



Publishing date: 09/04/2014

Document title: ACER Opinion 08-2014

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**OPINION OF THE AGENCY FOR THE COOPERATION OF ENERGY
REGULATORS No 08/2014**

of 4 April 2014

**ON THE NATIONAL TEN-YEAR ELECTRICITY NETWORK DEVELOPMENT
PLANS PURSUANT TO ARTICLE 8(11) OF REGULATION (EC) NO 714/2009**

THE AGENCY FOR THE COOPERATION OF ENERGY REGULATORS,

HAVING REGARD to Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003¹, and, in particular, Article 8(11) thereof,

WHEREAS:

- (1) Article 8(11) of Regulation (EC) No 714/2009 tasks the Agency for the Cooperation of Energy Regulators (“Agency”) with providing an opinion on the national ten-year network development plans to assess their consistency with the Community-wide ten-year network development plan (“EU TYNDP”).
- (2) On 5 July 2012 the European Network of Transmission System Operators for Electricity (“ENTSO-E”) published the first EU TYNDP pursuant to Regulation (EC) No 714/2009². The Agency issued an Opinion on this EU TYNDP 2012 on 5 September 2012³. That Opinion could not include a consistency assessment of the national ten-year network development plans with the EU TYNDP 2012 because, at that time, the relevant national ten-year network development plans were still being developed in most Member States. Since then many national plans have been finalised.
- (3) Regulation (EC) No 714/2009 does not define the term “national ten-year network development plan”. Yet, Article 8(11) of Regulation (EC) No 714/2009 clarifies the meaning of “national ten-year network development plan” when it considers “if such national ten-year network development plan is elaborated in accordance with Article 22 of Directive 2009/72/EC”. This specific reference to Article 22 of Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC⁴ implies that “national ten-year network development plans”,

¹ OJ L 211, 14.8.2009, p. 15.

² ENTSO-E, “10-Year Network Development Plan 2012”, 5 July 2012.

https://www.entsoe.eu/fileadmin/user_upload/library/SDC/TYNDP/2012/TYNDP_2012_report.pdf

³ Opinion of the Agency for the Cooperation of Energy Regulators No 06/2012 of 5 September 2012 on the European Ten-Year Network Development Plan,

http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2006-2012.pdf

⁴ OJ L 211, 14.8.2009, p. 55.

pursuant to Article 8(11) of Regulation (EC) No 714/2009, cover not only the national ten-year network development plans elaborated by independent transmission operators in accordance with Article 22 of Directive 2009/72/EC, but also other network development plans adopted at national level, including those prepared by independent system operators or transmission system operators. It is clear from Article 22 of Directive 2009/72/EC that the national ten-year network development plans of independent transmission operators shall indicate transmission infrastructure which needs to be built or to be upgraded over the next ten years to guarantee the adequacy of the system and the security of supply. A similar clarification by the legislator is missing for other national ten-year network development plans. However, the Agency believes that the aforementioned main purpose and key elements of national network development plans in Article 22 of Directive 2009/72/EC are of such an essential nature that they shall be considered as characteristic of any national ten-year network development plan within the meaning of Regulation (EC) No 714/2009. Accordingly, the Agency, for this Opinion, focused its assessment on national instruments concerning the planning of new transmission infrastructures, and as such on the substance and not on the form of the national network development plans. Thus, the Agency considered in this Opinion all relevant national planning instruments, even if they were referred to with a different title, e.g. investment plan⁵, as "national ten-year network development plans" pursuant to Article 8(11) of Regulation (EC) No 714/2009 (hereinafter altogether "national development plans").

- (4) National regulatory authorities ("NRAs") have provided essential information for this Opinion by submitting information on national components of transmission investments⁶ to the Agency through an online data collection (completed on 14 February 2014) and by identifying some key features of their national development plans in responses to a questionnaire (completed on 26 February 2014). This information is summarised in Annex I and in Annex II to this Opinion, respectively,

HAS ADOPTED THIS OPINION:

1. Introduction

In the Agency's view, the assessment of consistency of national development plans with the EU TYNDP may cover in principle three fundamental aspects:

- consistency of inputs;
- consistency of analytical methodology;
- consistency of outputs.

⁵ The Agency took also into account that in the European Commission "Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) No 1228/2003 on conditions for access to the network for cross-border exchanges in electricity", Brussels, 19.9.2007, COM(2007) 531 final, 2007/0198 (COD), it was proposed that "The European Network of Transmission System Operators for Electricity shall adopt (...) a 10-year investment plan", with the same features that the EU TYNDP has, pursuant to the adopted Regulation (EC) No 714/2009.

⁶ In this Opinion, "national component" means a national part of a transmission investment item (part of a line or cable interconnecting two or more countries or a line or substation or other equipment geographically located in one country).



The first two aspects are still under development at European level⁷ and therefore methodologies for the consistent elaboration of network development plans are not yet available. In the Agency's view, without such EU-wide methodologies it is not ensured that the national development plans and the EU TYNDP 2012 have a common input basis and a common analytical methodology which would allow a reliable assessment of consistency of outputs.

Therefore, in this Opinion the Agency compares the national development plans with the EU TYNDP 2012 and outlines relevant (matches and) differences, but deems it appropriate to refrain from qualifying the differences as inconsistencies pursuant to Article 8(11) of Regulation (EC) No 714/2009. In particular, the Agency has decided to focus this Opinion on the comparison of outputs of national development plans with:

- the main output of the EU TYNDP 2012, i.e. the list of projects of pan-European significance in Appendix 1 of the EU TYNDP 2012 (and its further disaggregation into investment items⁸) (Section 3 of this Opinion);
- the further outputs of the EU TYNDP 2012, i.e. the features which are presented for each project or investment item of pan-European significance (Section 4 of this Opinion).

The interaction between the national development plans and the EU TYNDP is relevant for the comparison of outputs of national development plans with regard to those of the EU TYNDP 2012. Therefore, as a preparatory step for this comparison, the Agency first analyses this interaction (Section 2 of this Opinion).

2. The interaction between the national development plans and the EU TYNDP

With regard to the relationship between national development plans and the EU TYNDP, the Agency took into account:

- the process of interaction between the national development plans and the EU TYNDP, taking into account the provisions of Articles 8(10) and (11) of Regulation (EC) No 714/2009 and of Article 37(1)(g) of Directive 2009/72/EC, and
- the timing of preparation of the national development plans and the timing of preparation of the EU TYNDP 2012.

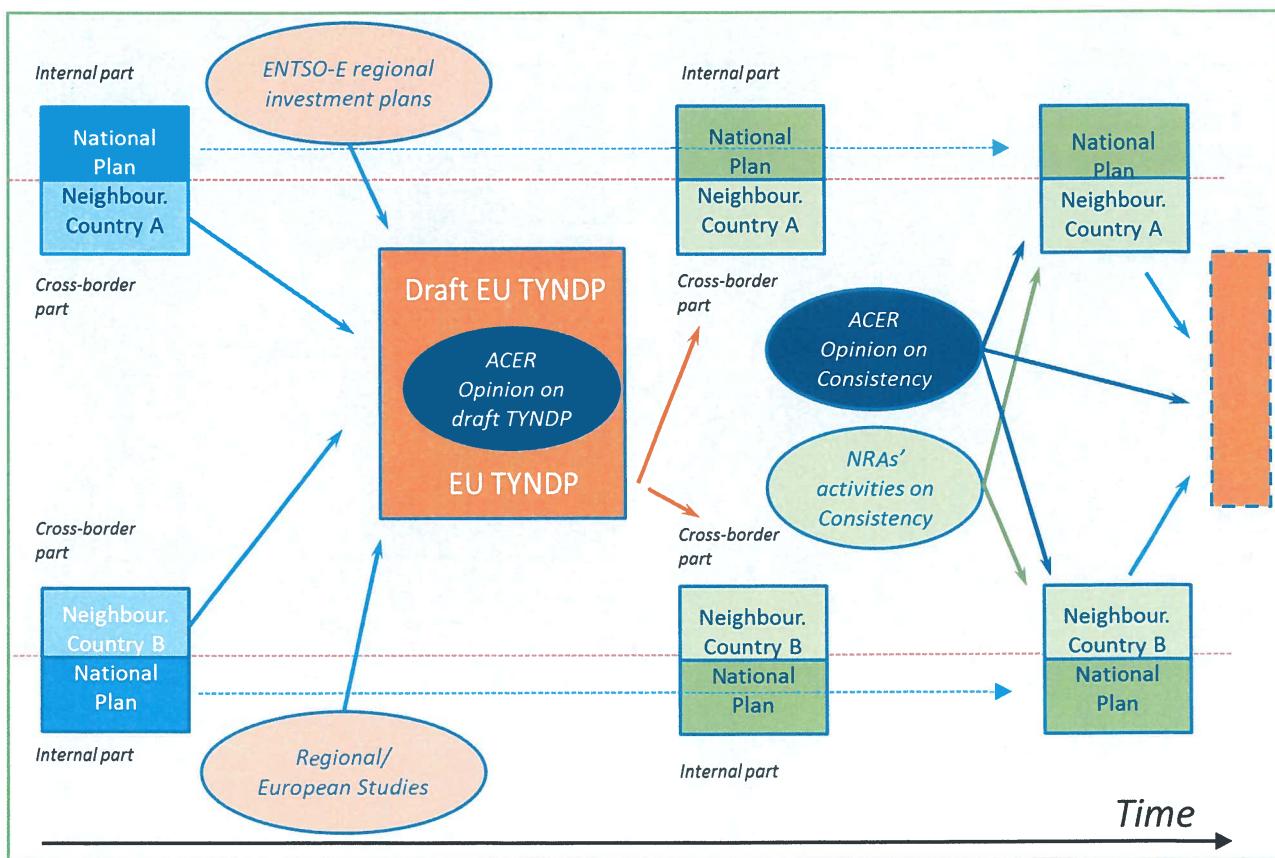
⁷ Such activities are ongoing, see ENTSO-E "Guideline to Cost Benefit Analysis of Grid Development Projects", 14 November 2013 and ENTSO-E activity (scenarios and visions) to prepare input data for the TYNDP 2014, https://www.entsoe.eu/fileadmin/user_upload/_library/events/Workshops/CBA/131114_ENTSO-E_CBA_Methodology.pdf.

⁸ The comparison with regard to the TYNDP has been performed with reference to investment items, as disaggregated in the ENTSO-E "2013 Monitoring update of the TYNDP 2012 Table of projects", 1 July 2013, Annex 1 – Monitoring update TYNDP 2012 Table of Projects, https://www.entsoe.eu/fileadmin/user_upload/_library/SDC/TYNDP/2012/130701_Monitoring_update_TYNDP_2012_Table_of_projects_FINAL.pdf.

The process of interaction is graphically depicted in Figure 1: the national development plans (in particular, their “cross-border” part, coloured in light-blue in Figure 1) contribute as building blocks of the EU TYNDP, together with the regional investment plans and the regional and European studies performed in the EU TYNDP framework. The regional and European studies are particularly focused on the investments which have a cross-border nature (interconnectors or internal network elements which affect cross-border transfer capacities) and can identify improved planning solutions, to be included in the next national development plans (or in amended plans, coloured in green in Figure 1). The “internal” part of national development plans is updated over time without interactions with other national development plans and the EU TYNDP (horizontal dashed blue lines in Figure 1).

After the preparation of the EU TYNDP, in the drafting phase of national development plans “succeeding” the EU TYNDP, the Agency and NRAs – according to their respective competences and duties - assess the consistency of the national development plans with the EU TYNDP. Furthermore, the Agency and NRAs – again, according to their respective competences and duties - can recommend amending the plans⁹.

Figure 1: The process of interaction between the national development plans and the EU TYNDP



⁹ NRAs may recommend to amend (only) national plans.

While the process of interaction in Figure 1 is relatively simple, the assessment of the Agency revealed significant complexities due to the widely different timing of preparation of national development plans across the European countries.

Figure 2 displays the timing of publication of a (usually draft) national development plan by a TSO and of its submission to the national competent authority(ies)¹⁰. When applicable, the national development plan “preceding” the EU TYNDP 2012 (coloured in blue) and the (first) national development plan “succeeding” the EU TYNDP 2012 (coloured in green) are presented. The orange vertical lines correspond to the main milestones of the EU TYNDP 2012:

- publication of the draft EU TYNDP 2012 by ENTSO-E and its submission to the Agency for its opinion (5 and 6 July 2012);
- publication of the Agency’s Opinion, which did not recommend any amendments of the draft EU TYNDP 2012 (5 September 2012).

Considering that, currently, the very large majority of countries publish national development plans, the Agency deems that it is good practice to publish a national development plan¹¹.

¹⁰ Publication and submission are in many cases at the same point in time. For a few countries, there is no submission to NRAs. In such cases, the date of publication is indicated.

¹¹ This is without prejudice to submission of any confidential additional information from a TSO to its NRA, pursuant to national legislations or regulations.

Figure 2: The timing of preparation of national development plans and of the EU TYNDP 2012

Country	Frequency of plan	Plan "preceding"	Year 2011						Year 2012						Year 2013						2014								
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
Austria	1-year	Dec-09																											
Croatia	1-year																												
Cyprus	1-year																												
Czech Republic	1-year																												
France	1-year																												
Germany	1-year																												
Great Britain	1-year																												
Greece	1-year																												
Hungary	1-year																												
Ireland	1-year																												
Italy	1-year																												
Latvia	1-year																												
Lithuania	1-year																												
Slovak Republic	1-year																												
Denmark	2-year	Nov-09																											
Finland	2-year																												
The Netherlands	2-year																												
Norway	2-year																												
Portugal	2-year	Jul-08																											
Romania	2-year																												
Slovenia	2-year																												
Sweden	2-year	Jul-07																											
Poland	3-year																												
Belgium	4-year	Jul-07																											
Spain	4-year																												
Estonia	n.p.																												
Luxembourg	n.p.																												
Malta: no transmission plan (as there exists no transmission system operator)																													
1- Belgium: the process for the national plan after ENTSO-E TYNDP 2012 has not started yet																													
2- Croatia: before TYNDP 2012, there was a 3-years investment plan of Croatian TSO approved by NRA																													
3- Cyprus: the process for the national plan after ENTSO-E TYNDP 2012 is not available																													
4- Finland: the TSO published a presentation "National ten-year grid development plan for Finland, 12/2012"																													
5- Romania: the process for the national plan after ENTSO-E TYNDP 2012 is ongoing (consultation phase in Feb 2014)																													
6- Slovak Republic: publication expected in Q1 2014																													
7- Spain: 1st submission to the NRA in September 2013, 2nd submission expected in March 2014																													
8- Sweden: Svenska kraftnät published no dedicated Swedish plan before July 2012																													

Figure 2 also identifies different frequencies in preparing national development plans (see Annex II to this Opinion for more details), with the large majority of countries having either a yearly or a biennial frequency.

The Agency deems it necessary that national development plans are prepared at least every two years, in order to allow for consistency of national development plans with the EU TYNDP.

Furthermore, the Agency finds that about half of the 13 countries with a yearly frequency encounter delays or difficulties in fulfilling the different steps of the process of preparation of the national development plan¹².

If difficulties are encountered with an annual frequency, the Agency recommends the relevant NRAs to examine the possibility to shift to a biennial frequency and to advise Member States about

¹² The preparation of the national development plan can include: analysis and drafting by the TSO, consultation from TSO and/or from NRA (when applicable), approval or opinion from NRA (as applicable), approval from Ministry (when applicable).

this possibility, according to the results of the NRA assessment. National development plans with a biennial frequency could be usefully accompanied by a monitoring update in the years when the plan is not prepared (similarly to the practice of ENTSO-E in 2013).

3. Comparison of investments listed in national development plans and in EU TYNDP 2012

3.1 Investment items in the EU TYNDP 2012 package (including Regional Investment Plans 2012) which are not included in national development plans

Based on the online data submissions by NRAs¹³, the Agency identifies 51 national components¹⁴ of transmission investments in the ENTSO-E TYNDP 2012, which are not included in national development plans (see Table 1 in Annex I to this Opinion).

The reasons for non-inclusion are summarised by Figure 3 in Annex I to this Opinion. In general, the following (actual or potential) reasons have been detected:

- the investment is not included because the national development plan was prepared before ENTSO-E TYNDP 2012;
- the investment is no longer included because it has been meanwhile commissioned;
- the investment is no longer included because it has been meanwhile cancelled;
- the (very long term) investment is not included because the timespan of the national development plan is shorter than the one of ENTSO-E TYNDP 2012;
- the investment is not included because its voltage level is not considered in the national development plan;
- the investment is not included because it does not fulfil another criterion for inclusion in the plan;
- the third party projects (TPPs) are normally not included in the national development plan¹⁵;
- the investment is not carried out by the TSO and it relates to a non-TSO network;
- there is no agreement on the investment among neighbouring TSOs;
- the initiative under consideration did not (yet) become a planned investment;
- the investment is likely to be part of a wider reinforcement project, but it is not explicitly mentioned in the national development plan.

Furthermore, the Agency identifies 24 national components¹⁶ of transmission investments in the ENTSO-E Regional Investment Plans 2012, which are not included in national development plans (see Table 2 in Annex I to this Opinion).

¹³ When possible, the comparison has been performed between the EU TYNDP 2012 and a national development plan “succeeding” EU TYNDP 2012.

¹⁴ This figure includes 8 investments in Germany which have been proposed in the draft plan of 2013, but were not approved by the German NRA.

¹⁵ This is the case for one investment included in the EU TYNDP (as TSO project), currently being considered as third party project.

¹⁶ Also the previous 51 national components of the EU TYNDP are included in the ENTSO-E Regional Investment Plans 2012. The additional 24 national components are investments which are not included in the EU TYNDP 2012.

The reasons for these differences are summarised by Figure 4 in Annex I to this Opinion.

The Agency considers it as important that ENTSO-E and its TSO members take into account the findings presented above in their upcoming preparation of the draft EU TYNDP 2014. In particular, considering the diverging or missing information in the NRA assessment of interconnection lines, ENTSO-E should carefully study the following investments:

- 16.38 Gatica (ES) - Aquitaine (FR);
- 23.60 under consideration (FR) - under consideration (BE), updated in 2013 as Avelin/Mastaing (FR) - Horta (BE);
- 26.66 Prati di Vizze (IT) - Steinach (AT);
- 27.A96 New interconnection between Italy and Slovenia, updated in 2013 as Slovenia (SI) – Salgareda (IT);
- 35.138 tbd (CZ) - South-Eastern 50 Hertz (DE);
- 381 Visaginas (LT) - Liksna (LV).

Out of the 75 (51 and 24) national components identified above, 24 were not included in national development plans because of cancellation and 12 were not included because of commissioning. Further analysis reveals that only about half of the national development plans list investments which were present in the previous national development plan and are commissioned or cancelled before issuing the next national development plan (see Annex II to this Opinion for more details).

In line with its Opinion on the EU TYNDP 2012 and the remarks on cancelled projects provided therein¹⁷, the Agency considers that full transparency on the evolution of investments should be provided in national development plans, especially on cancelled investments. It is therefore important to keep the commissioned and cancelled investments in the national development plan (for one subsequent edition) too. The reason for cancellation should be displayed for each investment.

Finally, the Agency observes that in a few cases - in particular for investments under consideration - the EU TYNDP 2012 did not provide details or sufficient clarity in investment descriptions, for example substations t.b.d. (to be defined).

This is acceptable when studies for the investment are still ongoing. However, this approach can create difficulties in assessing the consistency of investments and in future monitoring of their implementation.

Therefore, the Agency believes it is important that, as soon as an investment under consideration develops, complete descriptions are provided in the concerned national development plan(s) and in the EU TYNDP.

¹⁷ Agency Opinion on the ENTSO-E TYNDP 2012, p. 16.

3.2 Investments in national development plans which are not included in the EU TYNDP 2012

In the EU TYNDP 2012, none of the 5 TPPs having applied for inclusion met the criteria set out by ENTSO-E, thus none of these TPPs has been taken into account during the development of the EU TYNDP and has been included in the table of projects¹⁸.

Based on the online data submissions by NRAs, the Agency identifies 10 TPPs which are included (or at least referred to) in national development plans. These TPPs are listed in Table 3 in Annex I to this Opinion.

Further analysis reveals that only few national development plans occasionally present TPPs (see Annex II to this Opinion for more details). In its Opinion on the EU TYNDP 2012¹⁹, the Agency emphasised the importance of ensuring equal treatment of TSOs' projects and TPPs and, in particular, recommended ENTSO-E to add in an appendix of future EU TYNDPs all the TPPs which have applied for inclusion and to explain how they are treated in the EU TYNDP.

Similarly, the Agency deems it as useful that appendices are included in national development plans to provide information to stakeholders about non-TSO projects (as long as they had at least one interaction, for instance for connection, with the relevant TSOs). This inclusion would also allow implementing the provision of Article 3(6) of 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 715/2009²⁰, which requires projects of common interest (including non-TSO projects) to become an integral part of national network development plans and other national infrastructure plans concerned, as appropriate.

Furthermore, the Agency identifies 5 national components²¹ planned by TSOs²² that are not included in the EU TYNDP 2012 (see Table 4 in Annex I to this Opinion).

The Agency deems it as critical that ENTSO-E and its TSO members consider these investments in their upcoming preparation of the draft EU TYNDP 2014.

4. Consistency of investment descriptions in national development plans

The EU TYNDP 2012 makes use of a project number (for each project of pan-European significance) and of an investment number (for each investment item).

The Agency believes that such practice can facilitate the assessment of consistency and the monitoring of investment implementation. Therefore, the Agency believes it is appropriate that a

¹⁸ Annex I to ENTSO-E TYNDP 2012.

¹⁹ Agency Opinion on the ENTSO-E TYNDP 2012, p. 8.

²⁰ OJ L 115, 25.4.2013, p. 39.

²¹ This assessment is targeted to interconnection lines and to national investments affecting the cross-border transfer capacities.

²² One of the national components (Italy - Malta interconnection) is not actually planned by a TSO, because Malta has no transmission system operator. The investment interconnects the distribution system of Malta with Sicily region of Italy.



coding system (unique for each investment) is adopted in each national development plan. Furthermore, it is appropriate that each national development plan includes a mapping presenting, for those investments that feature also in the EU TYNDP or in Regional Investment Plans, a cross-reference between their codes in the different plans.

The EU TYNDP 2012 presents a summary table with project-by-project information, including²³:

- expected commissioning date;
- present investment status;
- grid transfer capability increase;
- project costs.

The analysis of the Agency revealed that the large majority of national development plans provide information on commissioning date and on investment status. The majority of national development plans provide information on net transfer capacity (“NTC”) increase resulting from an investment and on investment costs (see Annex II to this Opinion for more details).

The Agency therefore deems the systematic publication of the following information for each investment item in the national development plans as a good, TYNDP-consistent practice:

- commissioning date;
- investment status;
- increase of net transfer capacity (only for investment with cross-border nature, i.e. interconnectors or internal network elements which affect cross-border transfer capacities);
- cost.

Done at Ljubljana on 4 April 2014.

For the Agency:



Alberto Pototschnig
Director

²³ The presentation of benefits of each project is not discussed here, because it is subject to modifications with the forthcoming approval and application of the ENTSO-E cost benefit analysis methodology.

Annex I – Comparison of investments in national development plans and in the ENTSO-E TYNDP 2012

28 National Regulatory Authorities (AT, BE, BG, CY, CZ, DE, DK, EE, EL, ES, FI, FR, GB, HR, HU, IT, IE, LT, LU, MT, NL, NO²⁴, PL, PT, RO, SE, SI, SK) participated in the process, providing their inputs on national components of transmission investments by 14 February 2014, either for all components (15 NRAs) or for a part of them (13 NRAs).
No contribution was received from LV and NI.

Table 1: National components of transmission investments in the ENTSO-E TYNDP 2012, which are not included in national development plans

Country	TYNDP 2012 Code	Substation 1	Substation 2	Project Description	Reason for absence
AT	26.64	Border with Italy (Bressanone)	New substation near Innsbruck (AT)	New double circuit 400kV interconnection through the pilot tunnel of the planned Brenner Base Tunnel. Total line length: 65km.	Non-TSO projects are not in the national TYNDP.
AT ²⁵	26.66	Border with Italy (Prati di Vizze)	Steinach (AT)	Upgrade of the existing 44km Prati di Vizze (IT) – Steinach (AT) single circuit 110/132kV OHL, currently operated at medium voltage.	Non-TSO projects are not in the national TYNDP.
BE ²⁶	23.60	Border with France (Avelin/Mastaing)	Horta (new 400-kV substation) (BE)	France-Belgium	The investment is not included because the national development plan was prepared earlier than ENTSO-E TYNDP 2012. It is only under consideration in an early phase and the technical aspects are still to be determined.
BE	24.A26	Horta (BE)	Doel/Mercator (BE)	Upgrade with high performance conductors.	The investment is not included because the national development plan was prepared earlier than ENTSO-E TYNDP 2012.
CZ	35.137	Vitkov (CZ)	Border with Germany (Mechlemeuth)	New 400kV single circuit tie-line between new (CZ) substation and existing (DE) substation. Length: 70km.	Current national development plan covers projects up to year 2023 with some outlook to year 2025. According to information in TYNDP about expected commissioning year (2032) this project is not relevant for National

²⁴ The Norwegian NRA participated in the framework of the Agency cooperation with NRAs of EU Member States.

²⁵ The investment is included in the Italian national development plan. The Italian national development plan mentions that no works are needed on the Austrian side.

²⁶ The investment is included in the French national development plan.

Country	TYNDP 2012 Code	Substation 1	Substation 2	Project Description	Reason for absence
CZ ²⁷	35.138	tbd (CZ)	Border with Germany (South-Eastern 50 Hertz)	Possible increase of interconnection capacity between CEPS and 50Hertz Transmission is under consideration: either a new 400kV tie-line (OHL on new route) or a reinforcement of the existing 400kV tie-line Hradec (CEPS) – Röhrsdorf (50Hertz Transmission).	Current national development plan covers projects up to year 2023 with some outlook to year 2025. According to information in TYNDP about expected commissioning year (2032) this project is not relevant for National development plan.
CZ	55.310	Vyskov (CZ)	Reporje (CZ)	New connection between 2 existing substations line single circuit OHL 1385 MVA.	The investment has a status under consideration in TYNDP 2012. Due to the results of feasibility study (crossing protected area) the project was cancelled.
DE	35.137	Border with the Czech Republic (Vitkov)	Mechlenreuth (DE)	New 400kV single circuit tie-line between new (CZ) substation and existing (DE) substation. Length: 70km.	This project does not appear in the national grid development plan. Status in TYNDP has been “under consideration”. According to 50Hertz this project is not yet concrete enough to enter in the national grid development plan.
DE	40.A30	Border with Luxembourg (Bascharage)	Niederstedem (DE) or tbd (DE)	Upgrading and new construction of an interconnector to DE, in conjunction with the interconnector in the south of LU; Partial upgrading of existing 220kV lines and partial new construction of lines; With power transformer station in LU	This project does not appear in the national grid development plan, neither in 2012 nor in 2013. Status in TYNDP 2012 “under consideration”. Project is not yet concrete enough to enter in the national grid development plan.
DE	42.161	Offshore-Wind park GEOFreE (DE)	Göhl (DE)	New AC-cable connection with a total length of 32km.	This project does not appear in the national grid development plan. The connection of this offshore wind-farm is planned after 2023, i.e. the time horizon of the national development plan.

²⁷ The investment is included in the German national plan.

Country	TYNDP 2012 Code	Substation 1	Substation 2	Project Description	Reason for absence
DE	43.A153	Wehrendorf (DE)	Urberach (DE)	New lines in HVDC technology from the region of Lower Saxony to North Baden-Württemberg to integrate new wind generation especially from North Sea towards Central-South Europe for consumption and storage. The investment is part of the transmission corridor Cloppenburg- North Baden-Württemberg.	This project was included in the proposed grid development plan 2012 by the TSO, but it was not approved by the NRA.
DE	44.171	Hüffenhärt (DE)	Neurott (DE)	Upgrade of the line from 220kV to 380kV. Length: 11km. Included with the investment : 1 new 380kV substation.	This project does not appear in the national grid development plan, because it has meanwhile been cancelled by the TSO.
DE	44.182	Kriffl (DE)	Obererlenbach (DE)	New 400 kV double circuit OHL Kriffl-Obererlebenbach in existing OHL corridor.	This project was included in the proposed grid development plan 2012 and was approved by the NRA. This project was again included in the proposed grid development plan 2013 and was not approved by the NRA.
DE	44.A155	Conneforde (DE)	Unterweser (DE)	Upgrade of 230-kV-circuit Unterweser-Conneforde to 400kV , Line length: 32 km.	This project was included in the proposed grid development plan 2012 by the TSO, but it was not approved by the NRA.
DE	44.A159	Pkt. Blatzheim (DE)	Oberzier (DE)	New 400 kV double circuit OHL Pkt. Blatzheim- Oberzier including extension of existing substations.	This project was included in the proposed grid development plan 2012 by the TSO, but it was not approved by the NRA.
DE	44.A162	Großgartach (DE)	Endersbach (DE)	Extension of existing 380 kV line Großgartach- Endersbach. (Length: 32 km)	This project was included in the proposed grid development plan 2012 by the TSO and it was approved by the NRA. It was included in the proposed grid development plan 2013 by the TSO, but it was not approved by the NRA.
DE	45.47.158	Irsching (DE)	Ottenhofen (DE)	Upgrade of 230kV connection Irsching-Ottenhofen to 400kV, including new 400kV switchgear Zolling. Length 76km.	This project was included in the proposed grid development plan 2012 by the TSO, but it was not approved by the NRA.
DE	45.A166	Schalkau / area of Altenfeld (DE)	area of Grafenrheinfeld (DE)	New double circuit OHL 400-kV-line (130 km)	This project was included in the proposed grid development plan 2012 by the TSO, but it was not approved by the NRA.

Country	TYNNDP 2012 Code	Substation 1	Substation 2	Project Description	Reason for absence
DE	45.A168	Raitersaich (DE)	Isar (DE)	New 400 kV line in existing OHL corridor Raitersaich- Lüdersheim- Sittling- Isar or Altheim (160 km)	This project was included in the proposed grid development plan 2012 & 2013 by the TSO, but in both cases it was not approved by the NRA.
EL	49.252	Melliti (EL)	Kardia (EL)	New 400kV double circuit OHL. Length:40km.	The investment is no longer included because it has been meanwhile cancelled.
EL	49.253	Kardia (EL)	Trikala (EL)	New 400kV double circuit OHL. Length:80km.	The investment is no longer included because it has been meanwhile cancelled.
EL	49.254	Larissa (EL)	Trikala (EL)	New 400kV double circuit OHL. Length:57km.	The investment is no longer included because it has been meanwhile cancelled.
ES ²⁸	16.38	Gatica (ES)	Border with France (Aquitaine)	New HVDC interconnection in the western part of the border via DC subsea cable in the Biscay Gulf.	The timespan of the national development plan is shorter than the one of the ENTSO-E TYNDP 2012.
GB	74.449	Richborough (GB)	Canterbury (GB)	New 400kV double circuit OHL and new 400kV substation in Richborough.	This is not explicitly identified in the Electricity Ten Year Statement (ETYs) as it does not add National Electricity Transmission System (NETS) capacity in England and Wales. It is essentially all about a local connection in terms of the UK NETS.
GB	76.A44	Hackney (GB)	St. John's Wood (GB)	New Hackney- St. John's Wood 400kV double circuit.	This project is driven by and SoS/Asset Replacement requirement. It does not add any transmission connection capacity to the GB network or boundaries, and therefore it is unlikely to be seen or utilised by customers and as a consequence it is not included in the ETYs.
GB	76.A46	St. John's Wood (GB)	Wimbledon (GB)	New St. John's Wood- Wimbledon 400kV double circuit.	This project is driven by and SoS/Asset Replacement requirement. It does not add any transmission connection capacity to the GB network or boundaries, and therefore it is unlikely to be seen or utilised by customers

²⁸ The investment is included in the French national development plan.

Country	TYNIDP 2012 Code	Substation 1	Substation 2	Project Description	Reason for absence
GB	77.452	Deeside (GB)	-	New 400kV substation in Deeside. Part of the works required for the Western HVDC Link.	and as a consequence it is not included in the ETYS.
GB	77.454	Hawthorn Pit (GB)	Norton (GB)	Upgrade Hawthorn Pit- Norton to 400kV.	Since the submission of the project to the TYNIDP last year, a decision has been made that the project is not required at this time so it has been excluded from the ETYS.
HR ²⁹	27.223	Existing line from border with Slovenia (Cirkovce)	Existing line to Žerjavinec (HR)	The existing substation of Cirkovce(SI) will be connected to one circuit of the existing Heviz(HU)-Žerjavinec(HR) double circuit 400kV OHL by erecting a new 80km double circuit 400kV OHL in Slovenia. The project will result in two new cross-border circuits: Heviz(HU)-Cirkovce(SI) and Cirkovce (SI)-Žerjavinec (HR).	The investment has in the meantime been commissioned.
IT ³⁰	21.54	Border with France (Cornier)	Pirossasco (IT)	Replacement of conductors (by ACCS) on Albertville (FR)- Montagny (FR)- Cormier (FR) and Albertville (FR)- La Coche (FR)- La Praz (FR)- Villardonin (FR)- Venans (IT)- Pirossasco (IT) single circuit 400kV OHLs. In addition, change of conductors and operation at 400kV of an existing single circuit OHL between Grande Ile and Albertville (FR)	The investment has in the meantime been commissioned.

²⁹ The investment is included in the Hungarian and Slovenian national development plans.

³⁰ The investment is included in the French national development plan.

Country	TYNDP 2012 Code	Substation 1	Substation 2	Project Description	Reason for absence
				currently operated at lower voltage, and associated works in Albertville (FR) 400kV substation. (Total length of lines : 257 km)	
IT	26.64	Bressanone (IT)	Border with Austria (Innsbruck)	New double circuit 400kV interconnection through the pilot tunnel of the planned Brenner Base Tunnel. Total line length: 65km.	The Study did not become an investment.
IT	28.86	Villanova (IT)	-	A PST will be installed on the new 400kV line Foggia-Villanova	The investment has in the meantime been commissioned.
IT	29.73	Border with Tunisia (El Aouaria)	Partanna (IT)	New 350km 1000 MW HVDC line between Tunisia and Italy via Sicily with 400kV DC subsea cable and converters stations at both ends.	The third party projects are normally not included in the national development plan.
LU	40.A30	Bascharage (LU)	Border with Germany (Niederdiedem)	Upgrading and new construction of an interconnector to DE, in conjunction with the interconnector in the south of LU; Partial upgrading of existing 220kV lines and partial new construction of lines; With power transformer station in LU	Not in national development plan. Too early to be financially evaluated and thus put in the national development plan: studies and approaches reported after 2023.
NL	38.425	Border with Norway (Feda)	Eemshaven (NL)	NorNed 2: a second HVDC connection between Norway and The Netherlands via 570km 450kV DC subsea cable with 700-1400MW capacity.	The investment is no longer included because it has been meanwhile cancelled.
NO	37.408	Kristiansand, Feda (NO)	-	Reactive compensation due to HVDC links NorNed and Skagerak 4. Reactive power devices in 400kV substations.	The investment is no longer included because it has been meanwhile commissioned.
NO	38.425	Feda (NO)	Border with the Netherlands (Eemshaven)	NorNed 2: a second HVDC connection between Norway and The Netherlands via 570km 450kV DC subsea cable with 700-	The investment is no longer included because it has been meanwhile cancelled.

Country	TYNDP 2012 Code	Substation 1	Substation 2	Project Description	Reason for absence
NO	67.402	Border with Sweden (Barkeryd)	Tveiten (NO)	"South West link" consisting of three main parts: 3) New double HVDC VSC line between Barkeryd (SE) and Tveiten (NO).- The investments related also include new substations and converter stations in the connection points line.	The investment is cancelled by the TSOs in Norway and Sweden because analyses show that the benefits do not exceed the costs.
NO	67.411	Rød (NO)	Sylling (NO)	Voltage upgrading of existing single circuit 300kV OHL Rød-Tveiten-Flesaker-Sylling in connection with the new HVDC line to Sweden, the Syd Vest link.	The investment is no longer included because it has been meanwhile cancelled.
NO	104.A51	Svartisen (NO)	Nedre Røssåga (NO)	New 116km 400kV OHL	The investment is no longer included because it has been meanwhile cancelled.
PL	57.320	Dargoleza (PL)	-	A new AC 400/110kV substation between existing substations Shupsk and Żarnowiec in Northern Poland. New substation Dargoleza is connected by splitting and extending of existing 400kV line Shupsk- Żarnowiec.	Investment cancelled. TSO has changed the concept of network development in the field of wind power plants
PT	1.5	Macedo de Cavaleiros (By Valpaços)	Vila Pouca de Aguiar (By Valpaços)	New 83 km double circuit 400+220 kV OHL Macedo de Cavaleiros (PT)-Valpaços (PT)-Vila Pouca de Aguiar (PT).	Investment will be commissioned by the end of 2014 and is no longer in the national TYNDP.
PT	1.A1	Ribeira de Pena (PT)	Guarda (PT)	New 192km double/single-circuit 400kV OHL Ribeira de Pena (PT)- Guarda (PT). In a first step, only 75 km will be constructed and operated at 220 kV between Vila Pouca de Aguiar and Macedo de Cavaleiros, in a second step one circuit of this line will be operated at 400 kV. A single line will be constructed between Macedo de Cavaleiros zone and Pocinho zone also between Pocinho zone and Chafariz zone a double circuit 400 kV OHL will be constructed (only one circuit installed in a first step), this last line will use one circuit of the line Seia- Guarda to	Investment is not in National Development Plan because "timespan of national investment plan is shorter (2023 vs. 2025 commissioning date).

Country	TYNDP 2012 Code	Substation 1	Substation 2	Project Description	Reason for absence
PT	2.8	Arganil/Góis (PT)	-	establish the line Ribeira de Pena (PT)-Guarda (PT). New 400/60 kV substation at Arganil/Góis.	Investment not in national TYNDP due to its shorter timespan (2023 vs. the scheduled 2025 commissioning date).
PT	2.A2	Seia (PT)	Guarda (PT)	New double circuit 400 kV OHL Seia-Guarda (55km)	Investment item is not in national TYNDP due to its shorter timespan (2023 vs. the expected 2025 commissioning date).
PT	3.14	"Marateca"	Fanhões	New 95km double-circuit 400kV OHL . This new line will be connected to the existing line Palmela (PT)- Sines 2 (PT) , making a link Sines-Palmela/Fanhões.	Investment item is not in the national TYNDP because it was already commissioned in 2012.
PT	4.16	Lagoaça (PT) (By Armamar)	Recarei (PT) (By Armamar)	New line Lagoaça-Armamar-Recarei 400 kV in PT.	Lagoaca-Armamar was already commissioned in 2010. The section between Armamar and Recarei is expected to be commissioned during 2014.
PT ³¹	4.17	Border with Spain (Puebla de Guzman)	Tavira (PT)	New southern interconnection. New 400kV OHL single-circuit line between Puebla de Guzman (ES) - Tavira (PT).	Portuguese section was concluded in 2011. Not in national TYNDP because it is expected to be commissioned during 2014.
RO	53.A133	Fantanele (RO)	Ungheni (RO)	220	Studies performed confirmed the investment as necessary only under specific system evolution scenarios. It stays under consideration and will be included in TYNDP if future evolutions will confirm the necessity
SE	67.402	Barkeryd (SE)	Border with Norway (Tveiten)		The investment is no longer included because it has been meanwhile cancelled.
SI ³²	27.A96	Slovenia (SI)	Border with Italy (Salgareda)	The project includes a new HVDC link between Italy and Slovenia. The new HVDC line between Slovenia and Italy will	This project is not included in the confirmed TSO national development plan from 2011.

³¹ The investment is included in the Spanish national development plan.

³² The investment is included in the Italian national development plan.

Country	TYNNDP 2012 Code	Substation 1	Substation 2	Project Description	Reason for absence
				strengthen the connection between Slovenia and Italy and will increase existing power exchange capacity.	

Figure 3: Reasons for absence of transmission investments from the EU TYNDP 2012 in the national development plans

Reasons for absence of TYNDP Investments in National Development Plans

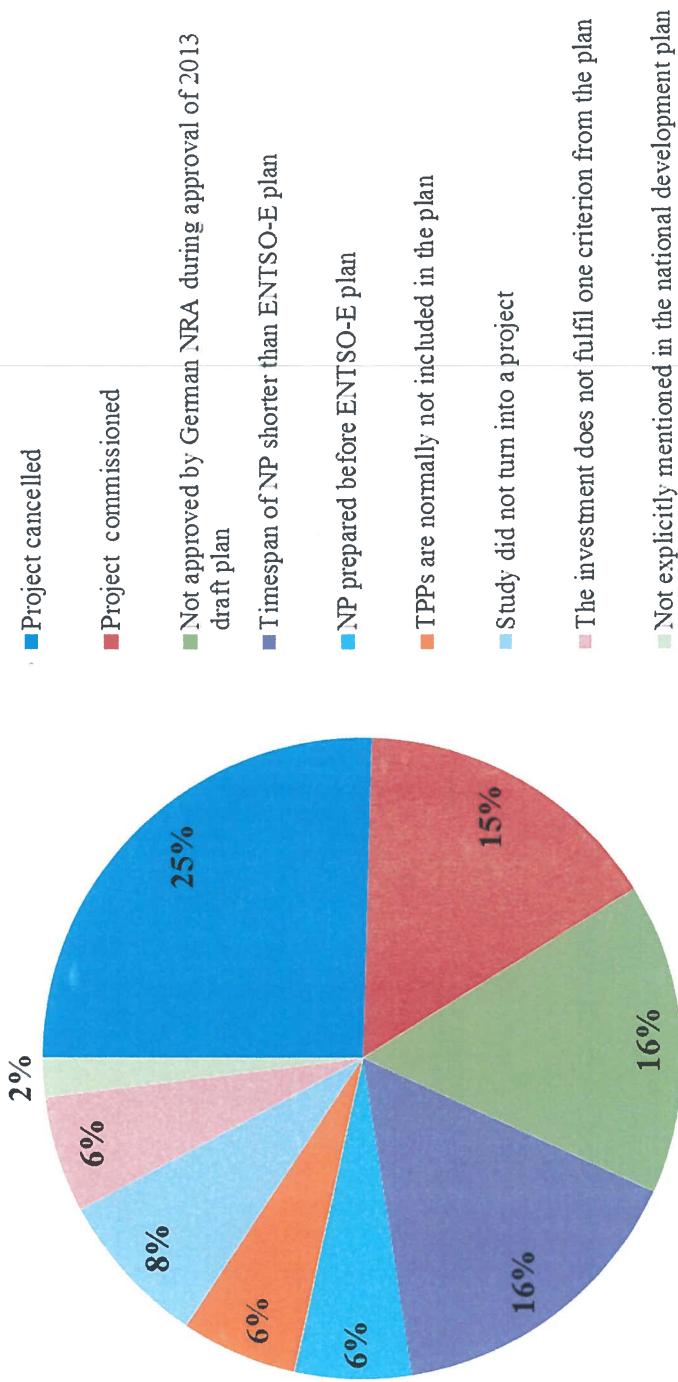


Table 2: National components of transmission investments in the ENTSO-E Regional Investment Plans 2012 (REG), which are not included in national development plans

Country	ENTSO-E REG 2012 Code	Substation 1	Substation 2	Project Description	Reason for absence
CZ	A150	Hradec (CZ)	Chrast (CZ)	New second circuit to existing single circuit OHL, upgrade in length of 82.4km. Target capacity 2x1730MVA.	The very long-term investment is not included because the timespan of the national development plan is shorter than the one of ENTSO-E TYNDP 2012.
CZ	A151	Prestice (CZ)	Chrast (CZ)	New second circuit to existing single circuit OHL, upgrade in length of 32.8km. Target capacity 2x1730MVA.	The very long-term investment is not included because the timespan of the national development plan is shorter than the one of ENTSO-E TYNDP 2012.
EL	72	Aetos (EL)	Border with Italy (Galatina)	Second 500MW HVDC link between Greece and Italy via 316km 400kV DC subsea cable and converters stations at both ends.	The investment is no longer included because it has been meanwhile cancelled.
EL	255	Lamia (EL)	-	Construction of a new 400kV EHV SS in Lamia and connection to the two circuits of the existing 400kV lines Trikala-Distomo and Larissa-Larymna.	The investment is no longer included because it has been meanwhile cancelled.
ES	35	tbd (ES)	tbd (ES)	Reinforcements in the 220kV network overall the country, in addition to upgrading of 300km of 220kV network, due to wind power evacuation.	The timespan of the national development plan is shorter than the one of the ENTSO-E TYNDP 2012.
FI	397	Border with Norway (Varangerbotn)	Pirttikoski or Petäjäskoski (FI)	New single circuit 380- 400kV OHL (500km).	The investment is no longer included because it has been meanwhile cancelled.
HR	69	Border with Italy (Candia)	Konjsko (HR)	New 1000MW HVDC interconnection line between Italy and Croatia via 280km 500kVDC subsea cable and converters stations at both ending points.	The third party projects are normally not included in the national development plan.
HU	282	Sajoszoged / God (HU)	Detk (HU)	New substation Kápona (Detk area) with 2*250 MVA 400/120kV transformation is connected by splitting and extending existing line Sajoszoged-God.	The investment is no longer included because it has been meanwhile cancelled.

Country	ENTSO-E REG 2012 Code	Substation 1	Substation 2	Project Description	Reason for absence
HU	285	Debrecen (HU)	-	New substation Debrecen with 2*250 MVA 400/120kV transformation is connected by changing the operating voltage of line Sajoszoged-Debrecen from 220kV to 400kV, this line being already designed for 400kV.	The investment is no longer included because it has been meanwhile commissioned.
HU	288	Albertirsa / Martonvasar (HU)	Szazhalombatta (HU)	New substation Szazhalombatta is connected by splitting and extending existing line Albertirsa-Martonvasar.	The investment is no longer included because it has been meanwhile cancelled.
HU	292	Debrecen (HU)	-	Reconstruction of 750kV substation.	The investment is no longer included because it has been meanwhile cancelled.
IT	56	Camporosso (IT)	-	New 450 MVA PST in Camporosso (IT) 220kV substation on Camporosso (IT)- Menton (FR)-Trinité-Victor (FR) OHL.	The investment has been meanwhile commissioned.
IT	69	Candia (IT)	Border with Croatia (Konjsko)	New 1000MW HVDC interconnection line between Italy and Croatia via 280km 500kV DC subsea cable and converters stations at both ending points.	The third party projects are normally not included in the national development plan.
IT	71	Brindisi (IT)	Border with Albania (Babica)	500MW single pole HVDC Merchant Line between Italy and Albania via 290km 400kV DC subsea cable and converter stations at both ends. On the Italian side, the new line will be connected to the existing substation of Brindisi South.	The third party projects are normally not included in the national development plan.
IT	72	Border with Greece (Aetos)	Galatina (IT)	Second 500MW HVDC link between Greece and Italy via 316km 400kVDC subsea cable and converters stations at both ends.	The study under consideration did not (yet) become a planned investment.

Country	ENTSO-E REG 2012 Code	Substation 1	Substation 2	Project Description	Reason for absence
LT ³³	381	Visaginas (LT)	Border with Latvia (Liksna)	Upgrade single circuit OHL (943 MVA, 50km).	Not in national development plan, because the two parties (LT and LV) do not agree with this investment. A decision will be accepted in the future.
LU ³⁴	61	Border with France (Moulaine)	Belval (LU)	Connection of SOTEL (industrial grid in LU) to RTE network by mixed (underground cable & OHL) single circuit 220kV line. Parts of the new line use existing ones.	It refers to an industrial network, and not to a TSO network.
NO	397	Varangerbotn (NO)	Border with Finland (Pänttikoski or Petäjäkoski)	New single circuit 380- 400kV OHL (500km).	The investment is no longer included because it has been meanwhile cancelled.
NO	409	Feda, Tonstad (NO)	-	Reactive power devices in 400kV substations. This investment proposed as stand-alone in the TYNDP 2010 is now merged into investment 37.406	The investment is no longer included because it has been meanwhile commissioned.
NO	410	Kristiansand (NO)	-	Spare transformer for the HVDC Skagerak interconnection transformer.	The investment is no longer included because it has been meanwhile commissioned.
PL	323	Warszawa Siekierki (PL)	Piaseczno (PL)	A new AC 220/110kV substation (with transformation 220/110kV 2x275MVA) in Warsaw Agglomeration Area connected by a new 20km 220kV 333 MVA cable/OHL line Warszawa Siekierki- Piaseczno.	The investment has been cancelled due to promoter's withdrawal from construction of the power plant.
PL	359	Morzycejn (PL)	Pomorzany/ Glinki (PL)		The investment is no longer included because it has been meanwhile cancelled. The alternative line Pomorzany-Krajnik replaced the investment.
PL	360	Miłosna (PL)	Siekierki (PL)	New cable connection 220kV Miłosna- Warszawa Siekierki (333 MVA, 10km).	The investment was cancelled due to promoter's withdrawal from construction of the power plant.
PL	714	Wielopole (PL)	Moszowica (PL)	Replacement of conductors (high temperature conductors). (new capacity 461 MVA),	The investment was cancelled. Promoters withdrew construction of the power plant.

³³ No information about Latvian national development plan.

³⁴ The investment is included in the French national development plan.

Figure 4: Reasons for absence of REG investments from the EU TYNDP 2012 in the national development plans

Reasons for absence of REG Investments in National Development Plans

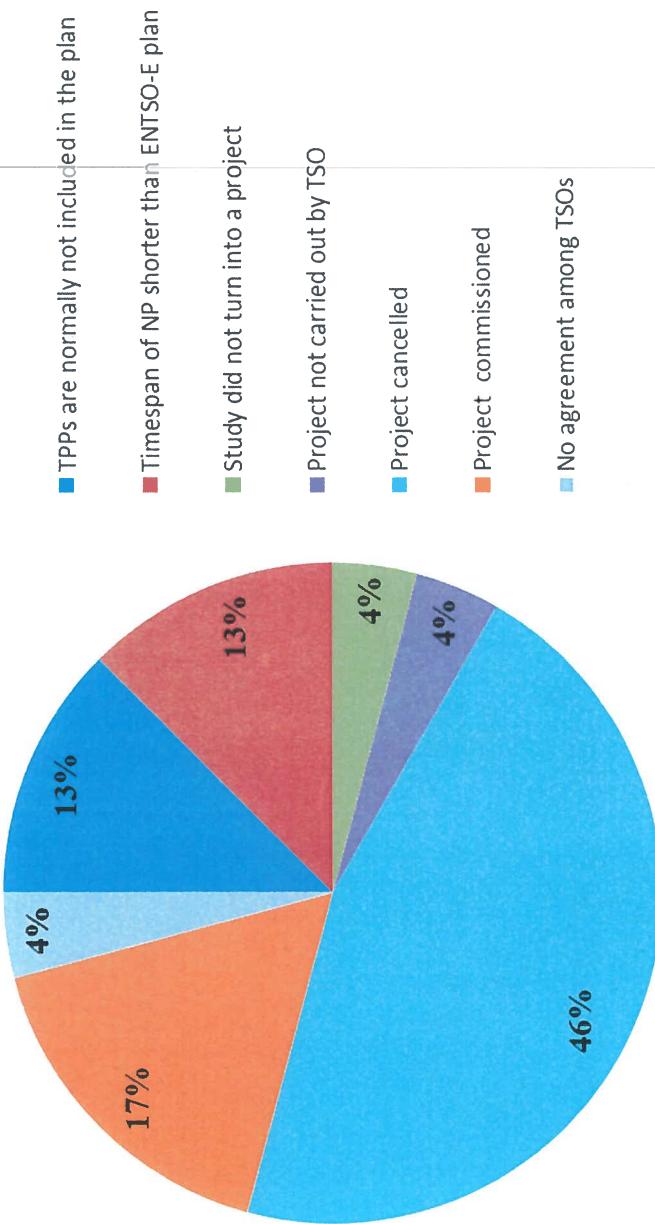


Table 3: Third-party-projects, which are included in the national development plans

The third party projects are included (or mentioned) in the national development plan of the country indicated in the first column and are not in the national development plan of the other country (excluding the Eleclink project).

Country national plan	Substation 1	Substation 2	Project Description ³⁵	Note
EL	Greece (Korakia)	Border with Cyprus (Vasilikos)	Part of Euroasia Interconnector	TPP appears in the national development plan.
FR	Calais (FR)	Border with United Kingdom (Folkstone)	Eleclink. 500 MW (potentially expandable to 1000MW) merchant interconnector passing through the Service Tunnel of the Channel Tunnel to link the 400kV grids in England and France.	TPP appears in the national development plan. The current capacity is 1000 MW.
FR	Cotentin (FR)	Vicinity of Exeter (GB)	FAB project	TPP appears in the national development plan as on the French side the project is developed by the French TSO.
GB	Border with France (Calais)	Folkstone (GB)	Eleclink. 500 MW (potentially expandable to 1000MW) merchant interconnector passing through the Service Tunnel of the Channel Tunnel to link the 400kV grids in England and France.	TPP appears in the national development plan, 2016.
GB	Border with Ireland (Irish Midlands)	Pembroke and Alverdiscott (GB)	Energy Bridge (EB) is a project which will route large amounts of renewable electricity generated in a series of interconnected Irish wind farms directly into the UK market. The whole project has the potential to deliver 5GW of both onshore and offshore energy by 2020 with first generation planned for 2017.	TPP appears in the national development plan, 2018 (first of three connection dates).
GB	Border with Ireland	Pembroke (GB)	MAREX (Organic Power). Combined 1900MW	TPP appears in the national development plan,

³⁵ Some project descriptions are derived from European Commission, “List of projects submitted to be considered as potential Projects of Common Interest in energy infrastructure – Electricity”, 27 July 2012. http://ec.europa.eu/energy/infrastructure/consultations/doc/pci_list_electricity.pdf

Country national plan	Substation 1	Substation 2	Project Description ³⁵	Note
	(Glinsk)		wind generation, with 6.1 GWh storage in Mayo Ireland, connected to UK at Pembroke via 1300MW HVDC VSC cable	2018.
GB	Border with Ireland Co. Offaly	Pembroke and Pentir (GB)	Greenwire 3GW of onshore wind in Ireland to be directly connected using 250km HVDC cables to the UK power system in Wales	TPP appears in the national development plan, 2017.
GB	Peterhead (GB)	Border with Norway (Sammanger)	NorthConnect is a joint venture project to realise an HVDC electricity interconnector between Norway and the UK.	TPP appears in the national development plan, 2021.
GB	Border with Spain (Gatica)	Indian Queens (GB)	BRIITIB. An HVDC submarine interconnector between Spain, France and the UK	TPP appears in the national development plan, ETYS 2017.
GB	Border with France	-	Channel Cable Interconnector. Direct Current (DC) bipolar interconnector, which consists of two bundled high-voltage cables. The Channel Cable will have a capacity of 1100 Megawatts and a total length of 130 kilometers	TPP appears in the national development plan, ETYS 2016

Table 4: National components planned by TSOs that are not included in the ENTSO-E TYNDP 2012

Country	Substation 1	Substation 2	Note
BG	Vetren (BG)	Blagoevgrad (BG)	The Cluster BG North-South Grid Enhancement consists construction of two new high-voltage transmission lines, as follows 1) OHL 400kV s/s “Vetren” – s/s “Blagoevgrad”, 100 km. 2) OHL 400kV s/s “Tsarevets” – s/s “Plovdiv”, 150 km. The construction of both lines will significantly increase interoperability and secure operation of Bulgarian 400kV network under normal and repair conditions.
BG	Tsarevets (BG)	Plovdiv (BG)	The Cluster BG North-South Grid Enhancement consists construction of two new high-voltage transmission lines, as follows 1) OHL 400kV s/s “Vetren” – s/s “Blagoevgrad”, 100 km. 2) OHL 400kV s/s “Tsarevets” – s/s “Plovdiv”, 150 km. The construction of both lines will significantly increase interoperability and secure operation of Bulgarian 400kV network under normal and repair conditions.
GB ³⁶	Border with Spain (Gatica)	Indian Queens (GB)	Interconnection Spain–United Kingdom ES-UK. Currently no contract. ETYS in 2025.
IT ³⁷	Ragusa (IT)	Border with Malta (IT)	The project will allow the connection of the Maltese electricity distribution system to the European transmission grid in Sicily and it will consist of one 220kV HVAC cable between Malta Island and Sicily Island (Ragusa substation).
LT ³⁸	Marijampolė (LT)	Border with Poland (Matiši)	LitPol Link 2 is 400 kV AC overhead line between Lithuania and Poland. The project is supposed to be beneficial according to Market integration and Security of supply criteria. LitPol Link 2 will provide the convergence of market prices and would be beneficial for the EU electricity market. Also LitPol Link 2 will increase interoperability and secure system operation. This project appears in the national development plan, but not in the ENTSO-E TYNDP.

³⁶ The investment is not in the Spanish national development plan.

³⁷ Malta has no national development plan (no TSO).

³⁸ The investment is not in the Polish national development plan.

Annex II – Summary of NRA responses on national development plans

Responses

28 responses (AT, BE, CY, CZ, DE, DK, EE, EL, ES, FI, FR, GB, HR, HU, IT, IE, LT, LV, LU, MT³⁹, NL, NO⁴⁰, PL, PT, RO, SE, SI, SK) were received by NRAs.

No response was received from BG and NI.

Frequency of publishing the national development plan

14 countries publish the national development plan on a yearly basis, while 8 countries do it on a biennial basis (see table below).

Every year	Every 2 years	Other
AT	DK	BE (4 years)
CY	FI	ES (4 years)
CZ	NL	PL (3 years)
DE	NO	EE (no publ.)
EL	PT	LU (no publ.)
FR	RO	MT (no TSO)
GB	SE	
HR	SI	
HU		
IE		
IT		
LT		
LV		
SK		

However, in several cases the collected responses exhibit delays or difficulties in the stages of publication and approval of the national development plan, thus causing a deviation compared to the declared (annual or biennial) frequency of publication of the national development plan.

Time horizon of national development plans

The time horizon of national development plans is 10 years for the large majority of countries (24 out of 27). Some of these national development plans (CZ, FR, IE, SI) include, as an exception, few investments with a commissioning date beyond the time horizon. This may be the case for projects whose construction start during the time horizon and whose commissioning is shortly after the last year covered by the national development plan. Other practices were reported in Denmark (20 years), Norway (20 years, with more details for the 10 year period) and Spain (6-10 years).

Status of investments in national development plans

For the large majority of countries, the national development plan includes investments which are:

³⁹ Malta has no TSO and no national development plan.

⁴⁰ The Norwegian NRA participated in the framework of the Agency cooperation with NRAs of EU Member States.

- under construction;
- planned;
- under consideration (under study).

However, in three countries investments under consideration are not included in the national development plans.

Approximately a half of the national development plans (AT, BE, DK, ES, FR, HR, HU, IE, IT, NL, PL, PT, RO) list investments which were present in the previous national development plan and are commissioned or cancelled before issuing the national development plan. The other national development plans do not.

Third party projects in the national development plan

9 national development plans (EL, FI, FR, GB, IT, LV, NO, SE, SI) include or refer to third-party projects, either on ad-hoc or on systematic basis.

Commissioning date and status

26 (out of 27) national development plans provide the commissioning date and 23 provide the status of the investment (exceptions: LU for ‘commissioning date’ and HU, LU and PT for ‘status’ information; ES provides progress status through biennial monitoring documents).

Increase of net transfer capacity

The majority of national development plans (14 out of 26) provide information on NTC increase resulting from an investment (see table).

Yes	No	Ad-hoc	n.a.
DK	BE	AT	CY
ES (only total NTC increase is provided)	CZ	EL	MT
FR (only for interconnections)	DE	FI	
HR (only for interconnection lines)	EE		
HU (per border only)	GB		
IT (per border only)	IE		
LT	LU		
LV	NO		
NL	SK		
PL (only for interconnections)			
PT (but not necessarily related to a single project)			
RO			
SI (only for interconnections)			
SE			

Estimated cost

In 14 cases out of 27, the published national development plan includes cost information per project (see table).

Yes	No	Ad-hoc
CY	AT (confidential)	DK
CZ	BE	FI
EE		
EL (costs only for the first 3 years are provided)	DE (total cost of plan is published) ES (total cost of plan is published)	
GB		
HR	FR (total cost of plan is published)	
IT (mature projects only)	HU (confidential)	
LT		
LV	IE	
LU	NL (confidential)	
NO	PT	
PL	RO (confidential)	
SI	SK	
SE		



Publishing date: 09/04/2014

Document title: ACER Opinion 08-2014

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