



## POSITION

Subject: **Federal plan for the development of the transmission grid (110 kV to 380 kV) at 2020–2030 horizon**

Date: 14 December 2018

### Introduction

On the 15<sup>th</sup> of October, 2018 Elia launched a public consultation on its ‘Federal plan for the development of the transmission grid (110 kV to 380 kV) at 2020–2030 horizon. Elia published all relevant information on a dedicated website. The deadline of the consultation is the 15<sup>th</sup> of December, 2018.

This document is the response of the **Belgian Generators’ Associations (BGA): this is an *ad hoc* cooperation of the associations EDORA, FEBEG and ODE.**

BGA welcomes this consultation and would like to thank Elia for creating this opportunity for all stakeholders to express their comments and suggestions. The comments and suggestions of BGA are not confidential.

### Preliminary comment

BGA appreciates the structured and detailed information provided by Elia with regard to the federal development plan. Given the importance of such plan for the Belgian energy system and the associated costs and considering the impact it has on market functioning and market parties, it is key that stakeholders have the possibility to express an opinion on the proposed projects. **In that respect, BGA would suggest to involve market parties at an earlier stage**, e.g. by organizing preliminary consultations on scenario’s and assumptions.

### General evaluation

BGA recognizes that the energy transition, and more specifically the development of renewables, the electrification of some sectors and the further integration of the European energy market will require important investments in the networks, both at DSO and TSO level. It is the task of grid operators to facilitate such evolutions and anticipate the future needs in the networks. Grid extension and upgrades in the network are indeed necessary and also offer commercial opportunities for market parties.

Nevertheless, **BGA is of the opinion that grid operators first need to correctly prioritize projects and invest in no-regret solutions for the networks**, taking into account optimizations of existing infrastructure – also at regional level – and development of new technologies in the system. Only after a complete and transparent cost and benefit analysis clearly showing the positive impact for the Belgian consumers, the project should be proposed for approval to the Ministry. **In this respect, BGA fails to see the concrete benefits of several proposed projects for the Belgian welfare – consumers and generators – especially when the impact on the transmission tariffs, which will be proposed by Elia, is taken into account.**

**BGA wonders if the 10-year development plan is not over-dimensioned compared to the needs of Belgian consumers, and especially when it comes to new interconnectors.** Authorities need to understand that the proposed plan reinforces the position of Belgium as a transit country which accommodates flows for the rest of the region to the benefits of European consumers, but without guarantee for Belgian consumers of being supplied with sustainable, reliable and affordable energy, while still having to bear the investment costs. To the contrary, with increased dependency on neighboring countries, Belgian consumers will be more exposed to volatile electricity prices resulting from regional system stress events or from energy policy decisions of those countries. Political choices on the energy mix throughout Europe will strongly influence the export opportunities of our neighboring countries.

**Maintaining sustainable, reliable and affordable electricity supply –reflected in both the energy and the grid transmission costs – for Belgian consumers in the long run should be the guiding principle for future investment decisions in the energy system.** In this respect, a broader cost-benefit analysis is necessary, considering an acceptable level – to be defined – of energy dependency of Belgian and all macro-economic aspects (impact on trade balance and other vectors such as utilization of existing gas infrastructure, competitiveness of the Belgian non-regulated electricity sector, etc.). **National authorities, but also TSO's, should also speed up their efforts to cooperate and to coordinate with the objective to enlarge market zones:** larger market zones will allow to more easily smoothen surpluses and shortages in generation and demand.

**Finally, BGA also wonders if Elia has sufficient incentives to provide the optimal infrastructure plan for the society, given that its remuneration is based on the regulated asset base.** In that respect, BGA welcomes the consultation of the CREG in the process but would find it relevant to also involve other stakeholders such as the Federal Plan Bureau, universities or even other stakeholders such as Fluxys or the DSO's in order to ensure all elements of the energy system are considered in this important reflection.

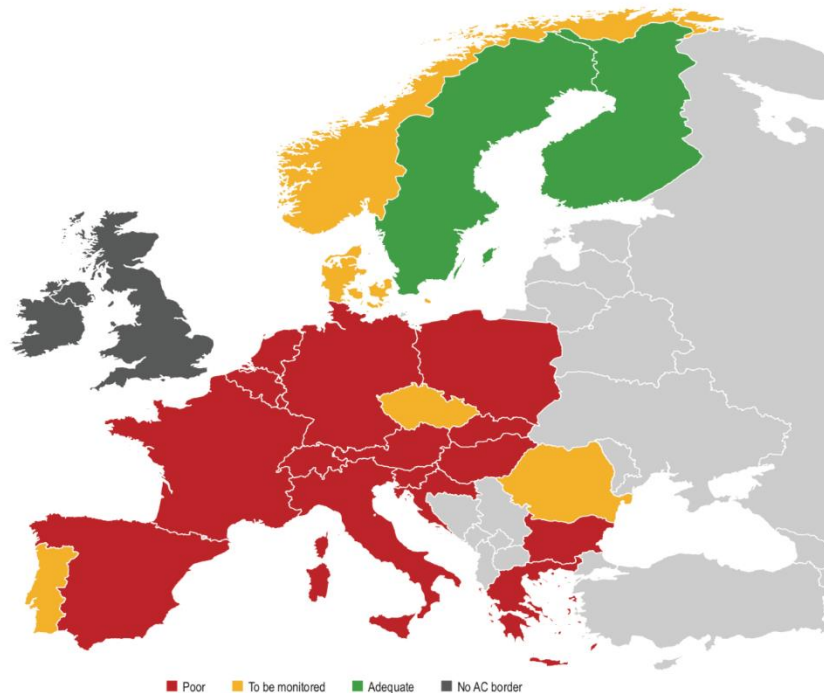
#### Detailed comments and suggestions

##### *Comments and suggestions on existing infrastructure and reinforcements of the Belgian infrastructure*

First of all, BGA is of the opinion that a lot of the **benefits presented in the plan can be realized through an optimized usage of existing grid elements**, through a better international cooperation.

BGA fears that, in the design of the future transmission network, Elia based itself on the existing infrastructure under current usage where market usage of interconnections is greatly restricted to accommodate unscheduled flows. Elia seems to consider in its plan that such unscheduled flows will have to continue, and therefore that new lines or grid elements need to be built in the system. **The question can be raised if some other countries should not invest in their grid first, instead of transferring the cost to Belgian consumers.**

- **Several documents such as the ACER Market Monitoring Report or various statements by market parties have shown that the grid usage is currently suboptimal and complained about this:**
  - The ACER Market Monitoring Report shows that all of the CWE countries make an inadequate amount of interconnection capacity available for the market. It would be relevant to know what projects in the plan would remain relevant if Belgium would put an adequate amount of interconnection capacity available for the market.



Source: NRAs, ENTSO-E and ACER calculations (2018).

Note: Performance was assessed by comparing cross-zonal capacity made available for trading to benchmark capacity on HVAC borders in 2016, and by price convergence in the period 2015-2017. Poor performance for a given country corresponds to a situation where less than 75% of the average benchmark capacity on HVAC borders is provided to the market, and where the average price spreads with neighbours is above 5 euros/MWh. The detailed qualification methodology is described in Annex 4. Luxembourg is assumed to perform like Germany. The Italian performance is assessed for the Italy North border. Great Britain and Ireland (SEM) do not have AC borders, and are therefore depicted in dark grey. No information was available for Estonia, Latvia, and Lithuania, and these countries are depicted in grey.

- EFET, eurelectric, MPP and Nordenergi have in a common statement clearly expressed their concern on the continuing inefficient calculation of cross-zonal capacity<sup>1</sup>.
- Under the proposed plan, it is clear that Belgium will continue to act as a transit country for loop-flows and transit flows; is this a real benefit for Belgian customers? If such projects would be deemed beneficial for the support of the pan-European grid, **those projects should be proposed as European Projects of Common Interest (PCI) and, as a consequence, be funded as European projects and not be funded by the Belgian customer.**
- As underlined by CREG in its report<sup>2</sup>, the introduction of the minRAM20% shows a potential of improved use at regional level, which would increase price convergence without additional infrastructure. Both the ACER consultation on the CORE Capacity Calculation Methodology as the Clean Energy Package seem intended to build on such measures to further increase the interconnection capacity that is made available to the market.

What would the assessment (e.g. price differentials) look like with more optimal use of existing infrastructure (e.g. flow based instead of NTC, ACER recommendation implemented, ...)?

Secondly, BGA is of the opinion that – especially in order to integrate additional renewable energy sources – **priority should be given to the reinforcement of the internal grid, especially to the reinforcement of the**

<sup>1</sup> EFET, Eurelectric, Nordenergi and MPP statement on inefficient cross-zonal capacity calculation; EFET, Eurelectric, Nordenergi and MPP response to CCM consultation and CREG evaluation of the flow-based market coupling.

<sup>2</sup> 'Advies over het ontwerp van ontwikkelingsplan 2020-2030 van de NV Elia System Operator', CREG, 12 July 2018, paragraph 40.

**380 kV corridor between Stevin, Avelgem and Courcelles ('Kustlus' and 'Boucle du Hainaut'), the connections for the second off-shore platform (MOG II) and the reinforcement of the 110–70 kV grid:**

- BGA is of the opinion that these investments are key to realize the energy transition in Belgium and that it is in the interest of the Belgian society to realize them as soon as possible. BGA is aware these projects – as other large infrastructure projects – are very challenging from the perspective of permitting. **The energy sector – system operators as well as generators – need swift permitting procedures and legal/regulatory stability in order to be able to realize the necessary – often large – infrastructure projects. This will be key in order to realize the energy transition:** a sustainable and reliable electricity system needs to be developed in due time and with limited costs in order to maximize welfare gains. Therefore, BGA calls the federal and regional authorities to align and – to the extent possible – simplify their permitting procedures and to ensure that these procedures and permits ensure investment stability as soon as possible. For projects of general interest, imposing a **binding deadline for the Council of State** ('Raad van State'/'Conseil d'Etat') to decide upon an appeal would, for example, contribute significantly to this objective.
- According to Elia a second off-shore platform (MOG II) needs to be developed to ensure an economic efficient transport of electricity to land. According to BGA this objective should be translated in a clear cost-benefit analysis demonstrating that the investment in MOG II is lower than the individual connection of each off-shore wind park to land. If the cost-benefit analysis is positive, then the **timing of the development of such a second platform should be aligned with the development of the second zone that has been designated for new off shore wind parks**. Elia should also aim at a maximum availability of this MOG II. BGA also wants to point out that the **loss of an off shore platform should be seen as a dimensioning incident for the volumes of ancillary services**. Even an improved forecasting of storm risks will not take away the remaining technical risk of incidents on the connections or upstream installations. The geographical concentration of the offshore wind generation in the sea as well as the geographical concentration of the connections to the grid and the injection in the system are also important factors to consider. Incidents on these connections or further upstream in the transmission system have the same systemic risk and a similar probability, although entirely out of the control of the ARP's.

*Example: outage off-shore generation facility on the 18th and 19th of January, 2018*

On the 18th and the 19th of January, 2018 an outage of an offshore generation facility occurred due to a storm (storm was not correctly forecasted with a quarter-hour granularity which lead to continuous output of the generation facility at maximum capacity until event, ...). After the outage, the generation facility was not able to inject for 12 hours due to an unavailability of a grid component. This example shows that storms are not perfectly predictable and – more importantly – that technical incidents do occur.

- **BGA can support the reinforcement proposed by Elia for several bottlenecks on the medium voltage grid**, especially for wind on-shore development. To avoid future possible bottlenecks with increasing wind development in Belgium, BGA asks – as does the CREG – for more transparency on the priority zones up to 2030 to be designated by Elia preferably in consultation with the energy sector.

***Comments and suggestions on new interconnectors***

The proposed **increase of interconnection level is highly questionable**.

- **The plan gives little information on security of supply aspects (coverage of the peak demand)**. For instance, Elia did not show evidence that increased interconnection level improves the security of supply of the country.

- As a matter of fact, the (additional) contribution of interconnections to the security of supply is doubtful since there is **no guarantee that there is sufficient excess of generation capacity available in the neighboring countries** to import to Belgium because similar unfavorable market circumstances exist in those countries: lack of profitability of conventional generation assets, combined with progressively more stringent emissions requirements, which leads to the absence of new investments and the decommissioning of existing generation assets.
- In its report, **Elia did not compute the effective contribution of the import capacity in case of simultaneous tense situations and low RES generation throughout Europe.**
- Additionally, in the proposed plan<sup>3</sup>, **BGA fails to see clear alternative solutions to the building of interconnectors to address market congestion issues at CWE level caused by unscheduled flows.** BGA believes that an optimized use of existing infrastructure, with some infrastructure optimization, could also help solving this structural problem.
- BGA is wondering how thoroughly Elia has considered the **impact of these new interconnectors on the competitiveness of Belgian power plants?** In that respect, it is important to remind that Belgian power plants pay injection tariff which is not the case in some neighboring countries such as Germany or Netherlands (and to a lesser extent in France). Some of the cost of the proposed projects would thus contribute to the deterioration of the competitive position of Belgian power plants.

**Finally, it is important to bear in mind that Belgium is already highly, physically interconnected country, well beyond European targets (15 % of installed electricity production in the Member States by 2030).**

- After the commissioning of Alegro and investment in voltage-supporting measures in 2021, the maximum simultaneous import capacity will reach 6.500 MW, representing more than 50 % of Belgium's peak demand.
- A higher interconnectivity could contribute to the further integration of (volatile) renewable generation in the European system, e.g. to allow the excess of RES generation in one area to be absorbed by other areas (e.g. from France to Germany – or vice versa –, etc). In that case, it should be put in a European perspective. **Therefore, those projects should be proposed as European Projects of Common Interest (PCI).**

#### ***Comments and suggestions on the cost-benefit-analyses***

**BGA is of the opinion that the cost-benefit-analyses are fragmented, partial and non-transparent throughout the document.**

- BGA fails to see **a proper combination of costs and benefits that gives an overall picture.** Some concrete examples:
  - *3.4 (page 112): the whole quantitative analysis is fragmented. There is no clear picture/overview of the cost/benefits of each project and any potential link/relation between the projects considered in the different welfare calculations.*
  - *Cost in table 3.2 (page 112) are disconnected from the welfare over time that is shown several figures later.*

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<sup>3</sup> Example p.48: Elia states '(...) network and market simulations show that (...)': BGA is of the opinion that a more thorough justification is needed.

- Overall, there is a lack of clear communication on the net welfare:
  - o Elia states that the welfare is increased for all projects, but there is no comparison to associated costs.
  - o It would be interesting to have more details on the split on the benefits for customers and producers as well as an estimation of the impact of the new projects on the overall congestion rents.
- As mentioned by CREG<sup>4</sup> in its report, **the interrelation between investments is unclear**. Concretely, what part of the backbone is necessary for new interconnectors.
  - o *Page 18, 96: the link between the investments in the backbone and addition of interconnectors is not clear. Figure 3.1 shows that some of the interconnector projects are only conditional or informative, while it suggest that all of the backbone investments are already planned. However, it seems more logical that some of the backbone investments would only be needed in case that the conditional or informative interconnectors actually be built. Otherwise, the additional backbone investments should be added to the costs of such interconnection projects.*
  - o *A similar lack of clarity is in the table 3.2 on page 112, where no link is made between the interconnection projects and the backbone.*
  - o *On page 107, it is stated that PSTs can alleviate some but not all of the congestions issues, so additional infrastructure has to be built. However, no other alternatives to PSTs or infrastructure seem to be considered. It would therefore be interesting to know how much of the issue is already solved by PSTs, and how much could be achieved by alternative measures such as better, regional coordination.*
- As underlined by CREG in its report, the **net simulations and market exchange capacity assumptions are not explained**:<sup>5</sup>
  - o *Page 105 (3.2.3): what are the market vs. physical assumptions behind net simulations and market exchange capacity? How much of current physical capacity is used for market vs. other flows?*
  - o *Page 55: The value of the market studies can be questioned, given that they are based on NTC values. Belgium uses Flow-based, as do all neighboring countries.*
  - o *Page. 60: the explanations on economic efficiency of the different alternatives are very abstract, which doesn't allow a proper evaluation on how they have been done/implemented concretely.*
- Further along, **there is no clear downstream assessment of price divergence versus grid tariff impact for the final customer**. Elia did not provide an estimate of the impact on grid tariffs that it will propose. How will the costs be split among grid users?

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<sup>4</sup> 'Advies over het ontwerp van ontwikkelingsplan 2020-2030 van de NV Elia System Operator', CREG, 12 July 2018, paragraph 48.

<sup>5</sup> 'Advies over het ontwerp van ontwikkelingsplan 2020-2030 van de NV Elia System Operator', CREG, 12 July 2018, paragraph 40.

### *Comments and suggestions on the process*

More **clarity is needed on the next steps** for some projects.

Some projects are included but 'conditional': how will they be decided? It should be clear that when the plan is accepted with such conditional projects still in it, the final decision of such projects should not be at the discretion of Elia alone. The final decision should be based on clear criteria and involve a cost-benefit analysis, with involvement of relevant stakeholders.

### *Comments and suggestions as regards future evolutions*

Priority should be given to **no-regret solutions, also maximizing CO<sub>2</sub> objectives**.

It should be clarified how much flexibility this plan still allows for future trends: the pro-active approach that Elia proposes in the plan also means taking decisions before some of the underlying assumptions have been realized. Are there 'early indicators' foreseen that some assumptions may be wrong and projects may have to be adapted?

A more considerate approach – given the substantial financial costs associated with the projects – would be to only decide pro-actively on large-scale projects that bring **no-regret solution for Belgian citizens**. In this respect, massive development of transmission networks should be put into perspective with some elements:

- **congestion management and local services** provided by the market as well as dispatching actions can be an alternative to new grid elements;
- **expected development of decentralized storage**; this relatively recent and growing trend could undermine the business case of some costly grid development projects. In its report, Elia considers a scenario with a higher degree of decentralization but does not translate this in appropriate development plans. In this scenario, one would expect that Elia gives a view on how to achieve a better balance between building transmission and distribution lines, storage, demand side flexibility, etc;
- **electrification** of the transport sector, with impact on peak consumption taking into account the possible future grid services delivered by electrical vehicles;
- further efforts in terms of **energy efficiency, digitalization and development of demand response**, also at residential levels: how does this plan take into account the new Elia's vision on the consumer-centric system in a decarbonized society presented in November 2018?
- **grid investments should be dimensioned also for days with very low and very high RES load factors in Belgium**, i.e. taking into account internal congestion, incompressibility, ...

Additionally, BGA does not find information on **how the proposed development plan of Elia will help the country reach its greenhouse gas or renewable energy objectives at the best cost/benefit ratio**.

Finally, BGA wonders if Elia integrated the risks associated with **network dynamic stability**? This will be an important challenge to anticipate at European level.

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