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Subject: “**Public Consultation on the proposed Greek capacity mechanism**”

### Summary

The proposed capacity mechanism has several problems, which the Green Tank urges the Greek government to remedy in close collaboration with all participants of the Greek electricity market and the European Commission. Specifically, the proposed capacity mechanism:

1. does not prove the necessity for a market-wide, permanent capacity mechanism in Greece since:
  - a) absolutely necessary **market reforms** have not been implemented yet,
  - b) a **resource adequacy assessment** does not accompany the proposal, while the most recent, publically available resource adequacy assessment by the Greek TSO fails to adequately prove a security of supply problem for Greece that cannot be remedied without a permanent market-wide capacity mechanism, such as the one proposed,
  - c) alternative forms of a capacity mechanism, such as a **strategic reserve**, have not been considered and comparatively evaluated with the proposed one.
2. violates the recently agreed new Electricity Market Regulation in favor of lignite.
3. violates the Guidelines on State aid for environmental protection and energy in favour of lignite.
4. unduly supports lignite, at the expense of other technologies.

According to the proposed scheme, lignite plants could secure capacity contracts until 2033 regardless of their emission performances.<sup>1</sup> This is contrary to the EU’s climate objectives and its commitments regarding the Paris Agreement. Moreover, it directly contradicts EU’s objective of phasing out fossil fuel subsidies prescribed by paragraph 221 of the guidelines on State aid for environmental protection and energy, as well as the agreement between the Council of Ministers of Energy, the European Parliament and the European Commission to set an emissions performance

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<sup>1</sup> According to the Consultation, the plan of the Greek authorities is to organise T-4 auctions. If the auctions are organised in 2019, delivery year would be in 2023. If the contracts are awarded before 31 December 2019, they would be "grandfathered" pursuant to Art. 22(5) of the recast Regulation on the internal market for electricity, meaning that 10-year contracts would run from 2023 to 2033.



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standard as a prerequisite for participation in capacity mechanisms in the recast Electricity Market Regulation.

Moreover, it is highly questionable whether contracting capacity from historically unreliable lignite plants is an appropriate means to meet the objective of ensuring security of supply for Greece. The Greek authorities themselves have identified in the context of the prolongation of the interruptibility scheme: "*outages of lignite plants due to ageing and weather conditions*" as a factor contributing to resource adequacy problems in the coming years.<sup>2</sup>

The pressure by PPC and the Greek government to obtain a swift approval by the European Commission for the proposed capacity mechanism is linked to the efforts to render PPC's lignite assets that are up for sale more attractive and to improve the dismal economics of PPC's yet unconstructed new lignite plant "Ptolemaida V". However, a capacity mechanism should not aim at rescuing a specific electricity producing technology; it is supposed to ensure energy security for the Greek citizens and businesses that cannot be achieved in a different, less invasive way.

For detailed comments see below.

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<sup>2</sup> Commission's decision on SA.48780, para. 42, c); para. 43: "*The Greek authorities underline that these factors are not necessarily unique to the winter of 2016/2017 and could in principle happen again in case similar weather conditions occur in the coming winters.*"

## The Green Tank's comments on the Public Consultation on the proposed Greek capacity mechanism in Greece

### A. The necessity for a market-wide, permanent capacity mechanism in Greece is not adequately justified

The necessity for a permanent, market-wide capacity mechanism in Greece is not adequately justified because:

1. It is not preceded by the implementation of **market reforms** which would have increased the capacity of the market and enhanced security of supply.
2. The proposal under consultation is not accompanied by a **resource adequacy assessment**, while the most recent, publically available resource adequacy assessment by the Greek TSO fails to adequately prove a security of supply problem for Greece that cannot be remedied without a permanent market-wide capacity mechanism, such as the one proposed.
3. Alternative forms of a capacity mechanism, such as a **strategic reserve** have not been considered and comparatively evaluated with the proposed one.

#### A1. Market reforms

According to EEAG (paragraph 223), "*the Member States should clearly demonstrate the reasons why the market cannot be expected to deliver adequate capacity in the absence of intervention, by taking account of on-going market and technology developments*". Therefore, the Greek government should have justified the need for a permanent capacity mechanism after implementing all necessary market reforms. Yet, the Greek government has proposed in the current document under consultation, a permanent, market-wide capacity mechanism, before the implementation of market reforms.

The importance of market reforms for the Greek electricity market has also been shown during the previous consultation conducted by the Greek TSO<sup>3</sup>, which attributed the lack of investment signals towards market participants, to market distortions and regulatory failures.

The key reforms necessary to increase capacity on the market are those known as "Target Model", and have not been implemented yet, as is also the case for the market reforms agreed in the latest Supplementary Memorandum of Understanding (SMoU) of 5 July 2017<sup>4</sup> that was readjusted in the

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<sup>3</sup> Due to regulatory failures and asymmetries in the Greek wholesale market, the existing structure and market mechanisms are unable to provide long-term financial incentives for the necessary investments and, as a result, questions arise as to the ability of market forces to support the long-term development of the required infrastructure." Consultation by TSO on CRM, 2016 (translated from Greek), page 8, section 1.3 of the consultation by the Greek TSO of 26 July 2016 on the "Basic design of the permanent capacity adequacy remuneration mechanism" available at [http://www.rae.gr/site/file/categories\\_new/about\\_rae/activity/global\\_consultation/history\\_new/2016/120716?p=file&i=0](http://www.rae.gr/site/file/categories_new/about_rae/activity/global_consultation/history_new/2016/120716?p=file&i=0)

<sup>4</sup> page 43 of the SMoU of 5 July 2017, [https://ec.europa.eu/info/sites/info/files/smou\\_final\\_to\\_esm\\_2017\\_07\\_05.pdf](https://ec.europa.eu/info/sites/info/files/smou_final_to_esm_2017_07_05.pdf)

4<sup>th</sup> review of the SMOU<sup>5</sup> and the Technical Memorandum of Understanding<sup>6</sup>. These reforms include the establishment of the following four markets:

1. A day-ahead market ready to couple with Italy and Bulgaria in line with Regulation 2015/1222 establishing a guideline on capacity allocation and congestion management ("CACM").
2. An intraday market ready to couple with Italy and Bulgaria in line with CACM regulation as part of a continuous intraday market (XBID project);
3. An energy financial market (forward market);
4. A balancing market in line with Regulation 2017/2195 establishing a guideline on electricity balancing ("EB").

All four markets were agreed to be functional by 1 January 2018<sup>4</sup>, then by 1 April 2019<sup>4</sup>. However, this has not occurred to date and it is almost certain that the new markets will not become functional before the first quarter of 2020.

The expectation of these market reforms is also evident in the recent decision by the European Commission to extend Greece's interruptibility scheme only for two years "*in view of the need to improve the adequacy assessment and in view of the imminent market reforms that will enable demand response participation on the electricity market.*"<sup>7</sup>

The importance of the implementation of the Target Model for Greece in relation to the necessity for a capacity mechanism was perhaps more clearly illustrated in 2016's "Basic Design Proposal", which concluded that if any Capacity Mechanism were needed at all after the implementation of the Target Model, *it should be limited to flexibility services and strategic reserves*, i.e. completely different from the current proposal under consultation.

Therefore it becomes clear that ***any proposed capacity mechanism should be implemented only after the implementation of the Target Model in Greece.***

## A2. Resource adequacy assessment

The proposed capacity mechanism is not accompanied by a resource adequacy assessment, which would prove the necessity for a market-wide capacity mechanism. In addition, the most recent

<sup>5</sup> [https://ec.europa.eu/info/sites/info/files/economy-finance/draft\\_smou\\_4th\\_review\\_to\\_eg\\_2018.06.20.pdf](https://ec.europa.eu/info/sites/info/files/economy-finance/draft_smou_4th_review_to_eg_2018.06.20.pdf), paged 26-27

<sup>6</sup> [https://ec.europa.eu/info/sites/info/files/economy-finance/draft\\_tmu\\_4th\\_review\\_to\\_eg\\_2018.06.20.pdf](https://ec.europa.eu/info/sites/info/files/economy-finance/draft_tmu_4th_review_to_eg_2018.06.20.pdf), pages 38 - 40

<sup>7</sup> Commission's decision on SA.48780, conclusions on page 15. See also para. 47: "*The Greek authorities have however re-confirmed their commitment to implement a functioning balancing market in which DSR can participate by August 2018, in line with Greece's commitments under the Supplementary Memorandum of Understanding between the European Commission acting on behalf of the European Stability Mechanism and the Hellenic Republic and the Bank of Greece.*"

(2017), publically available resource adequacy assessment by the Greek TSO<sup>8</sup> has several problems. Specifically:

1. Several of its assumptions are already outdated. For example, the assessment assumes that lignite units Amyntaio I and II, with a total installed capacity of 600 MW, will have used their 17.500 allowed hours under the Industrial Emissions Directive by the end of 2019 and shut down as a result of this. However, the 17.500 hours were exhausted at the end of 2018<sup>9</sup> and the Greek government has requested an extension to 32.000 hours from the European Commission. Despite the repeated denial of its request, the Greek Government has decided unilaterally and unlawfully to extend its operation to 32.000 hours and keep the plant online until 2022<sup>10</sup>. This **difference in the timeframe of operation of Amyntaio I and II** will influence the results of the assessment.
2. It examines the possibility of closure of gas-fired plants. However, the potential retirement of lignite plants due to the recently adopted stricter EU environmental standards and the escalating CO<sub>2</sub> prices will make the balance between supply and demand tighter, and, thus, the shutting down of gas-fired plants more unlikely.
3. The assumptions about the future contribution of interconnectors are based on historical values, and thus, the resource adequacy assessment lacks a representation of the region and an appropriate analysis of the risks of simultaneous system stress periods between Greece and its neighbouring countries.
4. All three scenarios considered in the 2017 resource adequacy assessment project that both annual and peak demand will grow over the timeframe of the analysis. However, the continuous growth of RES-based distributed generation has led to a reduction of peak demand at the transmission level in the summer (summer peak normally occurs at midday in July, when solar generation is at its peak)<sup>11</sup>, and the trend is expected to continue as more distributed generation is deployed in the Greek power system.

### **A3. No consideration for alternative forms of a capacity mechanism**

The Supplementary MoU (5 July 2017) stipulates that a permanent capacity mechanism is one of Greece's obligations. However, this does not impose that the capacity mechanism must be market-wide, nor that it should be long-term.

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<sup>8</sup> [http://www.admie.gr/fileadmin/groups/EDAS\\_DSS/AnaptixiSistimatos/Meleti\\_eparkeias\\_2017\\_2027.pdf](http://www.admie.gr/fileadmin/groups/EDAS_DSS/AnaptixiSistimatos/Meleti_eparkeias_2017_2027.pdf)

<sup>9</sup> According to the reporting data of ADMIE to ENTSO-E, these hours were exhausted in late November 2018.

<sup>10</sup> Joint Ministerial Decision 82568/11912/19-11-2018 (National Gazette B' 5031/26-11-2018): <https://bit.ly/2PWESuj>

<sup>11</sup> According to the 2017 Resource Adequacy Assessment, the installed capacity of PV generation is expected to increase from around 2.4 GW in 2017 to 4.6 GW in 2027. It is worth noting that the projections for the deployment of solar and wind (around 4.3 GW by 2027) power are lower than the projections in the draft Greek NECP. The latter projects around 6 and 5 GW of installed capacity in 2027 for solar and wind power respectively.

In this context, the Greek government has not considered in priority or even at all, the implementation of a strategic reserve, which might also be less distortive of competition, since the reserve does not participate in the market and therefore does not interfere with the development of the price<sup>12</sup>. Moreover, as stated in the Commission's Interim and Final Reports of the Sector Inquiry on Capacity Mechanisms, strategic reserves may "*bridge a gap until market reforms are carried out*"<sup>13</sup>. Furthermore, the 2017 resource adequacy assessment suggests that the risks to security of supply are higher in the shorter-term, which could imply that a strategic reserve is a more appropriate measure to address them.

Therefore, ***a combination of market reforms, as previously discussed, and a strategic reserve might be a more suitable solution for Greece instead of a market-wide capacity mechanism.***

#### **B. Violation of the rules of the new Electricity Market Regulation in favor of lignite**

The proposed capacity mechanism provides generous financial support for lignite plants in Greece, which might extend until 2033, and goes against the new rules of the recently agreed Electricity Market Regulation. Specifically:

The new Electricity Market Regulation (EMR) forbids capacity payments for **new plants** emitting more than 550 gr CO<sub>2</sub>/KWh (i.e. all plants burning coal or lignite), which will enter commercial operation after 1.1.2020, and stops all capacity payments to existing such plants after 30.6.2025.

However, the proposed capacity mechanism allows for 10-year capacity contracts for new installations irrespective of technology and whether these emit more than 550 gr CO<sub>2</sub>/KWh, provided their capital expenditure (CAPEX) is above €1000/KW. Given the fact that the CAPEX of the currently under construction lignite plant "**Ptolemaida V**" (€ 2.105/KW) is more than two times above the €1000/KW threshold, it becomes apparent that the corresponding measure in the proposed mechanism is attempting to financially support this particular plant with €65.000/KW (i.e. €43 million per year) until 2033, since a contract signed for the unfinished plant in 2019 will be implemented in 2023<sup>14</sup>. Given also that it is impossible for Ptolemaida V to enter commercial operation before 1.1.2020<sup>15,16</sup>, its participation in the Greek capacity mechanism violates the full exclusion of new coal and lignite plants from future capacity payments that was decided by the

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<sup>12</sup> See e.g. Commission's decision of 7 February 2018 on SA.48648, Belgium - Strategic reserve, para. (125)

<sup>13</sup> Interim report, p. 17; Final report, p. 10. See also Commission's decision of 7 February 2018 on SA.48648, Belgium - Strategic reserve, para. (124)

<sup>14</sup> We note that in a statement made before the Special Committee of Energy and Trade in the Greek Parliament, PPC's President publicly admitted that the operation of Ptolemaida V is not financially sustainable without the free emission allowances, which Greece failed to obtain as part of the revision of the ETS Directive.

<sup>15</sup> Energypress.eu 21.1.2019: "*PPC's effort to ensure CAT remuneration for Ptolemaida V, expected to be launched in 2021, stands to benefit from the development*" <https://energypress.eu/cat-eligibility-prospects-for-ppcs-ptolemaida-v-favorable/>

<sup>16</sup> Sourcewatch - Ptolemaida power station "*Construction on the new unit began in 2016. It is now planned for 2022*" [https://www.sourcewatch.org/index.php/Ptolemaida\\_power\\_station](https://www.sourcewatch.org/index.php/Ptolemaida_power_station)

Council of Energy Ministers, the European Parliament and the European Commission at the conclusion of the trilogue negotiations for the new Electricity Market Regulation, as recently as December 2018.

As far as **existing lignite plants** are concerned, the proposed mechanism specifies that existing capacity will receive one-year contracts, which may however be extended by one or two years in case the installation is under major refurbishment that involves either an environmental upgrade or a refurbishment necessary for the technical availability. Therefore, a capacity contract may extend beyond the new Electricity Market Regulation deadline of 30.6.2025 if a two year extension is granted.

More alarmingly, the contract for **existing lignite plants** may extend much further and beyond the 30.6.2025 deadline. The proposed capacity mechanism offers the particularly alarming possibility of transforming “existing” plants to “new”, which in turn, offers them the capability of signing long term contracts (with contract length of up to 10 years). This capability may very well extend capacity contracts for existing plants beyond 30.6.2025, on which date all capacity payments to all coal and lignite plants must be ceased according to the new Electricity Market Regulation. Specifically, in footnote 8 of page 14 of the document under consultation it is mentioned that *“existing capacity providers undertaking capital expenditure for refurbishment above a specific limit will be considered as new capacity providers”*, without further specifying the actual limit.

The only possibility for the abovementioned provisions of the proposed capacity mechanism to be consistent with the new Electricity Market Regulation would be, if the “grandfathering clause” of the latter is evoked. Specifically, according to Article 22(4)(a) of the recast Regulation on the internal market for electricity: *“from ... [date of entry into force of this Regulation] at the latest, generation capacity that started commercial production on or after that date and that emits more than 550 g of CO<sub>2</sub> of fossil fuel origin per kWh of electricity shall not be committed or to receive payments or commitments for future payments under a capacity mechanism”*. Equally, those plants that have started commercial production earlier may not be committed or receive payments or commitments for future payments after 30 June 2025. This is **“without prejudice to commitments or contracts concluded before 31 December 2019”**. Therefore, if the Greek Capacity Mechanism becomes approved by the European Commission and the corresponding contracts are signed before the end of 2019, the new rules would not not applicable.

However, this exception was intended to reconcile the fact that the Polish Capacity Mechanism that was approved by the European Commission before the conclusion of the trilogue negotiations for the new Electricity Market Regulation does not comply with the new rules. Approving another Capacity Mechanism which also does not comply with the new rules after those have been agreed upon by the three EU Institutions, and without an EU-level resource adequacy assessment will create a dangerous precedent and will effectively weaken the new Regulation, which is expected to constitute the foundation of EU’s internal electricity market.

### **C. Violation of the Guidelines on State aid for environmental protection and energy in favor of lignite**

The proposed Capacity Mechanism does not only bypass the new rules of the Electricity Market Regulation but contains provisions which oppose the State Aid Guidelines for environmental protection and energy<sup>17</sup> in favour of lignite.

Specifically, according to the text under consultation (page 20): “Existing capacity may receive, upon request, extended duration in case the installation is under major refurbishment. The duration of the extension will be based on the CAPEX requirements of the investment. Major refurbishment will involve either an environmental upgrade or a refurbishment necessary for the technical availability”. Thus, plants undergoing environmental upgrades may receive longer contracts and, consequently, larger sums of state aid which may be used to cover the costs for the environmental upgrades, necessary to render the plant compatible with the new Emission Limit Values (ELV) of the BAT conclusions<sup>18</sup>.

However, according to the State Aid guidelines (paragraphs 3,18,53,54), state aid, such as capacity payments, cannot be used to for complying with existing Union standards, which obviously include the new ELV of the BAT conclusions.

***Therefore, costs to install and operate abatement technologies necessary for compliance with the BAT conclusions cannot be covered with the extra funds that the lignite plant will receive through its extended participation in the proposed capacity mechanism.***

### **D. Additional discriminations of the proposed scheme in favour of lignite**

According to the new scheme the length of the capacity contracts for new capacity is a function of the corresponding capacity expenditure (CAPEX) irrespective of the technology (page 20). However, the levels of CAPEX which are typical for other technologies, such as Demand Side Response (DSR) are far smaller than the thresholds required for the long 5- and 10-year capacity contracts under the proposed capacity mechanism. On the other hand, these CAPEX thresholds are much closer to typical installation costs for lignite power plants as well as pertinent abatement technologies for such plants. Consequently, implementation of these rules will result in longer contracts - thus, larger state aid- for lignite plants than those for other technologies. This difference in contract length between other technologies and lignite plants in the proposed scheme, in turn further supports lignite at the expense of other technologies, thus undermining the technology

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<sup>17</sup> COMMUNICATION FROM THE COMMISSION Guidelines on State aid for environmental protection and energy 2014-2020(2014/C 200/01) [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0628\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0628(01)&from=EN)

<sup>18</sup> The BAT conclusions for large combustion plants (which includes lignite and coal power plants) were published in the Official Journal of the European Union on 17 August 2017, and according to the Industrial Emissions Directive, must be complied with 4 years later at the latest: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1503383091262&uri=CELEX:32017D1442>





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neutrality of the scheme, a key issue also in the Tempus case regarding the capacity scheme in Great Britain<sup>19</sup>.

In conclusion, the proposed capacity mechanism has several problems, which the Green Tank urges the Greek government to remedy in close collaboration with all participants of the Greek electricity market and the European Commission.

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<sup>19</sup> Case T-793/14 of 15 November 2018, *Tempus Energy and Tempus Energy Ltd / Commission*, para. 181. The point of technological neutrality is now formally investigated by the Commission in respect of the GB capacity mechanism