into account Article 12(5)(a) of Regulation (EU) No 347/2013, both the project promoter and the Lithuanian NRA have calculated the impact of LitPol Link on Lithuanian transmission tariffs.
- (192) According to the updated Business Plan of the project promoter, the electricity transmission regulated revenue consists of:
- Return on capital employed, calculated as a product of Regulated Assets Value ("RAV") and the weighted average cost of capital ("WACC"), at the value of 6.13% set in 2012;
  - Regulatory depreciation, with the use of an average regulatory depreciation rate of 3.0%<sup>59</sup>;
  - Eligible operating costs (costs to cover network losses, maintenance external services, insurance costs, taxes and charges, ITC fund contributions);
  - Furthermore, congestion income is taken from Vision 1 results in the year 2030 and interpolated as in the CBA calculations<sup>60</sup>. Congestion income used for financing energy

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<sup>57</sup> Updated CBA, page 9.

<sup>58</sup> For comparison, the Agency, in its Opinion No 01/2015, identified a cost uncertainty range of 20% for mid-term mature investments.

<sup>59</sup> The updated Business Plan also provides assumptions for financial depreciation calculation per type of asset.

<sup>60</sup> According to the updated Business plan (page 6), the project promoter did it only for the period 2019 to 2035.

infrastructure to relieve congestion<sup>61</sup> (minus income tax paid<sup>62</sup>) is deducted from cash flows with a 14-month lag<sup>63</sup>.

- (193) In the period from 2016 to 2025, the updated Business Plan (page 11) estimates an average real change, compared to 2014, of 23%, in the absence of CBCA compensation and of EU financial assistance from Connecting Europe Facility (“CEF”). The updated Business Plan also provides estimates assuming different levels of EU financial assistance from CEF, which the Agency deems not relevant for this Decision.
- (194) According to the Lithuanian NRA’s calculations, the impact on transmission tariff is most pronounced in 2016, when the Lithuanian NRA’s assessment indicates an increase of 38.6% compared to the previous year. It is worth noting that the Lithuanian NRA uses the same approach as Litgrid AB when considering the congestion income impact on tariffs, including the time lag before deducting the congestion income. Therefore, in the Lithuanian NRA’s assessment there is no tariff reduction due to congestion income in 2016. The average tariff increase through to 2035 is around 17% according to the Lithuanian NRA’s assessment. In order to evaluate LitPol Link impact on tariffs for 2016 and future periods, the Lithuanian NRA used a newly approved WACC of 6.79%<sup>64</sup>. In its reply to an Agency’s request for information, the Lithuanian NRA observed that, as the Agency’s decision on LitPol Link would be binding and investment costs should be included in the (Lithuanian) transmission tariff, external funding in the form of grants for works would effectively reduce the investment costs to be covered by Lithuania and therefore the extent to which the investment costs should be included in the regulatory asset base (“RAB”).
- (195) In line with its CBCA analysis, the Agency has evaluated the potential impact of the LitPol Link costs on the transmission tariffs in Lithuania over the period 2016-2040 (25 years). The evaluation takes into account eligible capital and operating expenditures and related revenues, including those related to the ITC mechanism, past grants and congestion revenue (for the latter, the Agency has assumed, in line with the CBA methodology and the estimations provided in the ENTSO-E’s TYNDP 2014 calculations related to the year 2030, that the revenues were constant in real terms between 2016 and 2040). No time lag was considered. The evaluation assumes no external funds are granted to the project in the future.

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<sup>61</sup> According to the Lithuanian NRA, the collected congestion revenues are deducted from tariffs only when these revenues are used for financing energy infrastructures that help decrease congestion. When used for infrastructure financing, revenues collected from congestion income are considered in the same way as any other forms of external financing and do not generate any regulated revenue for the company.

<sup>62</sup> Corporate income tax rate is constant at 15% in Lithuania.

<sup>63</sup> The time lag accounts for income collection into a separate account and subsequent Lithuanian NRA’s approval for use within the annual tariff setting cycle.

<sup>64</sup> The WACC methodology and the rate for new regulatory period can be seen at: <http://www.regula.lt/en/Pages/wacc-electricity.aspx>

- (196) The Agency's estimate differs from that of the project promoter and the Lithuanian NRA's estimates due to the cost of Kruonis - Alytus line being excluded in the Agency's calculations. In addition, the Agency has included the total congestion revenue as tariff reductions<sup>65</sup> after accounting for taxes and without a time lag<sup>66</sup>. The Agency's assessment relies on the current Lithuanian tariff framework, including the WACC of 6.79% from 2016, to obtain annual regulatory returns, and takes into account that the energy transmitted on the Lithuanian transmission grid may vary in the future. To avoid such source of uncertainty<sup>67</sup>, the Agency's analysis leaves out the energy transmitted and focuses on the impact on electricity transmission regulated revenues.
- (197) According to the Agency's calculations, the impact on tariff is also, as expected, most pronounced in the first year of project operation (2016). The expected increase in the required transmission regulated revenue due to LitPol Link in 2016 is 9.4 million Euro. The impact on tariff then decreases over time, in particular due to the OPEX decline in 2024 (as a result of the synchronisation of the Baltic power system with Continental Europe) and the consequent alternative use of the B2B converter station. The impact of LitPol Link on regulated revenues in Lithuania in 2016 results in an increase of 18.6% compared to 2015 regulated revenues. This increase falls below 10% in 2024. The Agency estimates that the LitPol Link will require an average real increase in tariff revenues for the period from 2016 to 2040 of close to 8% compared to 2015.
- (198) The following table provides an overview of the total investments in the electricity transmission network, the regulated revenues for the electricity transmission network that were recovered in recent years and the capital expenditures for LitPol Link.

Million Euro / year	2012	2013	2014	2015
<b>Litgrid AB</b>				
Litgrid AB investments for electricity transmission network	40.564	60.220	100.796	n.a.
Litgrid AB regulated revenues for electricity transmission network	62.413	65.193	60.067	50.472
<b>LitPol Link</b>				
LitPol Link capital expenditures	0,252	13.441	32.605	54.119

<sup>65</sup> This is without prejudice to the final use of congestion revenues pursuant to Article 16(6) of Regulation (EC) No 714/2009 and as decided by the Lithuanian NRA.

<sup>66</sup> The impact on tariffs of a time lag and of an allocation of congestion revenue for other purposes than tariffs reduction has not been addressed in this Decision.

<sup>67</sup> Uncertainties about the demand in Lithuania in the next 25 years and about the share of energy demand which will be withdrawn from the transmission network

(199) Based on the results in the table, the Agency concludes that the scale of the investments recently undertaken and the tariff increase expected due to LitPol Link are significant. For comparison with the rest of the EU, 100 million Euro of transmission investment in Lithuania is about 1% of the EU yearly transmission investments, while the demand in Lithuania is only about 0.35% of the EU demand and the generation in Lithuania is only about 0.15% of the EU generation<sup>68</sup>.

### **3.10 Reflection of costs into tariffs**

- (200) Pursuant to Article 12(6) of Regulation (EU) No 347/2013 the Agency shall also decide on the way the investment cost is reflected in the tariffs.
- (201) On 18 February 2015, the Lithuanian NRA informed the Agency upon its request that, according to the Law on Electricity of the Republic of Lithuania, investment costs could be included in the (Lithuanian) tariffs for network access only after the Lithuanian NRA adopts an individual decision and approves the values of investment expenditures. Investment costs are included in the RAB and capital expenditures (depreciation and return on investment) are calculated after the project enters into operation.
- (202) Upon the Agency's request for specific differences of LitPol Link compared to the general (Lithuanian) regulatory framework, the only specific difference noted by the Lithuanian NRA was the process for decision, with "a common decision between NRAs to be adopted pursuant to Regulation (EU) No 347/2013".
- (203) The Lithuanian NRA informed the Agency, upon its request, that there is a specific treatment of cost overruns in the Lithuanian regulatory practice under which the project promoter has to inform the NRA and these costs might be subject to ex-post verification by the NRA.
- (204) The Lithuanian NRA informed the Agency, upon its request, that there is no specific treatment of time overruns. However, the Agency notes that costs are included in tariffs only after commissioning.
- (205) During the hearings, the project promoter informed the Agency that, at the date of January 2015, a significant part of the costs was already incurred.
- (206) Based on these considerations, the Agency therefore deems not necessary to define further incentive measures for LitPol Link.

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<sup>68</sup> According to the ENTSO-E Yearly Statistics & Adequacy Retrospect 2013 (page 11), in 2013 the consumption (excluding pumping) was 10.57 TWh in Lithuania, compared to a total amount of 2995 TWh in EU Member States (excluding Malta). The generation was 4.40 TWh in Lithuania, compared to a total amount of 3027 TWh in EU Member States (excluding Malta).  
[https://www.entsoe.eu/Documents/Publications/Statistics/YSAR/141515\\_YSAR\\_2013\\_report.pdf](https://www.entsoe.eu/Documents/Publications/Statistics/YSAR/141515_YSAR_2013_report.pdf)

- (207) The Lithuanian NRA informed the Agency upon its request, that the Lithuanian legislation requires elimination of the EU grants from the TSO's RAB. Capital expenditures (depreciation and return on investment) covered by EU grants are not included in the national tariffs.
- (208) Based on the information received the Agency concludes that the general Lithuanian regulatory framework (including depreciation assumptions with regards to the specific types of assets) is applicable to the efficient and timely delivered capital expenditures for LitPol Link, i.e. the expected amount of capital expenditures and a possible upward variation of costs up to 5% of the figure estimated by the project promoter.

**HAS ADOPTED THIS DECISION:**

**Article 1**

**Allocation of investment costs of LitPol Link**

The investment costs related to LitPol Link shall be allocated to Lithuania and be borne by Litgrid AB.

**Article 2**

**Reflection of investment costs of LitPol Link in tariffs**

The expected efficiently incurred investment costs related to LitPol Link, up to a maximum amount of 105.28 million Euro, with a possible upward variation of 5.44 million Euro, to the extent not covered by congestion rents, inter-TSO compensations or grants not accounted for in this Decision, shall be paid for by tariffs for network access in Lithuania, in line with the applicable regulatory framework for other transmission network elements in Lithuania.

**Article 3**


**Addressees**

This Decision is addressed to Litgrid AB and Valstybinė kainų ir energetikos kontrolės komisija.



Done at Ljubljana on 16 April 2015.

For the Agency:

  
Alberto Pototschnig  
Director