

The importance of access to fuels for competition in the electricity sector: the case of lignite in Greece

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On 5 March 2008 the Commission adopted a Decision finding that the Hellenic Republic had infringed Article 86(1) in conjunction with Article 82 of the EC Treaty by maintaining the preferential access to lignite in favour of the incumbent Greek electricity provider, Public Power Corporation (PPC). The Hellenic Republic had thereby conferred a competitive advantage on PPC in the wholesale electricity market, because lignite is the most competitive source of electricity generation in the Greek market. This action maintained and strengthened the dominant position of PPC in that market and created inequality of opportunity between economic operators. The abovementioned Decision calls on the Hellenic Republic to grant fairer access to lignite, and is an important step in the Commission's efforts to introduce more competition into energy markets: it underlines the need to ensure fair access to the cheapest sources of generation in order to ensure effective competition.

1. The Greek electricity market

In terms of the process of liberalisation of energy markets that has taken place in the European Union, the liberalisation of the Greek electricity market began in 2001. The earliest steps of this process included the introduction of freedom to generate electricity and to supply electricity to large consumers. Subsequently, retail supply was further liberalised so as to include other categories of consumers. Moreover, a mandatory day-ahead market (pool) was created in 2005 for the sale of all locally generated and imported electricity.

At the beginning of the liberalisation process, the incumbent undertaking (PPC) was producing almost all of the electricity generated in Greece and supplying virtually all consumers: the only exceptions were a few industrial companies which had previously obtained authorisation to operate their own generation plants, usually Combined Heat-And-Power (CHP) plants, to meet their manufacturing needs. The aim of the liberalisation process was to bring new generators into the market.

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However, entries by newcomers were only very limited: the new power plants built between 2001 and 2006 were 1) plants using Renewable Energy Sources (RES, such as wind power) under an attractive guaranteed tariff regime, 2) plants built by PPC itself and 3) two gas-fired plants only which were built by competitors. For all practical purposes in 2006 PPC still owned 90% of the installed capacity (which was about 12 300MW), RES plants represented 4.1%, industrial CHP plants amounted to about 1.5% and the two new generators active on the market (Hellenic Petroleum and GEK) together amounted to 5.7% ⁽²⁾.

This lack of investment was not due to lack of demand, since consumption grew by about 15% in the relevant period. In fact, because supply was not keeping pace with the growth in consumption, there was a serious risk of black-outs, and the Regulator had to subsidise the building of one of the two new gas-fired plants mentioned above (on the basis of tender procedures) to ensure that the necessary supply would be available in 2004. The Regulator had to organise further tenders in 2006 in order to subsidise the building of more plants and to ensure that 900MW of additional capacity was put in place. This situation was not caused by the licensing process either: between 2001 and 2006, 21 licences for a total capacity equal to half of the existing installed capacity were granted to potential competitors of PPC and many of these licences were obtained as soon as 2001. The real issue was that competitors were not building new power plants.

2. The specific role of lignite in Greece

As explained in previous articles of this Newsletter ⁽³⁾, the electricity sector has particular characteristics: the product cannot be stored, flexibility of demand is very limited, and the level of demand varies significantly within a day or a week and on a seasonal basis. This leads to a system where demand must be continuously matched by supply (in practice on an hourly basis). In addition, the production costs of different sources of generation

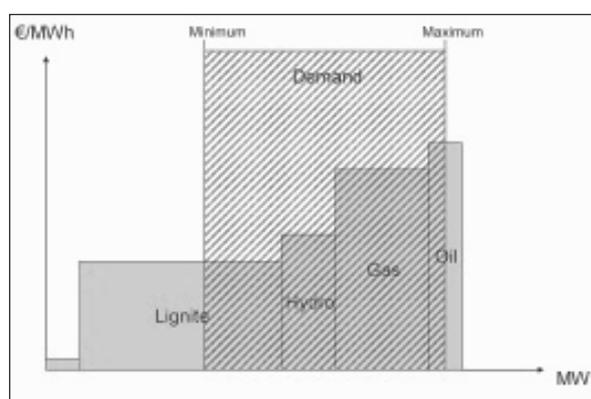
⁽²⁾ This percentage includes CHP plants owned by these two operators and which date back to pre-liberalisation times

⁽³⁾ See Competition Policy Newsletter 2/2007, 'Modelling competitive electricity markets, are consumers paying for a lack of competition?', page 18.

(based on various fuels or on hydropower) vary very considerably, thereby creating a steep merit curve; moreover, the price is set every hour, by the last plant in the merit order that is called upon to meet the demand.

The merit order of plants in Greece (shown in the graph below) is simpler than on other markets, given that at present there are no nuclear or coal-fired power plants in the Greek market. The cheaper plants are lignite-fired plants. In recent years, the shares of electricity production for each of the different sources of generation were around 60% for lignite-fired plants, 6-12% (depending on the year) for hydro-power plants and about 30% for gas and oil-fired plants.

Figure 1: the Greek merit curve



This is a schematic representation of the supply curve on the Greek wholesale electricity market based on data collected in the investigation. The box on the left in which the price is virtually zero corresponds to electricity which benefits from priority dispatch in the pool (imports and RES).

As demand varies between peak and off-peak, the cheaper plants (so-called ‘baseload plants’) are operating continuously to meet demand and the more expensive plants are called upon to produce only during certain hours. In order to compete in the market, it is thus important to have plants along the merit curve so as not to rely only on peak plants with a sporadic output. Furthermore, the cheaper plants generate far more profits than other plants as they enjoy inframarginal rent during peak hours. It is thus of key importance for an electricity undertaking to have cheap baseload plants, which in the case of Greece means lignite-fired plants. Indeed, the OECD had already reported in 2001 and in 2006 ⁽⁴⁾ on the

⁽⁴⁾ OECD report on Greece (OECD, 2006) and OECD report ‘Regulatory Reform — Greece’ (OECD 2001)

advantages of lignite-fired plants in Greece, and this was admitted publicly by PPC itself ⁽⁵⁾. The advantage of lignite-fired generation is not only the fact that it is the cheapest source of generation ⁽⁶⁾, but also that it is a very stable source. Lignite is very expensive to transport and is thus hardly traded: lignite extracted from a deposit is thus systematically burnt in nearby power plants which are designed specifically to fire the lignite of that deposit. This is the practice throughout Europe.

The problem is that, to date, only PPC can build lignite-fired plants in Greece since it has been given a virtual monopoly access to the Greek lignite reserves.

3. The State measures giving control of lignite to PPC

Lignite is an abundant resource in Greece and is essentially used for electricity generation. Greece is the second largest lignite producer in Europe and fifth in the world. Virtually all (98%) of lignite reserves are owned by the State. The State therefore controls access to lignite in Greece.

The State does not exploit lignite directly: it grants lignite exploration and exploitation rights to companies by individual decisions. Initially this was done without a specific legal framework. Then, in 1973, Greece adopted a mining code applying to all companies and, in 1975, a specific law creating a separate procedure for granting rights to PPC. The code was used only for the allocation of rights on very small deposits, whereas PPC was granted rights on all large deposits. The result of the decisions taken by Greece is that, by the time the electricity sector was liberalised, 91% of the reserves granted for exploitation had been granted to PPC and only 9% to other undertakings. Seven years later, in 2008, the situation had not changed.

It therefore comes as no surprise that competitors of PPC cannot in practice build new lignite-fired plants. In fact, undertakings applied for licences to build new lignite-fired plants in Greece as early as 2001, but these applications were all rejected, *inter alia* on the grounds that there were not sufficient quantities of lignite to fuel such plants.

⁽⁵⁾ PPC recognised that lignite is a strategic fuel for instance in presentations to sector experts and in its annual reports. Statements gradually disappeared from the annual reports as the procedure of the Commission went forward.

⁽⁶⁾ This is confirmed by PPC internal data and by the price of electricity offered by PPC in the day-ahead market.

4. The infringement

Article 86 (1) of the EC Treaty states that ‘in the case of **public undertakings** and undertakings to which Member States grant special or exclusive rights, Member States shall neither enact nor **maintain** in force any measure contrary to the rules contained in this Treaty, in particular to those rules provided for in Article 12 and Articles 81 to 89.’ PPC is a public undertaking because it is 51% owned and controlled by the Hellenic Republic.

According to the case law of the Court of Justice, if a State measure results in an inequality of opportunity between economic operators, and therefore a distortion of competition, such a measure constitutes an infringement of Article 86(1) in conjunction with Article 82 (7).

By granting and maintaining in force quasi-monopolistic rights giving PPC privileged access to lignite exploitation, and thus to lignite-based electricity, the Hellenic Republic ensured that PPC had privileged access to the cheapest available fuel for electricity production. This created an inequality of opportunity between PPC and competitors on the wholesale electricity market. The Hellenic Republic thus enabled PPC to protect its quasi-monopolistic market position despite the liberalisation of the wholesale electricity market, thereby maintaining and reinforcing the PPC’s dominant position in that market

5. The case made by the State

During the administrative procedure, the Greek State argued that the measures had essentially been adopted before the liberalisation of the electricity sector. In the Commission’s view, however, the problem was related to the fact that the Hellenic Republic had maintained those measures after liberalisation. No new deposits were granted to competitors, the legislation for the granting of rights to PPC is still in force and PPC remained free to obtain rights on more lignite deposits (8).

The Greek State also argued that lignite was not conferring an advantage on PPC given that it was proving increasingly expensive to mine owing to environmental concerns and that there were many alternatives available (e.g. for instance it

was argued that a large number of projects are in the pipeline for new gas-fired and even coal-fired plants and that this showed that these were suitable alternatives to lignite-fired plants). Increasing costs have not affected the competitive advantages of lignite: this is demonstrated *inter alia* by the plans announced by PPC itself to build new lignite-fired plants and to develop new deposits. Although other projects do exist, the analysis by the Commission (9) demonstrated that alternatives are still clearly more expensive than lignite. In fact, several of the projects announced by competitors continue to be delayed because these operators cannot compete effectively if they do not have lignite-fired power plants. This is the very reason why the State was obliged to subsidise new plants to ensure security of supply. The Greek State further argued that imports were placing a constraint on competition: however, that constraint remains very limited, as imported capacity accounts for only around 10% of peak electricity demand.

The Greek State also argued that the real issue for (the reduced) market entry was the existence of regulated tariffs in the downstream retail supply to consumers. While these tariffs may have compounded the effect of the State measures on lignite, these tariffs could not be the only reason for the low level of entry in the market by competitors. Furthermore, after the mandatory day-ahead wholesale market was created, this issue was no longer relevant. As admitted by the Greek State and PPC themselves, competitors need lignite-fired generation as part of their portfolio.

6. Remedies

The Commission Decision of 5 March 2008 (which found that there had been a violation of Article 86(1) in conjunction with Article 82 of the EC Treaty) called on the Hellenic Republic to adopt remedies in order to correct the anti-competitive effects of the State measures in question. Specifically, the Decision provided that the Hellenic Republic, within the framework of its overall policy regarding lignite-fired generation in Greece, should adopt specific measures to ensure that competitors of PPC have access to sufficient amounts of lignite and to generation of electricity on the basis of lignite to allow them to compete with PPC in the electricity wholesale market.

(7) C-462/99 Connect Austria [2003] ECR I-5197, paragraph 84.

(8) In particular PPC can apply for the exploitation of the only two remaining significant deposits which are immediately exploitable, based on the provisions of its licence for exploration of those deposits. PPC was also allowed to participate in the reallocation process of one of the few deposits which had not been granted to it.

(9) The analysis used *inter alia* the 2005 report of IEA and NEA on ‘Projected costs of generating electricity’ which is available at <http://www.iea.org/textbase/nppdf/free/2005/ElecCost.pdf> and the trend in fuel prices since then (in particular the surge in gas and coal prices), which underlines the advantage of the stable cost of lignite.

Under the terms of the Decision, as an indicative objective, 40% of total exploitable lignite reserves in Greece must be made available to PPC's competitors in the electricity market. The type of measures that the Hellenic Republic could adopt cumulatively or individually may include the allocation of new deposits to competitors, the reallocation of previous deposits and possibly connected power plants, and the imposition of a cap which would be binding on all market participants, including PPC.

7. Conclusion

This case underlines the important role of access to fuels in ensuring competition in electricity markets and the specific role of certain fuels in that respect. This case also demonstrates how State measures could hamper the development of competition in the energy sector. However, the Commission is determined to address such distortions through **structural measures** wherever necessary, in order to ensure that there is enough investment and better supply for the benefit of consumers.