COMMISSION DECISION

of 5 March 2008

on the granting or maintaining in force by the Hellenic Republic of rights in favour of Public Power Corporation S.A. for extraction of lignite

(Text with EEA relevance)

(Only the Greek text is authentic)

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THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community, and in particular Article 86 (3) thereof,

Having given the Greek authorities and Public Power Corporation S.A.(PPC) the opportunity, by letters of 1 April 2004, of 3 May 2004, of 21 September 2005 and of 18 October 2006 respectively, to make known their views on the objections raised by the Commission with regard to Greek legislation relating to lignite extraction rights, Whereas:

1. THE FACTS

1.1. The company

1. PPC is a corporation seated in the Municipality of Athens, Greece. It is one of the largest industrial enterprises in Greece in terms of fixed assets¹, active mainly in Greece and in the sectors of electricity and lignite. As of the end of 2006, PPC had 26 208 employees. In the year 2006, PPC achieved total revenues of 4 787 million € and a net income after tax of 22 million €

1.1.1. The statutes of the company

- 2. PPC was established in 1950 by the Greek Law 1468² as a 100% state-owned Public Corporation with exclusive right to generate, transport, and supply electricity throughout Greece.
- 3. In 1996, Law 2414/1996 for the modernisation of the Public Enterprises granted the Hellenic Republic the right to transform PPC into a shareholding company with a single share holder, the Hellenic Republic.
- 4. On 1 January 2001, pursuant to Article 43 of Greek Law 2773/1999 for the Liberalisation of the Electricity Market, *inter alia* transposing EC Directive 96/92³, the first EC directive liberalising the electricity market, and pursuant to the Presidential Decree 333/2000, PPC was transformed into a "Société Anonyme" with a share capital of 222 billion GDR (650 million €). On 12 December 2001, PPC issued for the first time shares on the Athens Stock Exchange House as well as Global Depositary Receipts on the London Stock Exchange. The Hellenic Republic further sold some of its shares in December 2002 and October 2003.

¹ PPC total assets amounted to 12 938 million Euros at the end of 2006, according the consolidated financial results for 2006 published by PPC on 30 March 2007 (available on PPC's website http://www.dei.gr).

² Official Journal of the Hellenic Republic, volume A, issue 169.

³ Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity Official Journal L 027, 30/01/1997 P. 0020 - 0029

5. According to Article 43 paragraph 3 of Law 2773/1999, the participation of the Hellenic Republic in the capital stock of the company at any time cannot be less than 51% of the voting shares of the company even after each increase of the capital stock. Thus PPC is controlled by the Hellenic Republic. Current shareholders of PPC's capital are shown in the table below:

Shareholder	% of shares
The Hellenic Republic	51.12
OAP – PPC (the Pension Fund of PPC employees) ⁴	3.81
Fidelity Investments	5
Free float. Athens and London Stock Exchanges	40.07

Table 1 Shareholding in PPC as of 31.12.2006

6. According to Article 8 of PPC's Articles of Association, approved by the Presidential Decree 333/2000, if a shareholder acquires more than 5 % of PPC's shares, its voting rights at the General Assembly of shareholders are limited to 5%. This limit does not apply to the Hellenic Republic.

1.1.2. The activities of the company

- 7. PPC is mainly active in Greece. The main areas of economic activity of PPC are electricity and lignite. In 2005, PPC generated 96% of the electricity produced in Greece⁵ and produced 97% of the lignite produced in Greece⁶. PPC is also active in other markets such as telecommunications, engineering, consulting and technical commercial services.
- 8. As regards the electricity sector, PPC is the former legal electricity monopoly and currently the main electricity generator and supplier in Greece. As regards electricity supply, PPC is the main supplier for eligible customers and is obliged to carry out a number of additional tasks under the Greek regulatory framework. Firstly, PPC is the exclusive supplier of all non eligible electricity customers (Article 26 par. 1 of the Law 2773/1999) in Greece. Secondly, PPC is the last resort supplier for the eligible customers, in case they have not chosen another supplier (Art 26 par. 2 of Law 2773/1999). Thirdly and lastly, PPC is the exclusive wholesale supplier and buyer for the non-interconnected islands (Article 11 par. 3 of Law 2773/1999). In addition to generation and supply activities, PPC is the sole owner of transmission and distribution network assets in the Member State, it manages the distribution network but does not manage the transmission network. Indeed that network is managed by the Hellenic Transmission System Operator (HTSO), which is 51% owned by the

⁴ PPC's employees pension fund was created pursuant to Article 34 of the Greek Law 2773/1999 on the privatisation of PPC, which defines this fund as public.

⁵ Source: PPC Annual Report for 2005.

⁶ PPC produced 67.3 million tons of lignite in 2005 (source: PPC) out of a total of 69.1 million tons of lignite produced in Greece in 2005 (source: Eurocoal Market report 1/2007)

Hellenic Republic and 49% owned by generators in proportion of their generation assets (meaning essentially PPC today)

- 9. As regards the lignite sector, PPC is the main lignite producer in Greece, the second-largest lignite producer in the European Union and the fifth largest in the world⁷.
- 10. While most electricity generation, electricity supply and lignite activities are carried out by PPC itself, PPC carries out also these and other activities through subsidiaries⁸. The following chart (based on PPC's latest annual report) shows the main subsidiaries and minority shareholdings of PPC.



11. In the year 2006⁹, PPC achieved total revenues of 4 787 million € including 4 442 million Euros from sales of energy (essentially electricity), it achieved Earnings Before Interest Tax Depreciation and Amortisation (EBITDA) of 740 million € and a profit after tax of 22 million € The decline in profits of PPC in 2005 and 2006 is, according to PPC annual reports and press releases¹⁰, primarily due to an increase in prices of liquid fuel and gas procured for electricity generation and to an increase in electricity procurement costs¹¹ which was higher than the increase in retail revenues in the corresponding years¹².

- ¹¹ From 2005 onwards, PPC had to procure electricity for its retail customers through the mandatory dayahead market, see point 103. This was underlined in PPC's letter dated 4 April 2007, paragraph 3.6.
- ¹² PPC finds that the increase in retail tariffs was not sufficient to cover the increase in the cost of procurement of electricity at the wholesale level. This was underlined in PPC's letter dated 4 April 2007, paragraph 3.6.

⁷ Source: PPC Annual Reports for 2004 and 2005.

⁸ In particular, PPC Rhodes, PPC Renewables and PPC Wind are active in generation and Larko is active in mining (exploiting a small mine see 1.2.3).

⁹ Source: consolidated financial results for 2006 published by PPC on 30 March 2007.

¹⁰ Source: PPC website (<u>www.dei.gr</u>). For 2007, see in particular the press release issued by PPC on 27 March 2007 for the results concerning 2006.

Year	2002	2003	2004	2005	2006
Turnover (thousand euros)	3,420,706	3,897,519	4,095,013	4,290,900	4,787,400
EBITDA (thousand euros)	1,027,849	1,138,328	1,210,058	906,800	739,700
Profit after tax (thousand euros)	479,962	304,628	293,126	135,700	22,100
Assets (thousand euros)	10,486,241	10,459,418	11,216,125	12,662,600	12,938,100

Table 2 Financial characteristics of PPC¹³

1.2. The Greek lignite sector

1.2.1. Introduction on lignite

- 12. Lignite is a solid fuel mostly used for electricity generation although it can be consumed for household heating and some industrial processes. The latest figures available¹⁴ show that electricity generation represents around 93.3% of total lignite consumption in the EU-25, industrial processes represent 2.4%, patent fuel plants 3.6% and domestic heating 0.4%. These proportions of lignite consumption are also valid for most Member States¹⁵, but in the case of Greece, virtually all lignite is used for electricity generation.
- 13. Lignite is the least calorific of all categories of coal (anthracite, bituminous, subbituminous, brown coal/lignite): this is due to its high moisture and volatile content and to its low carbon content¹⁶. This means that lignite-fired plants are designed to burn specifically lignite and that it is very expensive to turn them into coal-fired plants¹⁷. This also means that lignite is unsuitable for transporting over long distances¹⁸. Indeed, all lignite-fired plants in the EU are close to lignite mines and there is virtually no export of lignite between EU Member States (such exports

¹³ Source: Annual reports of PPC for the years 2002 to 2005, consolidated financial results for 2006 published by PPC on 30 March 2007.

¹⁴ See the 2003-2004 coal report published by the Directorate General for Transport and Energy of the European Commission. It is available at http://ec.europa.eu/energy/coal/market_pricing/reports_en.htm

¹⁵ See the 2003-2004 coal report published by the Directorate General for Transport and Energy of the European Commission. It is available at http://ec.europa.eu/energy/coal/market_pricing/reports_en.htm

¹⁶ See the OECD 2004 publication on "International coal trade –contributing to suitable energy supply". Coal classifications are discussed in chapter 2, called "Background in brief". See also the report of the United Nations Economic Commission for Europe called "Low-rank coal utilization – international codification system", adopted in 2002 and which describes the different sorts of low-rank coals (ortholignite, meta-lignite and sub-bituminous coal) and compares them to other sorts of coals (on its page 15) according to their characteristics (especially calorific value): it is available at: http://www.unece.org/ie/se/coal/code.html.

¹⁷ See case IV M.402 PowerGen/NRG Energy/Morrison Knudsen/Mibrag.

represented less than 0.1% of total consumption)¹⁹. Also, imports from and exports to third countries represented less than 0.3% of total consumption of the EU^{20} . Greece itself has neither imported nor exported any lignite in the recent years²¹.

- 14. Thus lignite is essentially a locally produced solid fuel used for electricity generation at power plants situated close to lignite mines.
- 15. Greece is the fifth largest producer of lignite in the world and the second largest producer of lignite in the EU after Germany, as shown in the table hereafter. Given the very limited imports and exports taking place, consumption in each Member State is about equal to production.

Quantities (Mt)	Germany	Greece	Poland	Czech Republic	Romania
2006 Production	176.3	64.2	61.3	48.7	n.a.
2005 Production	178	69.1	61.9	49	31.6

Table 3 Lignite production in the largest producing EU Member states²²

16. The neighbouring territories of Greece do have lignite deposits and some of them exploit them as shown in the table below²³. However, deposits in the territories of Bulgaria, in Kosovo and Serbia are too far away (100km or more from the borders of Greece²⁴ and exploited for the purpose of generation of electricity²⁵ and their

- ²¹ Same source. This is confirmed by the IEA website database per country available at http://www.iea.org.
- ²² Source: Euracoal, see in particular reports and data on their website available at: http://euracoal.be/newsite/overview.php.
- ²³ Turkey is not presented here as most of its lignite is produced in Anatolia.
- ²⁴ See Eurocoal report on "Coal industry across Europe 2005", available at: <u>http://euracoal.be/newsite/overview.php</u>. It contains a presentation of each national market, including maps of the main sites of production.
- ²⁵ The electricity company EPS (see <u>www.eps.co.yu</u>) exploits essentially all of the lignite exploited in Serbia and generates electricity by burning it. The Kosovo Electric Company (KEK) is also currently exploiting all of the lignite exploited in Kosovo and burning it to generate electricity; the Ministry of Energy and Mines of Kosovo's Temporary Self-Administration started in 2006 a tender procedure for projects to develop a new mine *to supply local power plants*, to build new power plants and to upgrade

¹⁸ Idem, in chapter 2, called "Background in brief", in section "coal quality", the report states: "Brown coal (lignite) is low in carbon content and high in moisture. It is unsuitable for transporting long distances and for this reason is used extensively, but close to mines, for power generation."

¹⁹ The only source of exports inside the EU25 is some special lignite (with exceptional calorific value for lignite) exploited in the Czech Republic. See the 2003-2004 coal report published by the Directorate General for Transport and Energy of the European Commission. It is available at http://ec.europa.eu/energy/coal/market_pricing/reports_en.htm. It shows that Greece has not imported or exported any lignite in those years.

²⁰ Again the only source of exports of the EU25 is some special lignite (with exceptional calorific value for lignite) exploited in the Czech Republic. There are also a few imports from a few third countries. See the 2003-2004 coal report published by the Directorate General for Transport and Energy of the European Commission. It is available at http://ec.europa.eu/energy/coal/market_pricing/reports_en.htm. It further shows that Greece has not imported or exported any lignite in those years.

production is thus unlikely to be transported to Greece. In addition, the amounts produced in the closest mines (FYROM, Albania) are either very small (in the case of Albania) or essentially mined by the local electricity generation company which exploits the lignite to burn it and generate electricity (in the case of FYROM²⁶). Thus the potential for lignite imports into Greece across its borders from close by lignite deposits is limited. In effect, as indicated above, Greece has not imported lignite in the past. As regards FYROM specifically, PPC confirmed²⁷ in 2007 that lignite is essentially exploited in FYROM by the local power producer [...].

Table 4 Lignite	production	in the	countries	neighbo	uring	Greece ²⁸	,

Quantities (Mt)	Albania	FYROM	Serbia	Bulgaria
2004 Production	0.1	8	24.1	23.7

17. All in all, Greece is by far the largest lignite producer in its region and lignite supply in Greece is essentially depending on local lignite production, i.e. on deposits located in the territory of the Hellenic Republic.

1.2.2. The legal and regulatory framework

- 18. Until 1973, the legal framework for lignite mining activity in Greece consisted of individual decisions of attribution of lignite exploration and exploitation rights, such as the Legal Decree (LD) 4029 of 12/13 November 1959 (see paragraph 37). In 1973, the Mining Code (Legislative Decree 210/1973) was adopted and established a general framework for lignite mining activity in Greece. In 1975, Law 134/1975 established separately specific rules for PPC.
- 19. According to the Hellenic Republic, the national legal framework encompasses two types of deposits: privately owned deposits which can be exploited freely by their owners²⁹, and public deposits (owned by the Hellenic Republic) for which the Hellenic Republic grants exploration and exploitation rights. In practice, according to

²⁷ [...]

²⁸ Source: Euracoal, see in particular reports and data on their website available at: http://euracoal.be/newsite/overview.php.

existing lignite-fired plants (PPC indicates in its 2006 Annual report that it participates in the process). In Bulgaria (see Eurocal report on Coal Industry in Europe 2005), the situation concerning the main deposits is the following: in the South west, Bobov Dol Mines EAD is extracting brown coal to be burnt in the Bobov Dol power plants and, in the centre of the country, Mini Maritsa Itzok EAD is exploiting lignite to be burnt in the Maritsa Iztok 1, 2 and 3 power plants

²⁶ Source: "FYROM- In-depth review of the investment climate and market structure in the Energy sector" published in 2006 by the Energy Charter Secretariat and available at: www.encharter.org. The section on electricity and exploitation of lignite is presented in pages 25 to 28: it states that "ELEM owns the coal (i.e. lignite) mines it is supplied from" and shows that its two mines (Suvodol - 91Million tonnes of reserves and Oslomej -14 million tons of reserves) produce 7.35Mt whereas the two other (private) mines (RIK Berovo and Piskupstine) only produce 0.18Mt. The electricity company ELEM (see www.elem.co.mk) confirms this and indicates that it is proceeding with the development of further deposits (Brod-Gneotino and Zivojno) into mines.

²⁹ Private lignite mines operate under Legislative decree N°210/1973.

the information provided by the Hellenic Republic to the Commission³⁰, there are nine (9) small privately owned deposits and thirty-eight (38) public deposits of varying sizes (see section 1.2.3 for the list of the deposits).

- 20. The Hellenic Mining code, in particular articles 143 and 144 thereof, provides for the granting of joint exploration and exploitation rights for public deposits. According to the Hellenic Republic³¹, it would not be financially rational and thus attractive to tender exploration rights without simultaneously tendering exploitation rights. Article 144 of the Mining Code provides for a tender procedure for licensing out such rights (paragraph 2 of that Article) or for direct assignment in urgent cases where this is in the public interest (paragraph 3 of that Article). According to the Hellenic Republic³², these Articles of the Mining Code apply to all market players. However, the current status of public lignite deposits in Greece does not reflect these general principlesFirst, licences for some of the currently licensed public deposits have been initially granted under legal frameworks that were in force prior to the existing mining code which did not provide for open tenders (through direct attribution of the rights, see point 34). Secondly, after the entry into force of the current Mining code, more concessions have been granted by a decision of the Cabinet rather than through tenders (see point 35). Third, in the case of PPC, a separate legal basis was used for the granting of concessions on public deposits (see point 36 et seq.).
- 21. Indeed, as regards PPC, Law 134/1975 stipulates in its Article 3 paragraph 3 that:

"by virtue of a decision of the Minister of Industry published in the Official Government Journal it is possible to determine each time areas in the whole territory of Greece where PPC shall have the exclusive right to search, research and exploit solid combustible mineral materials".

- 22. Accordingly, after the entry into force of the current Mining code, PPC (and only <u>PPC</u>) was granted rights for the exploration and exploitation of mines on the basis of Law 134/1975. While rights were granted to PPC in most cases for both exploration and exploitation of lignite deposits, in two cases (deposits of Drama and Elassona), the Hellenic Republic granted only exploration rights³³.
- 23. In its letter of 20 June 2006, the Hellenic Republic informed the Commission that it intends to amend the laws founding PPC's rights of exploration and exploitation of lignite, i.e. Law 134/75 and Legal Decree 4029/59. First, the Hellenic Republic envisaged to repeal "shortly", article 3, paragraph 3, of Law 134/75, which allows for the grant of lignite exploration and exploration rights to PPC (and only to PPC) by Ministerial decisions. Existing rights of PPC would be maintained and extended according to transitional provisions "consistent with Article 144(3) of the Mining

³⁰ Source: Answer to the Letter of Formal Notice and Letter of the Hellenic Republic dated 22 November 2005.

³¹ Letter of the Hellenic Republic dated 22 November 2005, reply to question 2.

³² Letter of the Hellenic Republic dated 22 November 2005, reply to question 2.

³³ According the letter of the Hellenic Republic dated 22 November 2005, this was done "to utilise the services and know-how of PPC in a supplementary manner to the task with which the IGME (Institute of Geological and Mining Exploration) was charged (for example at Drama and Elassona there were initial IGME surveys which PPC was invited to continue in 1985 and 1994 respectively). In this way, the legal basis for acquiring exploration rights by PPC to this day has been concession pursuant to Law 134/1975".

code".³⁴ Separately, Article 1, paragraph 1, of Law 4029/59 would be amended so that PPC would not have exclusive rights over the whole Arcadia department but only in the Megalopolis area³⁵. That being said, in its subsequent and last letter of 25 January 2007, the Hellenic Republic merely confirmed this intention but did not confirm that it had amended these laws.

24. Section 1.2.4 will provide details on all the decisions taken by the Hellenic Republic on public deposits.

1.2.3. The list of lignite deposits in Greece

- 25. Lignite is found in great abundance in the Greek subsoil. Indeed, the reserves of all deposits, according to the Greek Institute of Geology and Mineral Exploration (IGME), are estimated at 4,590 million tons. Out of these reserves, only 3,656 million tons are exploitable today, as defined in the letters by the Hellenic Republic and PPC. According to PPC, on the basis of Greece's total deposits and anticipated future rate of consumption, it is estimated that the domestic supply of lignite is enough to last for more than 50 years³⁶.
- 26. Table 5 hereafter lists of all proven deposits of lignite in Greece, as of 1. January 2007, indicating for each of them the owner of the corresponding rights of exploitation and/or exploration and the actual user or buyer of the lignite when the deposit is being exploited.
- 27. This list shows that privately-owned deposits represent a negligible part of the total reserves of all deposits: they represent 85 million tons of reserves, i.e. only 1.9% of all reserves and 2.3% of currently exploitable reserves. In other words, the Hellenic Republic controls access to essentially all Greek deposits and the decisions of the Hellenic Republic on the allocation of exploration and exploitation rights on public deposits shape the Greek lignite sector. These decisions of the Hellenic Republic are presented in the next section.

³⁴ Paragraph 3.2 of the Letter of the Hellenic Republic dated 20 June 2006.

³⁵ Paragraph 3.3 of the Letter of the Hellenic Republic dated 20 June 2006.

³⁶ See the website of PPC: <u>http://www.dei.gr</u>, under the section on business activities of PPC.

Table 5: List of lignite deposits in Greece

Categories of deposits, depending on their statute	Reserves (Million tons) out of a total of 4382 Mt	Percentage of total reserves	Percentage of public reserves conceded for exploration	Percentage of public reserves conceded for exploitation	Names of deposits	Reserves of those deposits (in Million tons)	User/buyer of lignite
Public deposits for which	2106.3	48.1%	62.6%	90.9%	Ptolemais Main field	528	PPC
rights were granted to PPC					Ptolemais South field	591	PPC
					Ptolemais Kardia	417	PPC
					Amynteon	378	PPC
					4 deposits of Florina	140.2	PPC
					3 deposits of Megalopolis	254	PPC
Public deposits for which	210.5	4.8%	6.3%	9.1%	Achlada 1&2	103	PPC
rights were granted to entities					Violignit/Vevi	90	Under auction
other than PPC					Amynteon/Vegora	15	To be reattributed
					Seven very small deposits	Total=10.8	Inactive*
Public deposits for which only	1046	23.9%	31.1%	Not relevant	Drama	900	To be decided
granted to PPC					Elassona	146	To be decided
Public deposits for which NO	934	21.3%	Not relevant	Not relevant	Servia	540	Not exploitable
rights have been granted					Orestiada	130	
					Other deposits (<60Mt)	Total=394	
Deposits privately owned	85	1.9%	Not relevant	Not relevant	Koroni	27	Inactive
					Kalavrita	24.1	Inactive
					Servia Larko	7	Larko (nickel-iron production)
					7 Others (reserve below 10Mt)	33.9	Inactive

* Only one very small one is active (0.6Mt).

Source of Table 3: the first five columns are based on the data provided by the Hellenic Republic in its Letter dated 24.01.2007, the last three columns are based on data from the Greek Institute of Geology and Mineral Exploration (IGME) and the Letter of the Hellenic Republic dated 22 November 2005 as well as information from PPC for the last column. The figures of individual deposits do not add up to the figures of the second column due to the difference in time between the answers of the Hellenic Republic in that regard. The term "exploitable reserves" is the one used by the Hellenic Republic and by PPC in their answers to the Commission: it basically includes all deposits except Public deposits for which NO rights have been granted. [...]

28. Most deposits are located in the north of the Member State. More precisely, the three PPC deposits of Megalopolis and most privately owned deposits are located in the Peloponnesus, a few small deposits for which exploitation rights have not been given are located in the centre of the country and in Crete and Rhodes, and all other deposits are located in the north (mostly in Western Macedonia). The following map shows the main areas of exploited and exploitable reserves, as identified by PPC.



1.2.4. The decisions taken by the Hellenic Republic for public deposits

- 29. As a result of the various decisions taken by the Hellenic Republic for public deposits, out of the thirty-eight (38) public deposits identified by the Hellenic Republic in its information provided to the Commission³⁷, two (2) public deposits (Drama and Elassona) are the subject of exploration licences only, twenty-one (21) public deposits are the subject of both exploration and exploitation licences and fifteen (15) other public deposits identified are not yet licensed but the Hellenic Republic has received applications for some of them. The following subsections will explain the decisions taken for these three groups of public deposits and show that PPC has been granted exclusive rights for virtually all exploitable reserves.
 - 1.2.4.1. The Drama and Elassona deposits for which only exploration rights have been granted
- 30. The two deposits for which only exploration rights have been granted are the very large deposit of Drama (900Mt of reserves as of 1.1.2004) and the medium-size deposit of Elassona (146Mt of reserves as of 1.1.2004). The Hellenic Republic

³⁷ Source: 32 deposits were identified in the Answer to the Letter of Formal Notice and six more deposits were identified in the Letter of the Hellenic Republic dated 22 November 2005.

assigned those rights to PPC on the basis of Law 134/1975 in 1985 and 1994 respectively³⁸. These rights were first renewed in 1997^{39} .

- 31. In an application from 1998, PPC requested for the lignite deposits in Drama and Elassona an extension of its rights for both exploration <u>and exploitation</u>. Decision No. D9-A/F52.F70/oik.12783/51/19.08.1999 of the Minister of Development extended the exploration rights for the Drama and Elassona deposits until 25.07.2005 and 04.08.2005 respectively and in relation to the granting of exploitation rights ruled that, 'Assignment or otherwise of the exclusive right to exploit the lignite fields of Drama and Elassona by PPC on a exclusive basis shall be examined on a request from PPC, where all parameters (mining, environmental, financial and social parameters) which are involved in determining the ability to mine the deposits located there are examined, and where the relevant results are notified to us in order for an assessment to be made.''
- 32. The exploration rights for the Drama and Elassona deposits expired on 25.07.2005 and 04.08.2005 respectively. The Hellenic Republic indicated in its Letter of 22 November 2005 that it considers that the results of exploration carried out by PPC to date on the Drama and Elassona deposits are adequate to justify exploitation. The Hellenic Republic also indicated in the same letter that it is now considering plans for exploitation of the two fields. In its Letter of 20 June 2006, the Hellenic Republic announced that it would carry out a public open tender for the two deposits. In its Letter of 24 January 2007, the Hellenic Republic indicated that the tender would not be launched before the closure of the procedure which this decision brings to an end. In its Letter of 19 January 2007, PPC found⁴⁰ that it was financially damaged by the arrangement for the exploration of the Drama and Elassona fields by PPC in lieu of IGME⁴¹, since the exploration rights have been granted separately from the exploitation rights.
 - 1.2.4.2. The public deposits for which both exploration and exploitation rights have been granted
- 33. As regards the public deposits for which both exploration and exploitation rights have been granted, one can distinguish three groups of deposits: the first group includes three (3) small or medium-sized deposits licensed to three entities other than PPC, the second group includes seven (7) very small mines licensed to yet other entities and the third group includes eleven (11) large and medium-sized deposits licensed to

³⁸ By Ministerial decision no. F34.14/4231 dated 19 July 1985, PPC was granted the exclusive right of prospecting and research of solid fuels in the Drama basin, and by Ministerial decision no. D9/A/F70/12954, dated 27 July 1994 (Official Gazette, Volume B, Issue no. 603, 4 August 1994), PPC was granted the exclusive right of prospecting and research of solid fuels in the Elassona basin.

 ³⁹ Ministerial decisions D9-A/F52/9381/151 dated 02 July 1997 (Official Gazette, Volume B, Issue no. 567, 10 July 1997) and D9/A/F70/11981/199 dated 02 July 1997 (Official Gazette, Volume B, Issue no. 567, 10 July 1997) renewed the exploration rights in the Drama and Elassona basins respectively

⁴⁰ Letter of PPC dated 19 January 2007, paragraph 2.2.

⁴¹ IGME is the Greek Institute of Geology and Mineral Exploration. The letter of PPC and the Letter of the Hellenic Republic dated 24 January 2007 (paragraph 2.1) state that IGME should have carried out the exploration of the deposits although it is not clear how IGME would have been granted such exploration rights under the Mining Code. The Letters also did not clarify whether PPC had been compensated for the exploration expenses but stated that it was not economically rationale to tender separately exploration and exploitation rights

PPC. The following paragraphs present the characteristics of those three groups, as summarised in the following table:

	Number of	Period of	Size of the deposits	Owner of the
	deposits	allocation of rights		rights
First group	3	Before the Second	Small and medium	Private entities
		World-War	(total 210.5Mt)	
Second Group	7	After 1985	Very small	Private entities
			(total 11Mt)	
Third Group	11	From 1959	Large and medium	PPC
		onwards	(total 2106Mt)	

Table 6: the differences between public deposits conceded by the Hellenic Republic for both exploration and exploitation

- 34. According to the elements provided by the Hellenic Republic, the rights given to entities in the first group were granted for three small and medium-sized mines in the Prefecture of Florina (West Macedonia) before the Second World War. These three mines had reserves totalling 210.5Mt as of 1.1.2007⁴². These are the mines of Achlada 1&2, the rights for which are currently owned by Lignite Mines Achlada S.A., the mine of Vevi, the rights for which were owned by Violignit S.A., and the mine of Amynteon/Vegora, the rights for which were owned by Amynteon Lignite Mines S.A.. In July 2003 the Deputy Minister of Development issued decisions declaring that the exploitation rights of Violignit S.A. and Amynteon Lignite Mines S.A. had been forfeited as regards the Vevi and Amynteon (Vegora) public lignite deposits respectively, because it found that these companies had failed to discharge their contractual obligations. These companies sought recourse before the Greek courts against these decisions. On 24 May 2006, the Ministry of Development published the terms of a tender to reassign the rights for the Vevi deposit (the larger of the two deposits): the deadline for submitting bids was 28 July 2006^{43} . By 29 September 2006 the Ministry of Development had received bids from six candidates⁴⁴. The Hellenic Republic indicated that it intends to issue a tender for the Vegora deposit after the completion of the tender for the Vevi deposit.
- 35. According to the elements provided by the Hellenic Republic, the rights for the seven very-small deposits (second group) were granted from 1985 onwards to five private legal entities and two individuals. The latest of these concessions was granted in 1999⁴⁵. Each deposit represents 3 million tons of reserves or less, for a total less than 11Mt. Out of the seven concessions for these very-small deposits, two were granted

⁴² Letter of the Hellenic Republic dated 24 January 2007.

⁴³ Letter of the Hellenic Republic dated 20 June 2006, paragraphs 3.5 and 3.6.

⁴⁴ Fax of the Ministry of Development to the European Commission, DG Competition, dated 19 October 2006. Further, PPC provided in its letter dated 4 April 2007 the list of the six candidates: AKMI ATE, TERNA SA, a Joint Venture (Damco Energy S.A.-Techninvest SA –METE SA), PPC SA, Vasiliki Toskani SA, and another Joint-Venture (AKTOR ATE, METKA, MYTILINEOS, Power Genertéion and Supplies SA).

⁴⁵ According to the Letter of the Hellenic Republic dated 22 November 2005, the following deposits were conceded from 1985 onwards: Moschopotamos (1985, 3Mt), Harokopos (1986, 3Mt), Paleohori Kalavriton (1989, 2Mt), Tyrfi Antifillipon (1991, 0.7Mt), Agnanti (1992, 1Mt), Prosilion (1995, 0.6Mt), Siousta Karperou (1999, 0.5Mt).

through tenders and five by Cabinet decision (without tender), and, according to the Hellenic Republic, only one of them was active at the end of 2005^{46} .

36. Thirdly, the rights given to PPC (third group) were granted after the Second World War (for a total of 2106Mt of reserves as of 1.1.2007⁴⁷). The legal instruments granting combined exploration and exploitation rights to PPC are listed in the following points.

Decisions granting exclusive exploration & exploitation rights to PPC

37. According to Article 22 of Legal Decree (LD) 4029 of 12/13 November 1959⁴⁸, PPC has the exclusive exploitation rights for the lignite in the Arcadia Department (essentially the Megalopolis basin of deposits). These rights were last renewed in 1976 and the Hellenic Republic indicated in its answer to the Letter of Formal Notice that these rights expire on 05.03.2026 and can be renewed by the Hellenic Republic for a 25-year-period. Concretely, Article 22 of LD 4029/1959 reads as follows:

"1. The Public Power Corporation (PPC) shall have the exclusive rights of research and exploitation of lignite in areas situated within the Arcadia Department (Nomos) to be determined from time to time by the Minister of Industry by decisions published in the Official Journal.

2. As from publication in the Official Journal of the decisions referred to in the preceding paragraph, research permits issued for lignite prospecting in the areas defined by the said decisions shall be automatically revoked, any existing leases and subleases thereof being terminated."⁴⁹

- 38. As a result of Law 134 of 23/29 August 1975⁵⁰ on the merger of PPC and the Ptolemais Lignite Mining and Industrial Company Ltd of Greece (LIPTOL), PPC acquired the LIPTOL' rights for prospection, extraction and exploitation of lignite in the Ptolemais ligniferous areas. Accordingly the rights for the three large deposits of the Ptolemais region (South field, Main field and Kardia field, see "Table 5: List of lignite deposits in Greece") were assigned to PPC (Article 3 paragraph 1). These rights were last renewed in 1976 and the Hellenic Republic indicated in its answer to the Letter of Formal Notice that these rights expire on 05.03.2026 and can be renewed by the Hellenic Republic for a 25-year-period.
- 39. This same Law 134/1975 further stipulates in its Article 3 paragraph 3 that:

"by virtue of a decision of the Minister of Industry published in the Official Government Journal it is possible to determine each time areas in the whole territory of Greece where PPC shall have the exclusive right to search, research and exploit solid combustible mineral materials"

⁴⁶ According to the Letter of the Hellenic Republic dated 22 November 2005, only the deposits of Agnanti (1992, 1Mt) and Siousta Karperou (1999, 0.5Mt) were granted through tender procedures, and only the company owning the rights on the deposit of Prosilion was active as of the end of 2005.

⁴⁷ Letter of the Hellenic Republic dated 24 Janaury 2007.

⁴⁸ Official Journal, volume A, issue no. 250.

⁴⁹ Translation provided by PPC attached to its letter of 30 May 2003.

⁵⁰ Published in the Official Journal of the Hellenic Republic, volume A, issue n° 180.

- 40. The concrete areas in which PPC has the exclusive right to research and exploit lignite are determined by the Ministry of Industry by virtue of decisions published in the Greek Official Journal.
- 41. On the basis of Law 134/1975, a Ministerial Decision of 1976⁵¹ determined the area in which PPC "shall have the exclusive right of research and exploitation of solid fuels" (lignite) in the Amynteon and Prosilion-Trigonikon areas. Again on the basis of this same Law 134/1975, another Ministerial Decision of 1988⁵² determined the area in which PPC "shall have the exclusive right of research and exploitation of solid fuels" (lignite) in the Amynteon and Komnina basins. This Ministerial Decision refers to two previous decisions covering the same basins. Concretely it refers to "Decision no. 7020/922/220 of 10 February 1976 of the Minister of Industry, by which PPC was granted the exclusive right of prospecting and research concerning solid fuels in the Amynteon basin, and decision no. 42812/6383/956/ of 4 July 1979 of the Ministry of Industry and Energy, by which PPC was also granted a similar right of research in the Komnina area". The Hellenic Republic indicated in its answer to the Letter of Formal Notice that these rights expire on 23.08.2018. These rights cover the Amynteon mines included in "Table 5: List of lignite deposits in Greece".
- 42. Equally on the basis of Law 134/1975, another Ministerial decision of 1994⁵³ determined the area in which PPC "shall have the exclusive right of research and exploitation of solid fuels" (lignite) in the Florina basin. The Hellenic Republic indicated in its answer to the Letter of Formal Notice that these rights expire on 21.08.2024. These rights cover the Florina mines included in "Table 5: List of lignite deposits in Greece".

1.2.4.3. The other public deposits for which NO rights have been granted

43. The fifteen (15) other public deposits identified by the Hellenic Republic in its information to the Commission⁵⁴ are not yet licensed but the Hellenic Republic informed the Commission of two applications that it had received by the end of 2005. One application was made by PPC S.A. for a deposit located at Pellana, Prefecture of Laconia, in the Peloponnesus (31Mt of total reserves according to the IGME⁵⁵, 13Mt of exploitable reserves according to the Hellenic Republic informed in January 2007 that it had rejected this application⁵⁶. The other application was made by an individual on 24.06.2005 for a large area (626km2 in the prefecture of Fthiotida) which does not correspond to any deposit (and thus any reserve)

- ⁵⁵ Greek Institute of Geology and Mineral Exploration.
- ⁵⁶ Letter of the Hellenic Republic dated 24 January 2007, paragraph 2.8.

⁵¹ Decision by the Minister of Industry, Energy and Technology published in the Official Journal of the Hellenic Republic, volume B, issue n° 282, of 3 March 1976.

⁵² Decision by the Minister of Industry, Energy and Technology published in the Official Journal of the Hellenic Republic, volume B, issue n° 596, of 24 August 1988.

⁵³ Decision by the Minister of Industry, Energy and Technology published in the Official Journal of the Hellenic Republic, volume B, issue n° 633, of 22 August 1994.

⁵⁴ Source: Answer to the Letter of Formal Notice and Letter of the Hellenic Republic dated 22 November 2005.

identified by the IGME: the Hellenic Republic did not inform of any decision made on this application. The Hellenic Republic has not informed the Commission of other applications that it would have received for the exploitation of lignite deposits.

- 1.2.4.4. Conclusion on the attribution of concessions on public deposits
- 44. Accordingly, from 1975 onwards, the Hellenic Republic has transfered to PPC exploration and extraction rights for the large existing public mines (Ptolemais area) not yet exploited by PPC and has been granting without tender <u>only to PPC</u> new rights for the exploration and exploitation of public lignite deposits, except for a few <u>very small</u> deposits. The result is that, apart from a number of small mines and two medium-sized mines allocated before the Second World War to other entities, practically all of the reserves of lignite in the country are in the hands of PPC.
- 45. Indeed, PPC now owns the <u>exploration</u> rights for practically all (94%) of the public lignites reserves licensed for exploration so far. These represent all exploitable reserves, as defined by the Hellenic Republic in its answers, thus PPC now owns the exploration rights for 94% of exploitable reserves.
- 46. Further, PPC owns the <u>exploitation</u> rights for most (91%) of the public reserves licensed for exploitation so far. In addition, there are some exploitable reserves, as defined by the Hellenic Republic in its answers, still not licensed for exploitation (essentially the deposits of Drama and Elassona). Accordingly, PPC currently holds the exploitation rights for about 62% of exploitable reserves. If PPC is granted the exploitation rights for the Drama and Elassona deposits, as envisaged by Decision No. D9-A/F52.F70/oik.12783/51/19.08.1999 of the Minister of Development (see point 31), PPC would hold 94% of those exploitable reserves.
- 47. Finally, PPC's keen interest to expand its rights is shown by the maintenance of its request to exploit the Drama and Elassona deposits and its further request for rights of exploration and exploitation for another deposit (see Point 43).

1.2.5. Production of lignite and the impact of PPC rights

48. Lignite extraction has increased until 2002, remained rather stable in the period 2002-2005 and declined in 2006, as shown in the table below. The decrease in 2006 is in particular due to the effects of the rules of the wholesale market (see point 106).

Table 7⁵⁷ : Greek lignite production in million tonnes

1952	1960	1970	1980	1990	2000	2001	2002	2003	2004	2005	2006
0.07	2.16	7.64	22.70	49.9	63.31	66.17	70.30	68.3	71.9	69.1	64.2

49. The exclusive extraction rights granted to PPC cover 94% of the quantity of deposits for which exploitation rights have currently been granted. The following table shows the annual volumes of lignite extracted by PPC, and the percentage that PPC's lignite extractions represent in relation to total lignite extractions in Greece for the same periods. Like total lignite extraction, lignite extraction by PPC has increased until

⁵⁷ Source: PPC for the years up to 2002, IEA for 2003, Eurocoal for 2004-2006

2002, remained rather stable in the period 2002-2005 and declined in 2006. PPC explained that the decrease in lignite extraction in 2006 was due to external factors⁵⁸.

	2000	2001	2002	2003	2004	2005	2006
Lignite extracted from PPC mines (in million tons)	61.91	64.77	68.3	68.0	69.9	67.2	62.5
Percentage to total lignite extracted in Greece (%)	97.8	97.9	97.2	99.6	97.2	97.3	97.4

Table 8: Volume of lignite extracted by PPC and percentage of total extractions⁵⁹

- 50. PPC has developed mines in the deposit areas for which it obtained exploitation rights (there are several mines on each deposit area presented in Table 5). PPC is continuing to develop new mines in certain deposit areas⁶⁰. PPC lignite mines⁶¹ are open-cast mines close to PPC power stations and lignite is transported by conveyorbelts. PPC has been producing virtually all of the lignite produced in Greece. The reason why PPC's share of production is larger than its share of exploited reserves is that public deposits whose rights have been granted to entities other than PPC and privately owned deposits do not represent an important alternative source of production of lignite.
- 51. Indeed, the privately owned deposits are first of all rather small (the average size of these deposits is approximately 9 million tonnes). They used to supply PPC with small lignite quantities in the past. However, according to PPC, these mines are at present not exploited⁶², except one (LARKO S.A.), a minority affiliate of PPC, which is consuming part of its production in its own nickel-iron production facility, and supplying [0 -500] thousands tonnes of lignite per year to PPC for its power plants⁶³.
- 52. As regards the ten (10) public deposits whose rights have been granted to entities other than PPC, only the three deposits mentioned in point 34 represent non-negligible quantities and were exploited in the recent past. These three deposits are

- ⁵⁹ Source: PPC for its own production figures and for total production for the years up to 2002, IEA for total production in 2003, Eurocoal for total production for the years after 2003.
- ⁶⁰ For instance, in its 2006 Annual Report, PPC reports that it was developing in 2006 two new mines "Dimitrios Ypsilantis" and "Klidi".
- ⁶¹ The main mine centres are the four mines in Western Macedonia (Main field, South field, Kardia field and Amynteon field) and the mine centre of Megalopolis. There are other smaller mines in the Florina area, such as the Mavropigi mine which PPC started to exploit in 2005.
- ⁶² Letter by PPC dated 30 May 2003, p.31.
- ⁶³ In its letter dated 4 April 2007 (section 1.2), PPC indicated that LARCO S.A. supplies PPC with [0-50 000] tons of lignite on a monthly basis.

⁵⁸ Source: Letter of PPC dated 4 April 2007, section 1.1, PPC explained that 2006 was a peculiar year and that the decrease in lignite extraction in 2006 was due to two main factors of the electricity market: first, a number of lignite-fuelled plants were temporarily out of order or under extended maintenance (and thus did not need lignite) and, second, imports and hydroelectric power plants covered a higher than usual part of electricity demand (thereby reducing demand for lignite-fired generation, see point 105.2 for market rules giving priority to imports and hydro over lignite-fuelled generation).

located in Florina (West Macedonia). At the end of 2001, PPC entered into [0-10]year supply contracts with the owners of the two larger deposits (Achlada and Vevi) to purchase from July 2002 onwards lignite to be used in PPC's Melitis power station at Florina. Over the [0-10] year period of these contracts PPC expected that approximately [60-100] % of the lignite required by the Florina station would be supplied by these two deposits, while approximately [0-40]% of the lignite would be supplied from deposits for which PPC holds exclusive rights⁶⁴. The two exploitation licensees of Vevi and Vegora lost their rights in 2003 (see point 34) and since then only the Achlada deposit has been exploited.

53. Lignite is thus essentially produced by PPC or purchased by PPC and burnt in PPC's power plants as shown in the following table. PPC projected⁶⁵ at the beginning of 2007 that lignite consumption for electricity generation would rebound in 2007 to more than [65-70] million tonnes.

Table 9: The use of lignite extracted in Greece⁶⁶

	2002	2003	2004	2005	2006
Lignite used as a fuel for PPC power plants (million tonnes)	68.3	69.8	70.2	69.4	63.7
Total lignite extracted in Greece (million tonnes)	70.3	68.3	71.9	69.1	64.2

54. In 2007, PPC indicated⁶⁷ that it would be able to procure lignite for its Florina power station[...]. As regards procurement from the Achlada mine, PPC indicated⁶⁸ that the contract between PPC and Achlada Lignite Mines SA is valid until 31.05.2007 but will be renewed and the Hellenic Republic indicated⁶⁹ that the exploitation rights of Achlada Lignite Mines SA [...] expire on 31.12.2008 [...].

55. [...]⁷⁰

56. As regards the Vevi deposit, which is under a process of reallocation, the Hellenic Republic indicated⁷¹ that the right holder will not be obliged to supply its lignite production to PPC and that the amount of reserves were sufficient to fuel electricity generation unit(s) of a capacity of 400MW for 30 years. PPC informed the

⁷⁰ [...]

⁶⁴ Letter by PPC of 30 May 2003, reply to question 33.

⁶⁵ In its letter by PPC dated 4 April 2007, section 1.1, PPC expected a decrease of hydropower production and imports of electricity (in particular imports from Bulgaria due to the closure of the Kozloduy nuclear plant) in 2007 compared to 2006. PPC thus found that there would be more lignite-fuelled generation in 2007 compared to 2006 (see point 49).

⁶⁶ Source: PPC letter dated 4 April 2007 for PPC use of lignite in its power plants, sources of Table 7 for total production in Greece.

⁶⁷ Letter by PPC dated 19 January 2007, paragraph 2.12.

⁶⁸ Letter by PPC dated 19 January 2007, paragraph 2.12.

⁶⁹ Letter of the Hellenic Republic dated 24 January 2007, paragraph 2.13.

⁷¹ Letter of the Hellenic Republic dated 24 January 2007, paragraph 2.15.

Commission⁷² that it considers the building of a new lignite-fired plant in the area [...]

57. All in all, PPC produces virtually all of the lignite currently extracted in Greece and procures most of the limited lignite production of the few other Greek lignite producers⁷³. Further, PPC uses all the lignite that it produces and purchases for its own electricity production, as described in the following section. Finally, PPC has planned to obtain the exploitation of the only mine (Vevi) for which there is currently an ongoing procedure for attribution of exploitation rights [...]

1.3. The Greek electricity sector

58. Total annual electricity consumption in Greece represented 59.8TWh in 2006. While consumption grew rather fast over the period 1999-2004 (4.7% per annum), consumption growth has slowed down during the period 2004-2006 (on average 1.8% per annum). Consumption is covered essentially by domestic generation and 4.2TWh of net imports⁷⁴. Imports have been on the rise since 2003. The following table shows the yearly generation, net electricity exchanges with foreign networks and total consumption for a number of recent years:

GWH	1997	1999	2001	2003	2004	2005	2006	GROWT
Electricity production	39 429	44 889	48 798	54 400	53 824	54 669	55 573	-1.2%
As a percentage of total consumption	96%	99%	95%	96%	95%	94%%	93%	
Net imports	1 746	546	2 500	2 100	2 821	3 781	4 205	+11.2%
As a percentage of total consumption	4%	1%	5%	4%	5%	6%	7%	
Total consumption	40 995	45 435	51 298	56 500	56 645	58 450	59 778	+2.3%

 Table 10⁷⁵: Generation imports and consumption of electricity in Greece

59. This section will present first the legislative framework and secondly the state of play of the various components of the Greek electricity sector, starting with sources of supply (generation and imports), then wholesale trade, transport, and finally retail supply.

⁷² Letter by PPC dated 19 January 2007, paragraph 2.13.

⁷³ Indeed, in its 2005 annual report PPC states that "PPC has exclusive use of lignite mines today".

⁷⁴ Source: Letter of the Hellenic Republic dated 24 January 2007 for 2004-2006, table 3.

⁷⁵ Source: RAE for years up to 2001, UCTE (imports) and PPC (generation) for 2003, Letter of the Hellenic Republic dated 24 January 2007 for 2004-2006 (table 3).

1.3.1. Introduction to the legislative and regulatory framework

- 60. Ten years ago, the Greek electricity sector consisted essentially of a vertically integrated monopoly, PPC, which carried out all electricity activities (generation, supply, transmission and distribution) under the supervision of the relevant ministries.
- 61. The legislative and regulatory framework for the Greek electricity sector was significantly modified over the recent years, as the Hellenic Republic has sought to implement the EU directives and regulations liberalising and setting common rules for the internal market in electricity. In particular, the Hellenic Republic had first to transpose Directive 96/92 by 1 February 2001 and then Directive 2003/54⁷⁶ by 1 July 2004. An infringement procedure has taken place in respect of the implementation of this latter directive⁷⁷. The Hellenic Republic had also to implement by 1 July 2004 Regulation (EC) No 1228/2003 of the European Parliament and of the Council of 26 June 2003 on conditions for access to the network for cross-border exchanges of electricity⁷⁸.
- 62. The main laws bringing change to the Greek legislative framework for electricity are Law 2773/1999⁷⁹, Law 3175/2003, and Law 3426/2005. The first Law 2773/1999 and its implementing laws *inter alia* introduced the first measures of liberalisation (allowing competition in generation and supply to very large customers) and set up the Regulatory Authority for Energy (hereafter "RAE"), and an entity for transmission operating activities separate from PPC, the Hellenic Transmission System Operator (HTSO)⁸⁰. The second Law 3175/2003 *inter alia* foresaw the creation of a wholesale market (including a mandatory day-ahead market), enlarged the notion of "suppliers" to include traders and not only generators, introduced a balancing mechanism, enlarged the scope for retail supply competition to include all non-household customers by 1 July 2004, and introduced a mechanism for tenders for capacity of generation to ensure security of the system. A number of other laws have been adopted to address specific issues⁸¹. A further Law 3426/2005 introducing new

⁷⁶ Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC, OJ L 176, 15/07/2003, p. 37–56.

⁷⁷ The Commission sent a Letter of Formal Notice to Greece on 13 October 2004 for failure to communicate national measures for the transposition of the electricity Directive 2003/54, as well as for the gas Directive 2003/55 of 26 June 2003. On 4 April 2006, the Commission sent another Letter of formal notice for failure to transpose certain provisions of these directives. A reasoned opinion was sent to Greece on 15 December 2006. On 11 December 2007 the Commission decided to close the infringement procedure (see section "3.2 Procedure in relation to Directive 2003/54").

⁷⁸ OJ L 176, 15.7.2003, p.1

⁷⁹ Government Gazette 286/A/1999

⁸⁰ HTSO was incorporated on 12 December 2000 by Presidential Decree 328/2000. This Decree decided inter alia that the Hellenic Republic must always own at least 51% of HTSO's capital, that the owner of the network remains PPC and that HTSO must ensure the operation of the network and system.

⁸¹ For instance, Law 2941/2003 (Government Gazette 201/A/12.09.2001) and Law 3377/2005 (Government Gazette 202/A/19.08.2005) addressed *inter alia* the licensing of PPC generation units already operating before liberalisation (see section 1.3.2).

substantial modifications to the framework was adopted by the Hellenic Parliament on 22 December 2005: this law renders all household customers eligible by 1 July 2007, modifies authorisation regime for generation and supply of electricity and foresees the separation of distribution network activities from other PPC activities by creating before 01.07.2007 a Hellenic Transmission and Distribution System Operator separate from PPC (HTSO would be included into that entity). Law 3426/2005 also called for the Ministry of Development to define Public Services Obligations.

- 63. In terms of regulations, despite the successive enlargements of competencies of the regulatory agency RAE⁸², the Ministry of Development remains the main regulator of the sector: it is adopting many of the implementing measures required by the legislative framework, in particular as regards licensing procedures, approval of tariffs and Public Services Obligations. The Ministry is also the authority deciding on the attribution of all licenses. The regulatory agency RAE is tasked mainly to carry out a constant monitoring of the sector, draw up reports⁸³ and give non-binding opinions to the Ministry on secondary legislation⁸⁴. The Ministry must however obtain an approval ("consenting opinion") from RAE in a few specific cases⁸⁵. In terms of monitoring of the sector, RAE is tasked to report every two years on security of supply and to approve the generation adequacy studies conducted by HTSO to establish whether HTSO should issue tenders for new generation capacity. RAE has also to monitor the activities of licensees (it can impose fines in certain cases). Finally, RAE can arbitrate disputes between parties on electricity and can receive and decide on complaints against electricity transmission or distribution system operators and the owner of the electricity network⁸⁶.
- 64. The following sections will present the state of the legislative and regulatory framework and of the markets for the two sources of electricity for Greece, generation of electricity (section 1.3.2) and imports of electricity (section 94), for the wholesale trade of electricity (section 1.3.4), for transport of electricity (section 1.3.5), and for retail supply of electricity (section 1.3.6).
- 65. It is important to note already at this stage that the Greek legislative and regulatory framework distinguishes the "interconnected system" from the "non-interconnected system" (also called "autonomous islands"). The "interconnected system" is the system which supplies power to mainland Greece and certain nearby islands which are connected to the mainland. The "non-interconnected system" covers all

⁸² Law 2773/1999 established RAE and determined its first competences and duties. Law 2837/2000 provided i.a. that the Authority possesses its own financial resources. Law 3426/2005 assigned new competences and duties to RAE.

⁸³ In particular, RAE has to draw reports on the state of competition, on the level of protection of consumers, etc.

⁸⁴ This includes regulations on issues such as third party access rules, licences and retail tariffs.

⁸⁵ RAE gives a "consenting opinion" in the cases of amendments to the Electricity Grid Operation Code, the Power Exchanges Code and the Distribution Network Operation Code, and in the case of adoption or modification of the methodologies for the access tariffs to electricity transmission and distribution networks.

⁸⁶ The decisions of RAE are subject to judicial review by the Athens Administrative Court of Appeals.

"autonomous islands" which are not in the "interconnected system"⁸⁷, i.e. which are not connected to the mainland. There are no exchanges of electricity between the two systems, which means that they are different markets in practice (one can even consider that each island in the non-interconnected system is a separate market). The "non-interconnected system" is subject to a number of specific rules: for instance, the procedures for the grant of licenses to generate electricity are different and retail supply competition is not yet allowed in the "non-interconnected system", as will be explained in the corresponding sections.

1.3.2. Electricity generation

1.3.2.1. Installed capacity

66. The total installed capacity in Greece is 14GW (12.3GW in the "interconnected system" and 1.7GW in the "non-interconnected system" or "Autonomous Islands"). "Table 11: Installed capacity" shows the shares of the different technologies used for generation of electricity in Greece. Lignite-fuelled plants represent 45% of the total installed capacity in the interconnected system. Since the last lignite plant was put into service in 2003 (the 330MW Florina plant), the main changes were additions of new gas-fired plants to the interconnected system: the 147MW Heron plant of the GEK⁸⁸ group in 2004, the Energiaki Thessaloniki 390 MW plant of Hellenic Petroleum in 2005 and the 385MW gas fired CCGT plant "Lavrio V" of PPC in 2006.

Table 11⁸⁹: Installed capacity per technology

⁸⁷ This includes the larger islands of Crete and Rhodes.

⁸⁸ The GEK group (<u>www.gek.gr</u>) has several subsidiaries: Heron, which owns and operates gas-fired plants (one 147MW plant so far), and Terna Energy S.A. which owns and operates wind parks (109MW installed at the end of 2006, 58MW under construction and to be completed in 2007) and hydro-power plants (15MW under construction and to be completed in 2007).

⁸⁹ The table was constructed by adding up the capacity of the different owners of generation in Greece: PPC, gas-fired plant owners other than PPC (Heron and Hellenic Petroleum), CHP owners and RES owners. The sources of data are PPC (information provided in its letters to the Commission and its annual reports for 2004 and 2005) for the PPC portfolio, the Greek authorities for the gas-fired capacity of Heron and Hellenic Petroleum (Energiaki Thessaloniki), the 2006 OECD annual report on Greece (table 26 for the year 2005 and the corresponding paragraphs which did not envisage further CHP plants to be online in 2006) for data on CHP plant owners, the 2006 OECD annual report on Greece (tables 14, 15 and 21) for data on RES plant owners. For the years 2002-2004, this table does not include figures for CHP plants and plants using renewable energy sources owned by parties other than PPC, as these figures are not available. Percentages are rounded.

INSTALLED CAPACITY (MW) AT THE END OF THE YEAR	2002	2003	2004	2005	2006	PERCENTAGE OF THE SYSTEM (IN 2006)
Total Interconnected System	10,570	10,902	11,052	11,889	12,27 4	100%
Lignite	4,958	5,288	5,288	5,288	5,288	43%
Oil	750	750	750	750	750	6%
Natural Gas	1,581	1,581	1,731	2,076	2,461	20%
Hydro	3,060	3,060	3,060	3,060	3,060	25%
CHP	216	216	216	216	216	2%
Wind and Other RES	5 (PPC only)	7 (PPC only)	7 (PPC only)	Ca. 600	Ca. 600	5%
Total "Non-interconnected system"	1,385	1,452	1,569	1,702	1,702	100%
Lignite						
Oil	1,352	1,421	1,538	1,517	1,517	89.1%
Natural Gas						
Hydro, Wind and other RES (PPC)	33	31	31	31	31	1.8%
Wind (other than PPC)	n.a.	<i>n.a</i> .	n.a.	154	154	9.0%
Total Greece	11,955	12,354	12,621	13,594	13,97 9	

67. Virtually all of the capacity installed in Greece at the end of 2006 was owned by PPC. The only exceptions are two gas-fired plants, and a number of small Combined-Heat-and-Power (CHP) plants and plants using Renewable Energy Sources (RES). PPC was building a number of new plants for a total capacity of a bit less than 900MW90. Two other sizeable plants (a 430MW gas-fired plant and a 330MW CHP plant) were under construction by another operator (see footnotes 100 and 107). The following table shows capacity in the interconnected system per operator in the period 2004-2006. In the non-interconnected system, PPC has exclusivity to build and operate plants other than RES, which means that in practice the share of other operators is the share of wind power (see the previous table). All in all, PPC owned at

⁹⁰ As reported by PPC in its 2004 Annual report, PPC was building four hydroelectric plants for a total of 354MW (Messochora 162MW, Ilarion 153MW, Metisovitikos 29MW and Smokovo 10MW), and one wind park power station of 28MW in Rhodes. In its 2006 Annual report, PPC reported that it was further building two new thermo electrical units of 46.6MW each at the Atherinolakkos Power Plant, that these units were already 50% complete, and that one of the units would be operational in August 2007. In its 2006 Annual report, PPC also reported that it intended to sign in the second trimester of 2007 a contract to build a new 370-420MWgas-fied combined cycle unit at Aliveri Power Plant and that the plant was expected to be in operation in the summer of 2009.

the end of 2006 more than 90% of total installed capacity in both the interconnected and the non-interconnected systems.

INSTALLED CAPACITY AT THE END OF THE YEAR	2004 (MW)	2004 (%)	2005 (MW)	2005 (%)	2006 MW	2006 (%)
PPC	10 086	91.2%	10 533	88.6%	10919	90.0%
Hellenic Petroleum	50	0.5%	440	3.7%	440	3.6%
GEK (Heron and Terna)	256	2.3%	256	2.2%	256	2.1%
CHP plants	166	1.5%	166	1.4%	166	1.4%
Others (RES)	Ca. 500	4.5%	Ca. 500	4.2%	Ca. 500	4.1%
Total "Interconnected system"	11 052	100%	11 889	100%	12 274	100%
Interconnector capacity (imports)	850		850		850	

 Table 12⁹¹: Installed capacity per operator in the interconnected system

68. Despite plans by competitors of PPC to build further plants in the interconnected system, the situation will not change significantly in the coming years. In November 2007, PPC decided to apply for licences to build in the coming years 3300MW of thermal power plants, including two new lignite-fired plants⁹². PPC also announced that it would build a further 285MW of hydropower plants⁹³. All in all, PPC

⁹² PPC announced on its website that, on 13 November 2007, the board of directors of PPC decided to apply to RAE and to the Ministry of development for generation licenses for five new units: an 800MW natural-gas fired unit to be installed in Megalopolis (by 2011), a 450MW lignite-fired unit to be installed in Meliti (by 2012), a 450MW lignite-fired unit using fluidized bed technology to be installed in Kozani-Ptolemaida (by 2012), a 700-800MW hard-coal-fired unit to be installed in Aliveri (by 2013), a 700-800MW hard-coal-fired unit to be installed in Larymna (by 2014). The dates of completion mentioned here above for those plants were communicated in the presentation by the chairman and CEO Mr T. Athanasopoulos of "PPC's strategic priorities" on 21.11.2007 (available on the website of PPC).

⁹¹ The installed capacity for a given year is equal to the capacity installed at the end of the year. The sources for this table are the following ones: PPC (information provided in its letters to the Commission and its annual reports for 2004 and 2005) for the PPC portfolio, the statements of GEK on its website (www.gek.gr) for Heron (Heron Thermoelectrical owns a 147MW plant as well as 109MW of RES plants), the Hellenic Republic and the OECD report (table 26) for Hellenic Petroleum (which owns the 390MW Energiaki Thessaloniki plant and a 50MW CHP plant at a refinery site), the 2006 OECD annual report on Greece (table 26 for the year 2005 and the corresponding paragraphs which did not envisage further CHP plants to be online in 2006) for data on CHP plant owners (deducing the CHP capacity of Hellenic Petroleum), the 2006 OECD annual report on Greece (tables 14, 15 and 21) for data on RES plant owners (deducing the RES capacity of Heron and assuming no change between 2005 and 2006). Percentages are rounded.

⁹³ In the above mentioned (s.ftn.91) presentation it has also been announced that PPC intended to build two hydropower plants (125MW in Sykia and 160MW in Pefkofito) in addition to the hydropower plants currently being built and to be ready in 2009-2010 (see footnote 90).

estimates that its share of installed capacity in the interconnected system will remain above 75% by 2011⁹⁴.

1.3.2.2. The authorisation processes for new plants

(a) Introduction

- 69. Before the adoption of Law 2773/1999, most plants were built by PPC and only some small CHP and RES plants were exceptionally authorised under specific schemes⁹⁵. New PPC plants were authorised as parts of five and ten-year development plans approved by the PPC Board of Directors and by the Minister of Industry, Energy and Technology (now the Minister of Development).
- 70. As part of the framework for liberalising the market for generation and supply, Law 2773/1999 introduced a new regime of authorisations: PPC obtained a single generation licence⁹⁶ for plants already operating or under construction at the time. An individual authorisation was required for all new plants. That being said, two other procedures were used to grant further licences for new plants: on the one hand, PPC obtained a separate lump generation license for replacement of its plants pursuant to Law 3175/2003 (as will be explained in Point 79) and, on the other hand, the same law opened the door for tenders to secure capacity, thus licensing and paying the availability of units (i.e. subsidising the building of those units) that would ensure the security of supply in the system (see Point 80). Law 3426/2005 further refined the rules. In addition, generation projects based on RES and for CHP plants have always been treated differently.
- 71. The following paragraphs will present first the specific rules for RES and other plants not competing in the wholesale market and then address the authorisation process for other plants.

⁹⁴ In its email of 8 February 2008 to DG COMP, PPC indicates that it expects its capacity in 2011 to decline slightly to 10854 MW whereas that of Independent Power Producers would climb to 2131MW. If one assumes that RES capacity doubles (to 1000MW), then PPC capacity would represent 77.6% of total installed capacity in the interconnected system, notwithstanding the fact that PPC itself will build some of the additional RES capacity. If one takes into account interconnection effective capacity which PPC estimates to be 2000MW by 2011, then PPC installed capacity (except additional RES capacity) will still represent a minimum 68% of total (generation + interconnection) capacity in 2011.

⁹⁵ For instance, in 1994, the Greek Law 2244/1994 (Official Journal of the Hellenic Republic, volume A, issue 168) allowed private companies to own only renewable and CHP plants, representing a total capacity of 223 MW. These operators could not sell freely their generation: the Transmission or Distribution System Operators were mandated by law to take off all electricity generated from renewables and small CHP and pay a regulated tariff.

⁹⁶ Pursuant to Article 42 of Law 2773/1999 a single generation license was granted to PPC S.A. which covers power generation plants owned by PPC or which upon the entry into effect of Law 2773/1999 were in operation or were being constructed on the basis of a five- or ten-year development plan. Ministerial Decision No. A.P.D5/B/F1/oik.1085/24.01.2002 (Government Gazette 92/B/2002), issued pursuant to Article 42 of Law 2773/1999, laid down the terms and conditions for the single generation license granted to PPC S.A.. Article 8(5) of Law 2941/2003 (Government Gazette 201/A/12.09.2001) which amended Article 42 of Law 2773/1999 granted PPC S.A. by law an interim single generation license valid until 31.07.2005 for those plants covered by the single generation license. Article 24 of Law 3377/2005 (Government Gazette 202/A/19.08.2005) extended the validity of this interim license until 31.12.2008.

- 72. Generation projects based on RES (Renewable Energy Sources) and CHP plants have always been treated differently. Before liberalisation, small CHP and RES plants by operators other than PPC were authorised under specific schemes. Law 2773/1999 gave RES plants a special status in the liberalised market: they had priority for dispatch if they had a capacity lower than 50MW (thus could sell all their ouput), the price at which they sold their production was regulated and they were not required to request licences for very small projects. CHP plants output was bought at regulated prices⁹⁷. Law 3486/2006 introduced several changes in order to facilitate further the development⁹⁸: it removed the 50MW cap for priority dispatch, it made the price at which the output of RES and CHP plants is bought more attractive (73€MWh for all wind, geothermal and CHP power, 230€MWh or more for solar power), it streamlined the process of licensing and raised the thresholds below which licences are not required.
- 73. At the end of 2005, in the interconnected system there was about 600MW of RES installed capacity (out of which 405.8MW of wind-based generation) and 216MW of CHP installed capacity (6 auto-producers)⁹⁹. This represented 5% and 2% of total installed capacity in the interconnected system. The Hellenic Republic had granted licences for further RES capacity and for a further 520MW of CHP capacity (see Table 13). A new CHP plant was under construction at the beginning of 2007 and expected to be completed by June 2007¹⁰⁰. In the non-interconnected system, there was mainly wind based (154.2MW) RES capacity and little or no CHP capacity¹⁰¹.
- 74. In practice, this regulatory system means that RES and CHP projects are not directly competing in the wholesale market: whatever its level, output of RES and CHP plants is bought at regulated prices.

(c) Licenses for plants other than those based on RES and CHP

75. The general authorisation procedure for individual plants was initially defined by Article 9(1) of Law 2773/99. It states that, "the construction of generating facilities and the generation of power is permitted for all persons who have been granted a power generation licence or all persons who have been lawfully exempted from this obligation"¹⁰². Paragraph 2 of the same Article states that, "the generation licence

- ¹⁰¹ Source: OECD 2006 report on Greece (tables 14, 15 and 26). PPC indicates in its annual reports that it owns 30MW, i.e. about one fifth of the total RES capacity.
- ¹⁰² Pursuant to Article 10 (Exemptions to the obligation to hold a generation license):
 1. By decision of the Minister of Development issued on an opinion from RAE and published in the Government Gazette, exemptions from the requirement to hold a power generation license may be granted to persons generating electrical power from:

⁹⁷ In practice, it is only excess electricity output of CHP plants which is bought at regulated prices as CHP plant owners also consume some of their electricity output.

⁹⁸ Letter of the Hellenic Republic dated 24 January 2007, paragraphs 4.16 to 4.19.

⁹⁹ Source: OECD 2006 report on Greece (tables 14, 15 and 26). The six CHP plant owners are Motor Oil Hellas (49.1MW), Aluminium de Grèce (11.6MW), Phosphoric Fertilisers Co. (33MW), Hellenic Petroleum S.A. (50.1MW), Hellenic Sugar Industry S.A. (56MW) and Kavala OIL S.A. (16.5MW).

¹⁰⁰ Mytilineos issued a press release on 28 March 2007 indicating i.a. that it was building a 334MW CHP plant which was expected to start operation in June 2007.

shall be granted by the Minister of Development on an opinion from the RAE in line with the terms and conditions laid down by this Law and the Authorisations Regulation." The same Article lists the criteria according to which RAE is to form its opinion. These rules were supplemented by several decrees¹⁰³ and refined further by Law 3426/2005. As regards the non-interconnected islands, the successive laws have gradually reduced PPC's historic monopoly on generation. Since only the"interconnected system" is relevant for this decision (see paragraph 65), the following paragraphs will only focus on that part of the system.

76. In principle, for the interconnected system, any operator (PPC or other) may apply for generation licences for any technology to be used in such new plants¹⁰⁴. PPC and some private entities have applied and obtained licences for generation: PPC obtained individual licences for some new gas-fired plants¹⁰⁵, and 11 entities obtained licences for gas-fired plants¹⁰⁶. Out of those eleven entities though, only one built a plant to date (Hellenic Petroleum, for its Energiaki Thessaloniki plant, see point 66) and another one (Mytilineos¹⁰⁷) announced in March 2007 that it had started to build a new plant¹⁰⁸. These eleven licences for potential competitors of PPC were issued

a. A reserve plant up to 900 KW. These reserve plants shall only operate in the case of blackout due to network fault or failure.

b. Power plants up to 2 MW installed by educational or research bodies for exclusively educational or experimental purposes.

c. Plants installed by the Centre for Renewable Energy Sources (CRES) for certification or measurement purposes for such time as measurement or certification continues.

2. The existence of the conditions in the foregoing cases shall be ascertained by decision of RAE. This decision shall be published in the manner cited in the Authorisations Regulation.

3. Power generation plants with a capacity of up to 20 KW are exempted.

- ¹⁰³ These rules are further detailed in "The Power Generation and Supply Authorisation Regulation" issued by means of Ministerial Decision No. D5-HL/B/F.1/oik. 17951/08.12.2000 (Government Gazette 1498/B/8.12.2000). As regards the autonomous islands, a specific system of authorisations applies.
- ¹⁰⁴ A special case is Attica since Article 5 of Law 2244/1994 prohibits the operation and establishment of new power generation plants using solid fuels with the exception of biomass or plants operating using liquid fuels.
- ¹⁰⁵ On 16.7.2003, the Minister of Development issued the power generation license No. A.P.D5/HL/A/F7/770/12555 to PPC S.A. for a natural-gas-fired combined cycle plant with a 400 MW capacity at Lavrion. On 4.11.2003, the Minister of Development issued the generation license no. A.P.D5/HL/A/F7/19660 to PPC S.A. to install a gas turbine plant with a total capacity of 120 MW until the combined cycle plant with a nominal capacity of 400 MW was commissioned at Lavrion.
- ¹⁰⁶ Answer of the Hellenic Republic to the Letter of Formal Notice, page 5. The licenses were issued for medium-sized and large natural gas-fired stations for an approximate total capacity of 4,114 MW in the interconnected system.
- ¹⁰⁷ On 28 March 2007, the Greek company Mytilineos issued a press release announcing the creation of a joint-venture with the Spanish generator Endesa for the purpose of electricity generation and supply in Greece and other makers in South-East Europe. The press release indicates that the joint-venture will have the CHP plant under construction by Mytilineos (see footnote 100), a 430MW natural gas-fired power plant currently under construction and which will be completed in June 2009, a 600MW coal-fired plant and a portfolio of renewable power projects. The press release issued simultaneously by Endesa lists the same generation assets. The joint venture would be owned 50.01% by ENdesa and 49.99% by Mytilineos.
- ¹⁰⁸ In parallel, PPC has commissioned and/or put online more than 1800MW of gas-fuelled plants since 1999 (letter of the Hellenic Republic dated 20 June 2006, answer to question 15).

following a call for submissions made by RAE in 2001 which surprisingly (given the neutrality of the law vis-à-vis technologies) excluded plants using certain technologies, in particular lignite-fuelled ones¹⁰⁹. Additional licences for combined cycle natural gas plants, as well as for one open cycle gas turbine were issued since 2001. All in all, 21 licences for a total capacity of 5930MW had been issued by March 2006 (see table hereafter) but only one plant (Energiaki Thessaloniki) had been effectively built and, one year later, construction of another one was announced¹¹⁰.

TECHNOLOGY	CAPACITY (MW)
Combined cycle natural gas	5 190
Open cycle gas turbines (one plant)	220
CHP plants by autoproducers	520
Total Large Power plants	5 930

Table 13 ¹¹¹ Generation licences awarded by 1	March 2006 for	plants other than RES
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77. Three separate individual applications were made for lignite-fired plants pursuant to the authorisation procedure and they were all rejected. In its analysis of the applications, RAE found *inter alia* that the applicants had inadequate financial capacity and that there were inadequate quantities or inadequate proof of the quantities of lignite for the projects; it also made recommendations against the first two applications because the projects would increase CO2 emissions more than gas-fuelled plants but did not consider CO2 emissions as an issue for rejection of the last application¹¹². One further application (by EFT Hellas) for a lignite-fired plant was

¹⁰⁹ The Greek Regulator (RAE) made in 2001 a call for submission of applications until 19 February 2001 for new electricity generation capacity. The call expressly said that:

[&]quot;(a)t the present stage: RAE shall examine applications for licenses for production from:

Thermoelectric natural gas units

Hydroelectric units of any size

Renewable Energy Sources units

Small units of co-generation and auto-production".

A press-release published on 23 April 2001 by RAE after the selection of submissions indicates that all projects retained were natural gas fuelled. The press-release explicitly states that applications for lignite fuelled power plants were not retained because it "was not included in the conditions of the interest call". No other calls for submissions of applications for new electricity generation capacity have been made by RAE.

¹¹⁰ 430MW plant of Mytilineos (see footnote 107).

¹¹¹ Source: Ministry of development, as reported in table 23 of the OECD 2006 report on Greece.

¹¹² Source: Letter of the Hellenic Republic of 22.11.2005, answers to questions 5 and 7. In 2001, the RAE issued decision No. PA-0894/3.4.2001 rejecting application No. C 105/17.12.2001 submitted by the Company Pure Energy Hellas S.A. for a combined cycle IGCC plant (fuelled by synthesis gas produced from domestic lignite) at Koumouthekra in the Municipality of Zacharo, Prefecture of Ileia, with a 130 MW capacity. In 2004, RAE issued decision No. PA-1893/2.6.2004 rejecting application No. C. 448/17.3.2003 submitted by the Company Bio Park S.A. for a circulating fluidised bed (CFB) lignite-fuelled plant at a location near the village of Vegora in the Prefecture of Florina with a 128 MW capacity. In 2005, RAE issued opinion No. PA-2850/11.10.2005 rejecting application No. C 915/13.4.2005 submitted by the company Hellenic Energy Hercules S.A. for a lignite-fuelled

still pending in 2007¹¹³. PPC indicated that this last application received a positive opinion of RAE¹¹⁴. The tender procedure for the Vevi lignite deposit has opened for the first time the possibility for competitors of PPC to have access to some lignite and several of them envisage building new lignite fired plants¹¹⁵. Already, one bidder for the rights of exploitation of the Vevi deposit, "Heron Thermoelectric" applied for a licence of a combined lignite and biomass-fired 460MW power plant on 26 March 2007. This procedure will be discussed further in paragraphs 211 and 224 below.

- 78. The Ministry of Development has thus so far granted new licenses only for gas-fired plants.
- 79. Separately from the general rules of individual authorisations of new generation units, pursuant to Article 23(12) of Law 3175/2003, PPC was granted a lump "generating permit of up to a total of 1600MW in order to renew and replace the capacity of old units". Greece indicates that "such replacement will relate to 1200 MW from natural gas-fired plants and only 400 MW from lignite-fuelled plants"¹¹⁶, but nothing in Article 23 of Law 3175/2003 specifies the technologies to be used by PPC¹¹⁷. The Hellenic Republic reports that PPC has already decided to build a [300-500]MW lignite-fuelled plant¹¹⁸. PPC indicated that this new plant might be built in the Florina area [...]¹¹⁹. In November 2007, PPC announced that it decided to apply to RAE and to the Ministry of development for generation licenses for two 450MW lignite fired plants, called Florina II and Ptolemaida V¹²⁰.
- 80. Finally, Greece has adopted a separate tendering procedure aimed at securing reserve capacity, thus licensing new generation units that would serve exclusively the safety of the system¹²¹. Pursuant to Article 15(4) of Law 2773/99, amended by Article 23(9)

supercritical-cycle steam-electric generation plant at a location near the Akritohori Municipal District of the Municipality of Koroni, in the Prefecture of Messinia with a 600 MW capacity.

- ¹¹³ Application No. C 1077/18.7.2005 has been submitted by EFT Hellas S.A. for a power generation licence for a mixed lignite-biomass-fuelled CFB plant with a 200 MW capacity within the boundaries of the Municipality of Amynteon in the Prefecture of Florina. Based on particulars in the application, lignite will be obtained from local lignite mines in the Amynteon area (Lignite Mines Achlada S.A.) and secondarily from lignite imports in the form of briquettes.
- ¹¹⁴ Letter of PPC dated 19 January 2007, paragraph 3.1.
- ¹¹⁵ See footnote 44 for the list of the six candidates for the exploitation rights on the Vevi deposit. One bidder (TERNA) included in its offer a business plan presenting the construction of a lignite-fuelled power plant. Further, another candidate (the consortium Mytilineos-Endesa) indicated that it intended to build a 600MW coal-fired plant (see footnote 107). Finally, a third bidder, "Heron Thermoelectric" applied for a licence of a combined lignite and biomass-fired 460MW power plant on 26 March 2007.
- ¹¹⁶ Letter of the Hellenic Republic dated 22.11.2005, answer to question 4.
- ¹¹⁷ It has to be noted that PPC has to retire 610MW of lignite-fuelled plants in the next [5-15] years, precisely from [2010-2020] to [2010-2020] (Letter of the Hellenic Republic dated 22.11.2005, answer to question 10).
- ¹¹⁸ Letter of the Hellenic Republic dated 22.11.2005, answer to question 10.
- ¹¹⁹ Letter of PPC dated 19 January 2007, paragraph 2.13.
- ¹²⁰ See footnote 92.
- ¹²¹ Letter of the Hellenic Republic dated 22.11.2005, answer to question 14.

of Law 3175/03, the Hellenic Transmission System Operator (HTSO) is permitted to hold tendering procedures and enter into <u>capacity availability</u> agreements "in order to secure the long-term availability of adequate electricity generating power and adequate reserve power margins". Under these capacity availability agreements, generators are obliged, in return for financial compensation, to provide availability of capacity and for a specified period of time. This procedure was confirmed by Law 3426. When first implemented, the maximum capacity under these agreements entered into with the System Operator is set at 900 MW. This may be increased by up to 400 MW. A special tender is to be organised by HTSO for each block (PPC being excluded as regards the first block of 900MW, and being capped to 200MW as regards the second block of 400MW). Units to be selected under these tenders to be organised will be competing with PPC units in the wholesale market. On 22 February 2007, four candidates¹²² submitted bids for the first block.

- 81. Given that the first tender would not be issued immediately and that Greece had to meet emergency needs, the HTSO held a separate tender (from which PPC was excluded) at the end of 2003 under the supervision of RAE and selected Heron Thermoelectrical to build a 150MW gas-fired plant, which was effectively available at the end of 2004. According to the Hellenic Republic¹²³, unlike units to be selected in the above-mentioned procedure, this unit is mainly dedicated to reserves and can sell only occasionally to the wholesale market when HTSO determines that it does not need it to ensure the safety and reliability of the system¹²⁴. This unit is thus not exercising at this stage competitive pressure on PPC units in the wholesale market.
- 82. Accordingly, the licensing system for non-RES and non-CHP plants has been opened to all, but maintains a specific treatment for PPC and has so far only led to the grant of generation licences for gas-fired plants, except for PPC which has obtained a licence to build lignite plants.
 - (d) Conclusion on the licensing of plants
- 83. All in all, the licensing system distinguishes between plants not competing in the wholesale market on one hand (RES and CHP plants, and a reserve plant) and other plants competing in the wholesale market on the other hand. The second category has been opened to all, but maintains a specific treatment for PPC and has so far only led to the grant of generation licences for gas-fired plants, except for PPC which has obtained a licence to build lignite plants.

¹²² According to information provided by PPC on 4 April 2007, the four candidates were Heron Thermoelectrical (subsidiary of TERNA) and three joint-ventures involving Italian and Spanish generators with Greek partners: Energiaki Thisvis (involving Edison, Elliniki Technodomiki and Viohalco), Energiaki of Corinth (involving Iberdrola and Motor Oil) and Enelco (involving Enel and Kopelouzos group).

¹²³ Letter of the Hellenic Republic dated 24 January 2007, paragraph 4.6.

¹²⁴ In effect, in January 2007, GEW (see <u>www.gek.gr</u>) announced that Heron would start to sell in the day-ahead market.

84. Given that there is only one significant plant¹²⁵ in Greece contributing to total generation which is not owned by PPC, effective generation in Greece is almost exclusively ensured by PPC units. The alternative sources of electricity are the Energiaki Thessaloniki plant and small CHP and RES units which produce less than 4% of total electricity generation. The following table shows the shares of effective generation ensured by the different sources of energy separted between PPC and other parties.

	2004	2005	2006 ¹²⁷
PPC GENERATION			
Thermoelectric stations	47 532	47 493	45 694
- Lignite	32 388	31 977	29 095
- Oil - Natural gas	7 088	7 862	8 043 8 557
Hydroelectric stations	4 921	5 367	6 276
Alternative forms of energy	76	74	61
PPC TOTAL	52 529	52 934	52 031
THIRD PARTY GENERATION	1 295	1 735	3 542
- Thermal	19	298	1 588
- RES	1 276	1 437	1 954
TOTAL GENERATION	53 824	54 669	55 573
Lignite generation as a percentage of general total consumption	57.2%	54.7%	48.7%
Lignite electricity generation as a percentage of total Greek electricity generation	60.2%	58.5%	52.4%
Lignite electricity generation as a percentage of total Greek electricity generation in the interconnected system	66.0%	64.7%	59.7%
PPC generation as a percentage of total generation	96.86%	96.83%	93.6%
PPC generation as a percentage of total generation other than RES	99.96%	99.4%	97.0%

Table 14 ¹²⁶ : Effective electricity a	generation	in Greece
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¹²⁵ This is the 390MW gas-fired Energiaki Thessaloniki plant of Hellenic Petroleum. The 147MW gasfired plant of Heron Thermoelectrical is mainly contributing to reserves, thus not producing much electricity.

¹²⁶ Source: Letter of the Hellenic Republic dated 24 January 2007, table 3.

¹²⁷ Provisional twelve-month data.

- 85. This "Table 14: Effective electricity generation" shows first the dominance of PPC on generation in Greece. PPC produces more than 93% of total electricity output in Greece. Secondly, when one considers only the sources of generation whose prices are not regulated (i.e. excluding RES), PPC represents 97%¹²⁸ of such generation in 2006, more than five years after liberalisation.
- 86. This "Table 14: Effective electricity generation", as compared to "Table 11: Installed capacity" also shows the <u>very specific role of lignite in the interconnected system</u>. In the Autonomous Islands there is little alternative to oil-fired plants to produce electricity. However, in the "interconnected system", plants running on various fuels are available and lignite-fuelled plants represent a much higher percentage of effective generation (around 60%¹²⁹) than installed capacity (43%). These figures demonstrate that lignite plants provide base load supply: they are the ones called to run most, if not all, of the time. As one would expect the cheapest plants to run more than others¹³⁰, this tends to demonstrate that lignite plants are the cheapest ones available.
- 87. Indeed PPC's average electricity generation costs (€MW) are shown in the table below. They confirm that lignite-fuelled units are substantially less expensive than other units.

	Interconnected system				Non-interconnected islands
	FUEL	GAS	LIGNITE	HYDRO	FUEL AND DIESEL OIL
Average Unit Cost €MWh	[30-60]	[50-80]	[20-50]	[30-60]	[90-120]

Table 15¹³¹: Cost of production of generation technologies in the portfolio of PPC

88. This is confirmed by PPC statements in Annual reports that it "enjoys a low cost competitive advantage due to the use of lignite for electricity production"¹³². It was confirmed still at the end of 2006 that lignite is a "key strategic fuel for PPC", in particular due to: "low extraction cost due to open cast mining and overall mining

- ¹³⁰ Hydro power plants are a specific case as they depend on the amount of water available, but all other plants can theoretically run at all times, depending on the cost of fuel.
- ¹³¹ Information provided by PPC for the year 2001. In the meantime the cost of fuel oil, diesel oil and gas on wholesale markets has increased substantially while the supply of lignite has remained the same (mainly internal production in the mines operated by PPC). The cost of lignite remains indeed in line with the price at which PPC offered lignite-fired generation in the day-ahead market (see point 89).
- ¹³² Source: PPC Annual reports for 2003 and 2004, introductory section "PPC S.A. today". The corresponding section of the 2005 Annual report states that "since the company exploits nearly all of it [lignite] from mines it owns, the cost of production of lignite is the most substantial cost it bears for that particular source of thermal electricity production".

¹²⁸ The other 3%, corresponding to a bit more than 1500GWh, have been produced by Energiaki Thessaloniki (source: Letter of the Hellenic Republic dated 24 January 2007, paragraph 4.2).

¹²⁹ In fact the level was higher than 60% in all years except 2006. As regards 2006, PPC found that the decrease in lignite-fuelled generation in 2006 was due to particular circumstances and expected at the beginning of 2007 that lignite-fuelled generation would increase again in 2007 to reach almost [20-40]TWh (source: Letter of PPC dated 4 April 2007, section 1.1). See points 49 and 53 for more explanations. Data provided by PPC on 8 February 2008 showed that the final value for 2006 was [55-60]% but that in 2007 lignite-fired generation represented [60-65]% of total generation in the interconnected system, i.e. again more than 60%.

conditions, stable cost compared to the purchase cost of other fuel sources, particularly oil and natural gas, low sulphur content which makes it less environmentally harmful in and around mining areas"¹³³.

- 89. The advantage of PPC due to lignite is also evident in the offers made by PPC in the wholesale market: these offers are made at prices on average at [20-50]€MWh¹³⁴.
- 90. At the end of 2005, PPC owned and operated seven lignite-fired power stations with a total installed capacity of 5,288 MW, representing approximately 43% of total generating capacity installed in the "interconnected system" and 38% of total generating capacity installed in Greece. These lignite-fired power stations are located close to mines for which PPC holds exclusive rights in order to reduce transportation costs and facilitate supply of lignite. PPC has designed its lignite based power stations to burn the lignite produced in the neighbouring mines, taking into account its specific calorific value and other characteristics in order to maximise efficiency of operations and minimise emissions. The expected useful life of a thermal station is approximately 45 years, and PPC does not have plans to decommission any power stations before 2010¹³⁵.
- 91. PPC has built and operates the following power plants fuelled with lignite¹³⁶:
 - Megalopolis power stations (total capacity of 850MW) supplied from the Megalopolis lignite mines (around 250million tons of lignite reserves, i.e. a ratio of around 300kt of reserves per MW of installed capacity).
 - Ptolemais, LIPTOL (LKDM), Kardia and Agios Dimitrios power stations (total capacity of 3,508MW) supplied from the lignite mines of the Ptolemais Main Field, Kardia Field and South Field (together around 1500million tons of lignite reserves, i.e. a ratio of around 400kt of reserves per MW of installed capacity).
 - Amynteon-Filota power stations (total capacity of 600MW) supplied from the Amynteon lignite mine (around 375 million tons of reserves, i.e. a ratio of around 600kt of reserves per MW of installed capacity).
 - Florina-Meliti power station (330MW) operating with lignite supplied from the privately-owned Achlada mine (around 100million tons of lignite reserves, i.e. a ratio of around 300kt of reserves per MW of installed

¹³³ Source: Presentation by Dr. Konstantinos Kavouridis, Vice-President of Euracoal, former General Manager of mines at PPC (see PPC annual report), at the Third Coal Dialogue in Brussels, 18 October 2006. Available on the Euracoal website at www.euracoal.be.

¹³⁴ Letter of PPC dated 19 January 2007, paragraph 5.10.

¹³⁵ Letter of the Hellenic Republic dated 22.11.2005, answer to question 10. See also Table 16.

¹³⁶ Technical presentations and photos of the lignite-fired power plants are available at: http://www.industcards.com/st-coal-greece.htm
capacity) and from one of PPC's mines in the Florina area, called also Achlada¹³⁷.

	Plant	Installation capacity	Output capacity	Anticipated year lifespan
		$(\mathbf{W}\mathbf{I}\mathbf{W}\mathbf{V})$	$(\mathbf{W} \mathbf{W})$	will end (based on nomeining
				(based on remaining
	-	1.0		reserves)
AIS LIPTOL	I	10	8	[2010-2030]
	II	33	30	[2010-2030]
AIS PTOLEMAIS	Ι	70	64	[2010-2030]
	II	125	116	[2010-2030]
	III	125	116	[2010-2030]
	IV	300	274	[2010-2030]
AIS KARDIA	Ι	300	275	[2010-2030]
	II	300	275	[2010-2030]
	III	325	300	[2010-2030]
	IV	325	300	[2010-2030]
AIS AGIOS	Ι	300	274	[2020-2040]
DIMITRIOU	II	300	274	[2020-2040]
	III	310	283	[2020-2040]
	IV	310	283	[2020-2040]
	V	375	342	[2030-2050]
AIS AMYNDEON	Ι	300	273	[2020-2040]
	II	300	273	[2020-2040]
AIS MELITI	Ι	330	292	[2030-2050]
AIS MEGALOPOLI	Ι	125	113	[2010-2020]
А	II	125	113	[2010-2020]
	III	300	270	[2010-2020]
AIS MEGALOPOLI	IV	300	260	[2020-2040]
В				
TOTAL		5 288	4 808	

Table 16¹³⁸: PPC lignite fired plants

- 92. PPC has been regularly building new lignite-fired plants in the past and the last ones that were put in commission were the 300MW Megalopolis B steam-electric power station (Plant IV) in 1991, the 375MW plant V at the Agios Dimitrios steam-electric power station in 1997 and the 330MW Meliti steam-electric power station (Florina 1) in 2003. It took around ten years from planning to operation (including around five years for building) for PPC's latest power plants¹³⁹.
- 93. This regular build-up is consistent with the low cost of lignite-based generation and can be expected to continue given the sustained interest demonstrated by PPC (see Section 1.2.4) for obtaining new exploitation rights on further lignite deposits, exploit

¹³⁷ It is to be noted that the planning and construction of Florina power station was based on the qualitative characteristics of all mine deposits in the area, so that lignite of all these deposits can be used.

¹³⁸ Source: Letter of the Hellenic Republic dated 24 January 2007, table 2.

¹³⁹ The power plant Agios Dimitrios V was planned in 1990, built from 1993 to 1997 and started to operate in 1997. The Meliti power plant was planned in 1994, ordered in 1998 and started to operate in 2003. Sources: Answer of the Hellenic Republic to the Letter of formal notice, paragraph 5.7, information from the manufacturers (Alstom) available at: http://www.power.alstom.com/home/turnkey_plants/turnkey_plant___steam/fossil_fuel_condensing/ca se_studies/Florina/6764.EN.php?languageId=EN&dir=/home/turnkey_plants/turnkey_plant___steam/f ossil_fuel_condensing/case_studies/Florina/.

these deposits, and build new lignite-fired power plants to burn this lignite and produce electricity¹⁴⁰. In other words, the competitive interest of lignite is bound to stay for PPC.

94. As far as competitors of PPC are concerned, they did not have the opportunity to build such lignite-fired plants yet. The Hellenic Republic and PPC recognised that competitors of PPC are interested in lignite-fired generation at least to have varied sources of fuel to diversify their risks¹⁴¹.

1.3.3. Imports

- 95. Given the absence of significant generation facilities competing with those of PPC, imports represent theoretically a source of competition to PPC. However, as indicated in point 58, imports represent a rather modest share of total consumption (7%). The following paragraphs outline how electricity can be imported into Greece¹⁴².
- 96. The Greek interconnected transmission system is connected with the transmission systems of Albania, Bulgaria, FYROM, in the North of Greece, as well as with Italy¹⁴³. The total capacity of Northern interconnectors is 600 MW. The interconnection with Italy comprises a direct current (DC) transmission line with a maximum capacity of 500 MW¹⁴⁴. So total interconnector capacity is equal to 1100MW. A new interconnector is being built (around 200MW) to link the Greek network with the Turkish network and is expected to be operational in 2008¹⁴⁵.
- 97. Importers can either be large eligible customers or wholesale suppliers. Suppliers need to obtain a supply import licence from the Minister of Development, who has delivered 12 such licences¹⁴⁶. While any licensed supplier can import electricity into Greece, only PPC can export electricity from Greece¹⁴⁷. However, that being said, transport of imported electricity is limited because of the limited capacity of the electricity interconnectors. In addition, PPC enjoys reserved import capacity rights over most of the interconnection capacity at the Northern borders.

¹⁴⁴ Capacity for imports from Italy to Greece is equal to 500MW, whereas capacity for exports from Greece to Italy is capped at 300MW due to constraints inside the Italian network.

¹⁴⁷ The Grid code states that only generators have the right to export electricity or transit electricity through Greece.

¹⁴⁰ [...]

¹⁴¹ Letter of the Hellenic Republic dated 24 January 2007, paragraph 1.3, Letter of PPC dated 19 January 2007, paragraph 3.3.

¹⁴² Source: RAE.

¹⁴³ Until end 2004, the Greek network did not function synchronously with UCTE (Union for Coordination of Transport of Electricity, covering most of the EU Member States) due to damage to the transmission networks in Croatia and Bosnia-Herzegovina during the conflicts in the early 1990s. At the end of 2004 this link was restored.

¹⁴⁵ Letter of the Hellenic Republic dated 24 January 2007, annex.

¹⁴⁶ By the end of 2005 (source, letter of the Hellenic Republic dated 21 November 2005), the Minister of Development had issued 12 power supply import licences which cover a total of 2 658 MW.

- 98. More precisely, the 600 MW import capacity in the Greek northern interconnectors is allocated¹⁴⁸ as follows¹⁴⁹: 200MW are available to entities other than PPC for yearly allocations and are granted in a tender procedure to customers and licensed suppliers other than PPC¹⁵⁰; while most of the remaining capacity is allocated to PPC¹⁵¹. Under the Energy Community Treaty, Regulation (EC) No 1228/2003 is to be applicable from 01 July 2007 to the electricity exchanges between Greece and Albania and FYROM. Also, since Bulgaria is a Member State of the EU since 01 January 2007, Regulation (EC) No 1228/2003 is also to be applied to exchanges between Greece and Bulgaria. Accordingly, allocation on the Northern interconnectors will have to be carried out in a non-discriminatory manner in the near future.
- 99. As regards the Italy/Greece interconnector, capacity is divided between the Italian and the Greek TSOs. Half of the capacity is allocated by the Italian TSO. The other half is allocated by HTSO following an auction procedure, in which licensed suppliers in Greece and Greek eligible customers have the right to participate. In practice, import capacity from Italy to Greece is limited to 300MW.
- 100. All in all, a maximum of 500MW could theoretically be used for imports by entities other than PPC to day, and they should have access to 900MW in the near future. This compares to 12 058MW of domestic installed capacity. In other words, import capacity represents 7.5% of total domestic installed capacity and 6.9% of the sum of total domestic capacity and import capacity (12958MW).
- 101. In practice, RAE indicated that the Italy/Greece interconnector was mostly used for exports to Italy, whereas the northern interconnectors were mostly used for imports into Greece. Indeed, the high price of electricity in the Italian wholesale market rendered imports from Italy into Greece commercially unattractive. In 2006, this situation changed and imports from Italy have become much more frequent. However, imports represented only 7% of total consumption, i.e. more or less their share of the sum of total domestic capacity and import capacity.
- 102. As a conclusion, imports represent a limited source of competition.

1.3.4. Wholesale market

103. The implementation of Law 3175/2003 led to the adoption in May 2005 of the System and Electricity Transaction Code¹⁵². This Code has created, from May 2005

¹⁵² The presentation of the daily wholesale market in the point 104 is made on the basis of the information provided by the Hellenic Republic in its Letter dated 24 January 2007, in paragraphs 5.1 to 5.12. The

¹⁴⁸ Allocation is not made for each interconnector but for all of them together.

¹⁴⁹ Relevant rules include the transitory provisions of Art. 177 of the Grid Code (O.G. B' 1440/2001) and a Ministerial decision of 22 October 2001.

¹⁵⁰ In 2004, large eligible customers (three entities) obtained 103MW whereas suppliers (five entities) obtained 97MW. In 2005, large eligible customers (four entities) obtained 149MW whereas suppliers (three entities) obtained 51MW.

¹⁵¹ Precisely, 220MW is allocated to PPC on a yearly basis and 150MW is allocated to PPC on a daily basis. Suppliers and eligible customers can have access to the remaining 30MW on a daily basis, as well as to any capacity allocated on a yearly basis but whose owner indicates on the day-ahead that it will not use it. So, all in all, entities other than PPC have a guaranteed access only to 220MW on a yearly basis.

onwards, a mandatory day-ahead market ("pool") for all sellers and buyers of electricity <u>in the interconnected system</u>. In other words, in the interconnected system, all sellers of electricity (generators, self-supplying customers and importers) <u>must</u> sell their electricity available the next day on a hourly basis and all buyers (retailers of electricity, operators of hydro pumping stations, exporters and self-supplying customers) <u>must</u> purchase electricity on a hourly basis to cover their needs of the next day. HTSO is responsible for the operation of this market.

- 104. Every day, the sellers and buyers submit supply and demand curves for each hour of the next day. A supply curve is based on the plants owned by the seller¹⁵³ and/or on the imports it has secured¹⁵⁴ and is increasing in relation to capacity offered. A demand curve is decreasing in relation to quantity demanded. A supply curve is in addition constrained by the rule that production for a plant should not be offered at a price lower than its variable costs. On the basis of supply and demand of sellers and buyers, HTSO decides the price of the market, the dispatch of plants and the amounts of imports and exports.
- 105. Rules for the determination of prices and quantities have been progressively modified since the start of the market in 2005. From January 2006 onwards, following the adoption of decision O-12592¹⁵⁵ of RAE, the rules were the following:
 - 105.1. For each hour, the price of the market (SMP System Market Price) is determined in the following way: total demand is determined by the crossing point between the demand curve of the market (aggregating supply curves of all buyers) and the supply curve of the market (aggregating demand curves of all sellers), after having given priority to some sellers (generation based on renewable energy sources, generation from CHP plants, mandatory hydro plants, imports and exports) over other sellers (mainly all thermal plants including lignite, gas and oil-fuelled plants). The price of the market is then determined by the most expensive of the offers of supply retained.
 - 105.2. For each hour, the dispatch (i.e. the amount produced by each plant) is decided by taking the result of the price determination mechanism and increasing where necessary the production of plants which are below their minimum stable generation and accordingly decreasing the amount supplied by others.
 - 105.3. For each hour, the sellers receive an amount of money equal to the total production, as determined by the dispatch, multiplied by SMP and buyers pay an amount equal to their consumption multiplied by SMP.

- ¹⁵⁴ This requires that the importers obtain capacity reservations through auctions on the interconnectors with Italy and on the northern borders.
- ¹⁵⁵ Government gazette II/31/17.01.2006.

code was adopted by the Greek Government on 9 May 2005 and published in the government gazette on 17 May 2005.

¹⁵³ The pool obliges a seller to link offers (e.g. 50MW for 50 €MWh) of electricity to specific plants. Power exchanges in Europe have different practices in that regard: while the power exchange of Italy does the same but unlike the power exchanges of Germany or the Netherlands do not ave the same requirements.

- 106. The quantities cleared by the pool are equal to total consumption in Greece. Prices have changed substantially since the start of operations of the pool: SMP was on average 43.13€MWh in 2005 whereas SMP was on average 64.13€MWh in 2006.
- 107. PPC finds¹⁵⁶ that the rise of the wholesale price is due to the introduction of the new rules in 2006. PPC finds that this is particularly due to the fact that the technical minimum generation of plants is not taken into account anymore in the construction of the merit order for the calculation of the SMP (point 105.1). PPC also explains that the priority given to imports forces buyers to buy those imports at night even though it would be more economical to run lignite-fuelled plants the output of which is offered at lower prices (around [20-50]€MWh according to PPC). PPC adds that the rules favour the plant of its sole competitor Energiaki Thessaloniki and allow it to sell more in the pool¹⁵⁷. Together, priority rights and increased sales triggered by the rules enjoyed by wholesale sources of electricity other than PPC (imports and competitors) explain the lower use of lignite-fired generation in 2006 than 2005 and the lower level of sales of PPC.
- 108. Whatever the rules, the following table indicates that PPC sales have represented at least 85% of total electricity traded in the wholesale market in the interconnected system. Indeed, this figure includes only generation by PPC and does not take into account the imports made by PPC (see Point 98)¹⁵⁸.

	2004	2005	2006	2007
PPC generation	48 057	48,309	47,278	48,881
Third party generation	844	1,310	3,318	3,737
- Thermal	91	374	1,797	1,991
- RES	753	936	1,521	1,746
Imports of Greece	4,853	5,616	4,498	4,364
TOTAL Electricity (Generation + imports)	53,754	55,235	55,094	56,982

 Table 17¹⁵⁹: The wholesale market in the interconnected system

¹⁵⁷ Source: Letter of PPC dated 19 January 2006, paragraph 5.10, and Letter of PPC dated 4 April 2007, paragraph 3.5.

¹⁵⁶ Source: Letter of PPC dated 19 January 2007, paragraphs 5.1 to 5.12, and Letter of PPC dated 4 April 2007, paragraphs 3.2 to 3.5.

¹⁵⁸ According to data provided by PPC on 8 February 2008, PPC imports represented in 2006-2007 more than 60% of total imports: in 2006 PPC imported 2 838GWh whereas other undertakings imported 1660GWh, and in 2007 PPC imported 2 732GWh whereas other undertakings imported 1632GWh.

¹⁵⁹ No single source of data provided data necessary to make up this table across the whole period. Accordingly data sources for this table vary across the years of the period. For 2004, data represents a "potential wholesale market" and corresponds to total electricity produced and imported as there was no active wholesale trade at the time. The sources of data for that year were the PPC 2004 Annual Report and the Letter of the Hellenic Republic dated 24 January 2007 For 2005, data comes from the DESMIE website and the PPC annual report. For the year 2005, the pool was in operation only from May onwards. For 2006 and 2007 data was provided by PPC in its email of 8 February 2008. Consumption includes final consumption as well as pumping of hydropower stations.

Consumption	51,721	53,400	53,987	56,647
Exports	2,033	1,835	1,107	334
TOTAL Electricity (Consumption + exports)	53,754	55,235	55,094	56,982
PPC generation as a percentage of total electricity	89.4 %	87.5%	85.8%	85.8%

109. PPC continued to supply more than 85%¹⁶⁰ of the wholesale market and thus, taking also into account the barriers to entry, to dominate that wholesale market in 2007, six years after liberalisation and despite measures adopted in favour of its competitors. PPC further does not expect its market share to fall below 70% by 2014¹⁶¹, despite its expectations of significant market entry, development of RES and interconnection capacity.

1.3.5. Transport and distribution of electricity in Greece

- 110. According to the electricity liberalisation law 2773/1999, PPC is the exclusive owner of the transmission grid (high voltage grid). The Greek State owns 51% and PPC 49%¹⁶² of HTSO, the High voltage Transmission System Operator. HTSO operates the system (i.e. maintaining balance between supply and demand on the network). PPC nominates two (out of seven) directors on the board of directors of HTSO.
- 111. PPC is also the exclusive owner of the distribution network (medium and low voltage network), the exclusive operator of the distribution network and of the network of the non-interconnected islands. Before 1 July 2007, PPC has to set up a separate company to manage both the distribution and transmission networks (see point 62).

1.3.6. Retail Electricity supply

- 112. Before liberalisation, PPC was the sole supplier of electricity, apart from autoproduction and -consumption by a few industrial companies.
- 113. As regards retail supply, Greece first introduced competition in retail supply of electricity in 2001¹⁶³, making eligible to competition all customers that are connected to the high or medium voltage network. Given that there are no such networks in the non-interconnected islands, there were no eligible customers in the non-interconnected islands and competition in retail supply could only take place in the "interconnected system". The size of the eligible market was thus around 15TWh per year. Law 3175/03 enlarged the notion of eligible customers to all commercial

¹⁶⁰ Data provided by PPC on 8 February 2008 showed that, if imports made by PPC are taken into account, PPC supplied 91% of the wholesale market in both 2006 and 2007.

¹⁶¹ See the presentation made by the chairman and CEO Mr T. Athanasopoulos of "PPC's strategic priorities" on 21.11.2007 (available on the website of PPC).

¹⁶² The remaining 51% is owned by the State. PPC's share in HTSO is to be shared with licensed generators in proportion to their generating capacity when they enter the market. Thus, PPC currently remains the holder of that share.

¹⁶³ Ministerial Decision No. D5/HL'B/F1/oik.337, Official Gazette, Volume B, Issue no.2, 16 January 2001.

customers, except in the non-interconnected islands where competition remains excluded. Accordingly, at present retail competition is allowed for all non-household customers in the interconnected system, representing around 70% of total consumption or 40TWh per year. The non-eligible market represents around 15TWh per year¹⁶⁴. These consumers have become eligible on 1 July 2007 (see point 62).

114. Initially, PPC lost a few consumers which procured electricity directly from imports. The customers lost by PPC represented 398GWh in 2004, thus around 1% of the eligible customers. In addition, there are some customers which produce electricity for their own use. Overall, PPC supplied 97% of total electricity supplied in Greece in 2004¹⁶⁵. The following table shows the latest figures available for competition in the retail market. Since the entry into force of the mandatory day-ahead market in 2005, PPC and its competitors procure electricity for their retail customers by buying electricity on the day-ahead market, while auto-producers also buy and sell their own production through this market.

Table 1	8: PPC's	market	share of	f electi	ricity s	supply	to el	igible	customer	s
								0		

Market share (%)	2000	2001	2002	2003	2004
Eligible customers excluding auto- production (estimation by RAE)	100%	100%	100%	98%	97%
Eligible customers including auto- production (estimation by PPC)	93.8%	94.6%	93.8%	n.a.	n.a.

- 115. PPC tariffs in the retail market are regulated. Greek law¹⁶⁶ provides that the Minister of Development acting on recommendation of RAE must approve the tariffs which are to be applied by PPC not only for the non-eligible customers but also for the eligible customers¹⁶⁷. Accordingly, all PPC supply tariffs are regulated and fixed by the Minister of Development after hearing the opinion of RAE¹⁶⁸.
- 116. According to PPC¹⁶⁹, the main issue with those tariffs since the beginning of 2006 was that the tariffs have not increased much while the wholesale price increased sharply (see point 106). The increase in wholesale prices entailed in effect higher procurement costs for PPC's retail business¹⁷⁰. PPC argues further that the

- ¹⁶⁶ Article 29 of the Law 2773/1999 and Article 14 of the Supply Code-1st Edition- Eligible Customers,
 O.G. 270/2001
- ¹⁶⁷ The law requires the regulator to regulate tariffs of a supplier that supplies more than 70% of the total consumption.
- ¹⁶⁸ The approval is based on the method of incremental cost-plus: PPC provides evidence of annual growth of cost elements, such as inflation rates and changes in energy fuel prices. The decision takes the form of an allowed percentage change of all tariff levels and parameters. The tariffs are defined per category of consumer (e.g. industrial, commercial, domestic, etc.).

¹⁷⁰ Indeed, PPC consolidated financial results for 2006 show a sharp increase of energy purchases from 240million Euros in 2005 to 523million Euros in 2006. PPC explains that "this 118.3% increase is

¹⁶⁴ In 2004, the residential customers in the interconnected system consumed 15.2TWh and customers in the autonomous islands consumed 4.4TWh.

¹⁶⁵ Source: OECD 2006 Report on Greece,.

¹⁶⁹ Letter of PPC dated 19 January 2007, paragraph 5.10.

discrepancy between wholesale prices and retail tariffs has lead to "the return to PPC of the eligible customers who had chosen other suppliers, because those suppliers prefer injection into the system and payment at the higher system marginal price" (pool price) rather than enter the retail market. In other words, the market share of PPC in the market for eligible customers has not decreased further but rather increased in 2006. The discrepancy between regulated retail tariffs and procurements costs at the wholesale level remained an issue for PPC at the end of 2007¹⁷¹.

2. THE PROCEDURE

2.1. The Complaint and the Letter of Formal Notice

- 117. The Commission received a complaint informing it about the fact that under the Legislative Decree 4029/1959 and Law 134/1975 the Hellenic Republic had granted to PPC an exclusive free of charge licence to excavate and exploit lignite. These state measures were alleged to be in breach of Article 86 (1) of the EC Treaty in combination with Article 82 of the EC Treaty. The complainant requested that its identity remain confidential.
- 118. The Commission investigated these facts and sent requests for information, among others, to PPC, who replied by letters of 23 May 2003, 30 May 2003, and of 11 July 2003, and to the Regulatory Authority for Energy who replied by letter dated 25 June 2003.
- 119. Thereafter, the Commission sent a Letter of Formal Notice dated 1 April 2004 to the Hellenic Republic informing it of the Commission's objections in relation to the measures in question and giving it the opportunity to comment. The Commission sent on 3 May 2004 a copy of this letter to PPC, and offered this company the opportunity to comment on it.
- 120. In particular, the Letter of Formal Notice referred to the complaint the Commission had received, and informed the Hellenic Republic that the State measures granting exclusive rights to PCC for lignite extraction and exploitation might be in breach of Article 86 of the Treaty in combination with Article 82 as they had the potential to lead PPC to abuse its dominant position. By virtue of these State measures PPC was considered able in particular to extend its dominant position on the lignite supply market to the market for electricity supply to eligible customers in Greece, or at least to maintain its dominant position on the market for electricity supply at a level which PPC would not have been able to achieve without abusing its dominant position.
- 121. The Hellenic Republic and PPC replied and commented to the Letter of Formal Notice by letters both dated 5 July 2004.

[&]quot;mainly due to the sale of larger quantities of electric energy from third parties to the Pool and to the increase of the System Marginal Price" (press released issued on 27 March 2007).

¹⁷¹ See the presentation made by the chairman and CEO Mr T. Athanasopoulos of "PPC's strategic priorities" on 21.11.2007 (available on the website of PPC).

2.2. The replies by the Hellenic Republic and by PPC

2.2.1. In relation to the lignite supply market

122. The Hellenic Republic in its letter of 5 July 2004 claimed that the Commission has not taken into account the special features of the Greek lignite supply market, and concretely that PPC's entire lignite production is used for its own plants, next to lignite mines, designed to accommodate the specific characteristics of the lignite fields where they are built. Further, the Hellenic Republic noted that lignite exploitation requires long-term investments, which are of the same duration as the power plant that will use lignite, and that difficulties in transporting lignite makes vertical integration necessary. The Greek government concluded that PPC cannot be dominant in a market in which it is not actually or potentially active as a seller.

2.2.2. Concerning PPC's rights in relation to lignite exploitation

- 123. The Hellenic Republic in its letter of 5 July 2004 indicated that the rights granted to PPC are not exclusive for the whole territory of Greece, but are exclusive only for certain lignite deposits. It also indicated that there are other players in the lignite market. It explained that there are both public deposits and private deposits which the owners are free to exploit. As regards public deposits, the Hellenic Republic has granted two types of rights for these deposits. First, rental rights for extraction to "Lignite Mines Amindeou SA", in the Amindeon Area, "Lignite Mines Achlada" and "Biolignite SA" in the Florina Area. Second, concession rights granted to PPC for the Amindeon Area, the Florina Area, the Ptolemais Areas and the Arcadia Area. The Hellenic Republic also indicated that PPC holds extraction rights on approximately 50% of proven reserves. These extraction rights would correspond, according to the Hellenic Republic to approximately 60% (65% according to PPC) of the major exploitable lignite reserves suitable for power generation. It also emphasized that there are other proven reserves of lignite amounting in total to 1980 million tonnes for which no exploitation rights have been granted, including the two deposits of Drama and Elassona for which PPC has exploration rights.
- 124. The Hellenic Republic indicated that a difference should be made between deposits for which PPC had been granted exploitation rights, and those for which it has only exploration rights (Drama and Elassona)¹⁷². The fact that explorations rights have been granted would not automatically entail the subsequent grant of exploitation rights. It also noted that the PPC business plan does not include any new lignite plant based in Elassona and Drama.
- 125. The Hellenic Republic explained that the long duration of lignite exploitation rights is linked to "a reasonable return" on investments: exploitation rights are always based on durations of 40-50 years, given the expected life of a power plant. In that light, the rights granted to PPC would not be preferential.
- 126. The Hellenic Republic further indicated in its letter of 5 July 2004 that the 6% fee borne by privately exploited mines is imposed when lignite is sold to third parties and not for in-house use, as is the case with PPC. Therefore, the situation of private mines and that of PPC is not comparable, and this would imply two different treatments.

¹⁷² As explained in section 1.2, these two deposits correspond to most of the remaining exploitable reserves.

The two privately exploited mines would not be representative, as these were established long ago when lignite heating was still used. There would be no legal obligation to impose a fee on PPC, and the privately owned mines which sell to PPC do not pay such a fee to the State. The Hellenic Republic further held that PPC is obliged to pay a special duty equal to 0.4% of its turnover, exclusively destined to support the development of the local economies in the areas where PPC extracts its lignite.

- 127. PPC admitted that it does not pay a fee similar to the one paid by the other mines, but argued that this is because PPC does not trade in lignite, but uses the lignite for its own electricity production. PPC indicated that based on information provided by the European Association for Coal and Lignite (Eurocoal), the organisation of the European coal industry, the payment system is similar to the payment system in other Member States.
- 128. PPC contested however that it is not subject to any payment or fee, while small privately exploited mines pay to the State 6% of their total excavation expenditures on an annual basis. PPC subscribed to the explanations given by the Hellenic Republic, and adds that the 6% fee imposed on privately exploited mines is actually born by PPC itself since PPC depends on the production of those mines (in 2003, supply from lignite Mines Achlada SA represented [60-90]% of PPC's needs for the Florina plant). Then the mines pass the fee on to PPC, while PPC cannot pass it on to consumers, whether eligible or not, since tariffs are set by law.

2.2.3. In relation to lignite-fuelled generation of electricity

- 129. The Hellenic Republic argued that there is no legal ban on the construction of lignitebased electricity production plants and that any new entrant can apply for a licence for such plants. The Hellenic Republic found that new entrants prefer to use other types of fuel, such as natural gas, because they require less substantive and timeconsuming investments. The Hellenic Republic further found that PPC is the only generator using lignite because it is the incumbent¹⁷³ and because PPC has had time to amortise the larger investments required (per kW of installed capacity) for lignitefuelled generation¹⁷⁴.
- 130. The Hellenic Republic also noted that PPC tariffs are regulated because it supplies more than 70% of the eligible market and argued that the Commission acknowledges that the existing level of tariffs does not constitute an entry barrier.

2.3. The further facts submitted by the Hellenic Republic after the answer to the Letter of formal notice

131. The Commission sent on 21 September 2005 a letter requiring clarifications on a number of facts. The Hellenic Republic replied by Letters of 22 November 2005 and 28 November 2005 (the latter containing annexes to the first). The Hellenic Republic

¹⁷³ Paragraph 5.7 of the answer to the Letter of Formal Notice: "PPC lignite-based production is reminiscent from the days when it was the national electricity company. At that time, and considering Greece's natural resources, lignite-fuelled plants represented the best strategy for electricity production".

¹⁷⁴ The Hellenic Republic quotes a Report of RAE of 12 October 2002 with regard to the forecast for demand until 2005. According to that report, the average building cost of a gas-fuelled plant is 530\$/kW of installed capacity compared to 1250\$/kw of installed capacity for a lignite-fuelled plant.

sent a further Letter on 20 June 2006 providing additional information. In those letters, the Hellenic Republic submitted several new facts.

- 131.1. The Hellenic Republic mentioned for the first time the seven small deposits for which concessions were granted after 1985 (see point 35).
- 131.2. The Hellenic Republic mentioned that it intends to amend Laws 134/75 and 4029/59 (see point 23).
- 131.3. The Hellenic Republic reported on the application by PPC for exploration and exploitation of another lignite deposit at Pellana and on another application by a separate entity for an area which does not correspond to any deposit identified by IGME in the previous letter sent by the Hellenic Republic (see point 43)
- 131.4. The Hellenic Republic reported that the Vevi deposit was undergoing a process of reattribution of its exploitation rights through a public tender and that the smaller Vegora deposit would follow (see point 34).
- 131.5. The Hellenic Republic reported that the Drama and Elassona deposits have now been explored sufficiently to be exploited and confirmed that PPC maintained its interest in exploiting them (see points 31 and 32).
- 131.6. The Hellenic Republic updated on the list of licences granted or refused for new power plants: in particular, it did not report any further licence for plants competing in the wholesale markets (only for some small-scale thermal, cogeneration and reserve plants), it explained the reasons why three applications for lignite-fuelled plants had been refused and mentioned that it is studying another such application (see point 76).
- 131.7. The Hellenic Republic explained that PPC obtained a single lump generation licence for renewal of 1600MW of capacity and that it has already decided to build a new [300-500] MW lignite-fuelled plant in that framework (see point 79). The Hellenic Republic also reported that PPC has commissioned and/or put online more than 1800MW of gas-fuelled plants since 1999.
- 131.8. The Hellenic Republic reported that the 150MW gas-fired plant of Heron Thermoeletrical dedicated to security of the network was operational at the end of 2004 and that the 390MW gas-fired plant of Energiaki Thessaloniki was under tests at the end of 2005 (see points 67 and 80).
- 131.9. The Hellenic Republic informed that a new Law 3426/2005 had been adopted to transpose the provisions of EC Directive 2003/54 (see point 62). The Hellenic Republic informed further that the implementation of this new Law had already led to a first tender excluding PPC for the commission of new power plants to ensure security of supply.
- 131.10. The Hellenic Republic argued that Greek lignite has a lower calorific value than lignite exploited in other countries and that environmental costs (CO2 emission costs) have made lignite a less attractive fuel.
- 131.11. The Hellenic Republic considered that lignite-fuelled plants do not correspond to the need for more plants serving peak-load in the Greek power system; it noted in that respect that such plants are not as flexible as natural gas combined cycle plants (lower start-up speed and frequency, slower ramp-up and ramp-down rates. The Hellenic Republic also noted that lignite-fuelled generation represents a declining proportion of total generation.
- 131.12. The Hellenic Republic provided an updated overview of licences granted for supply. The Hellenic Republic also reported on the allocations of capacity made on the northern interconnectors, but did not report any new substantial development of competition in the supply of electricity.

2.4. The supplementary Letter of formal notice and replies by the Hellenic Republic and PPC

- 132. The Commission sent a supplementary Letter of Formal Notice on 18 October 2006. This letter clarified the consequences that the Commission drew from the new facts presented in the letters of 2005 and 2006, and in particular that these new facts did not change its objections as laid out in point 120. The Letter restated and further clarified the reasoning of the case, in particular:
 - 132.1. Article 86(1) is applicable in this case because PPC is a public undertaking. It is therefore not necessary to demonstrate that PPC has special or exclusive rights to apply Article 86.
 - 132.2. The measures regarding lignite exploitation and exploration adopted by the Hellenic Republic create an inequality of opportunity in the market of electricity generation and supply. Indeed, by granting and maintaining in force quasi-monopolistic rights giving the public undertaking PPC privileged access to lignite exploitation, and accordingly to lignite-based electricity, the Hellenic Republic assured PPC a privileged access to the cheapest available fuel for electricity production, which gave this company the possibility to maintain a dominant position in that market at a level close to monopoly by excluding or hindering market entry by new-comers.
 - 132.3. The Court has held that if inequality of opportunity between economic operators, and therefore distortion of competition, results from a State measure, such a measure constitutes an infringement of Article 86(1) in conjunction with Article 82¹⁷⁵.
 - 132.4. The Commission thus maintained its view that the measures regarding lignite exploitation and exploration adopted by the Hellenic Republic constitute an infringement of Article 86(1) in conjunction with Article 82 and invited the Hellenic Republic to comment and to propose remedies before 18 December 2006.
 - 132.5. The Commission also invited the Hellenic Republic to suspend any measure that may aggravate the situation and to inform the Commission in particular of any measure taken as regards the deposits of Drama and Elassona.
- 133. PPC was also given an opportunity to comment by the same date. Both the Hellenic Republic and PPC requested an extension of the deadline, which was granted until 19 January 2007.

2.5. The replies by the Hellenic Republic and PPC to the supplementary Letter of formal notice

- 134. The Hellenic Republic replied in a letter dated 24 January 2007. The Hellenic Republic updated some factual developments, disputed the reasoning of the case and maintained its view that there was no infringement.
- 135. In terms of factual developments, the Hellenic Republic indicated in particular that:
 - 135.1. The amount of reserves of public deposits for which exploitation rights have been granted had slightly decreased and the exploitability of certain deposits for which PPC has exploitation rights is doubtful (see Table 5: List of lignite deposits in Greece);

¹⁷⁵ C-462/99 Connect [2003] ECR I-5197, paragraph 84.

- 135.2. The application of PPC for the lignite deposit of Pellana was rejected (see point 43);
- 135.3. PPC received offers for supply of lignite from neighbouring countries;
- 135.4. the exploitation rights on the Achlada deposit and the PPC purchase contract with the exploiting entity are expected to be renewed (see point 53);
- 135.5. the Vevi deposit continues to be under the reallocation procedure and should lead to the building of a new generation plant (see point 55);
- 135.6. competitors of PPC are interested in lignite-fired generation only to have varied sources of fuel to diversify their risks (see point 94);
- 135.7. the costs of generating electricity with a brand new plant would be [75-85] €MWh for lignite-fired plants, [65-75] €MWh for gas-fired plants; in parallel, the regulated price to stimulate the building of RES plants was [70-80] €MWh for all non-solar RES plants (see point 72);
- 135.8. the wholesale market is now fully operational and has cleared transaction covering virtually all consumption in the interconnected system in 2006; in that market, the plant of Energiaki Thessaloniki has provided 1.5TWh in 2006 (2.6% of total production);
- 135.9. the owner of the other large non-PPC plant, Heron Thermoelectrical, earned 34M€in 2006;
- 135.10. The tenders for generation capacity issued in 2006 and to be issued in the future are not for reserve capacity but to ensure security of supply (see point 80).
- 136. In terms of the reasoning of the case, the Hellenic Republic found that
 - 136.1. the theory of extension of dominance used by the Commission would require the existence of exclusive rights in the first as well as in the second market; also, in most cases addressed in the case-law, the two markets concerned are in a horizontal and not vertical relationship
 - 136.2. the relevant market for lignite supply is larger than national based on the new elements provided by the Hellenic Republic (see point 135.3);
 - 136.3. the measures to which the commission objects were adopted before liberalisation of the electricity market (which started in 2001) and the Greek government intends to repeal the old provisions of the law 134/75 and decree 4029/1959 relating to PPC;
 - 136.4. the competitiveness of lignite-fired generation is contradicted by several elements: lignite fired generation represents a gradually decreasing proportion of total generation in Greece, lignite-fired generation is polluting, lignite-fired plants of PPC will be retired from [2010-2020] onwards and PPC only intends to replace part of them, the costs of producing electricity with new plants show the disadvantage of lignite fired-plants (see point 135.7 above), and the Commission itself recognised in the Final Report of its Sector Inquiry that lignite-fired generation implies higher fixed costs¹⁷⁶;

¹⁷⁶ In paragraph 1.3 of its letter dated 24 January 2007, the Hellenic Republic referred to paragraphs 368-370 of the Final report of the energy sector inquiry published by the European Commission on 10 January 2007. The final report of the energy sector inquiry is available at http://ec.europa.eu/comm/competition/sectors/energy/inquiry/index.html.

- 136.5. the Commission does not take into account that there are many microdeposits, the most significant being a 4.5Mt deposit at Asea;
- 136.6. PPC incurred costs due to the arrangement for the exploration of the Drama and Elassona fields for which PPC was responsible in lieu of IGME (see point 32); in addition, PPC is not better placed than other operators to obtain exploitation rights for the Drama and Elassona deposits, because there are other companies which have gained experience in Greece, there are other European companies which have experience in lignite exploitation in other markets and the information gained by exploration of those deposits will be available to all operators.
- 137. PPC commented on the supplementary Letter of formal notice in a letter dated 19 January 2007. PPC also updated on some factual developments, disputed the reasoning of the case and maintained its view that there was no infringement.
- 138. In terms of factual developments, PPC submitted the same elements as the Hellenic Republic (see points 135.1 to 135.10) and added a further element as regards the wholesale market: PPC submitted that the rules which entered into force in 2006 were detrimental to PPC and to lignite-fired plants (see point 107). PPC also argued that these rules had resulted in eligible customers, who had previously been supplied by competitors of PPC, returning to PPC (see point 115).
- 139. In terms of the reasoning of the case, PPC submitted the same arguments as the Hellenic Republic (see points 136.1 to 136.6), except one argument (point 136.5).
- 140. PPC sent another Letter on 4 April 2007 to update on some factual developments regarding lignite extraction (see points 49, 53 and 55), potential imports of lignite (see points 16 and 55, and Table 9), electricity generation (see point 73, 76 and 77) and PPC's results (see point 11).

2.6. Other letters

- 141. On 19 October 2006, the Greek Ministry of Development informed by fax DG Competition of the European Commission that it had received six tenders for the Vevi deposit and asked whether, in light of the present procedure, the Ministry of Development may contract with the Public Power Corporation (•••••), should it be the successful tenderer.
- 142. In a letter to the Greek Ministry of Development dated 8 November 2006¹⁷⁷, DG Competition referred to the supplementary Letter of formal notice, and indicated that it considered that allocating the deposit to PPC for further exploitation could aggravate the situation as regards the exploitation of lignite for electricity production in Greece.
- 143. On 8 February 2008, PPC provided per email to DG Competition some updated data about the Greek electricity market in the period 2006-2007.

¹⁷⁷ DG Competition sent a first answer in English on 8 November 2006 and a translation in Greek on 15 November 2006.

3. OTHER PROCEDURES

3.1. Procedure on the basis of State aid rules

- 144. In parallel to the procedure that has led to this decision, the Commission has since 2003 been investigating an alleged State aid granted to PPC following complaints. Concretely, the Commission is investigating allegations concerning the existence of State aid in favour of PPC when granting the lignite exploitation licences with a compensation in the form of a special lignite fee based on the total PPC annual turnover, whereas a number of small operators seem to be charged either an annual rent or a fee calculated on the basis of the quantity of lignite sold. In particular, the investigation concerns the issue whether by foregoing revenues from the lignite exploitation by PPC, the Hellenic Republic is granting aid to PPC, and whether this aid is compatible with the common market.
- 145. In this respect, on 28 October 2004, the Commission sent to the Hellenic Republic a preliminary assessment letter under State aid rules inviting for comments.
- 146. Contrary to the present procedure, this State aid procedure does not cover the question of whether by granting exclusive lignite exploitation rights to PPC the Hellenic Republic has infringed Article 86 EC in combination with Article 82. Conversely, the present procedure does not address the issue of payments by PPC and other lignite operators of fees for the exploitation of public deposits, which is addressed by the State aid procedure.
- 147. Separately, it is recalled that on 16 October 2002 the Commission approved a Stateaid of 1,430 million € in the form of subsidies in favour of PPC, for stranded costs born by PPC as a result of the liberalisation of the electricity market¹⁷⁸. The bulk of this amount, 929 million € was intended to cover investments in less competitive electricity power plants in the interconnected system, i.e. mainly hydro-electrical power plants, but also a small number of the lignite fuelled thermal plants¹⁷⁹. Most of the lignite fuelled power production plants were not considered by the Hellenic Republic to have stranded costs. The calculation of the stranded costs was done on the basis of the plants' residual accounting value minus investment aid by the Commission or by the Greek Government, and the expected revenues from future sale of electricity until the end of the plant's life on the hypothesis of a liberalised market where the electricity prices would be based on gas fuelled production. As a result, the Commission approved State-aid to a number of hydro-electrical power plants and to those few lignite power plants which were not considered competitive.

3.2. Procedure in relation to Directive 2003/54/EC

148. The Commission sent on 13 October 2004 a Letter of Formal Notice to the Hellenic Republic requesting it to transpose the second electricity Directive 2003/54/CE into national law, which the Greece had failed to do by the required deadline. On 22

¹⁷⁸ Decision of aid N133/2001, notified on the basis of Article 24 of Directive 96/92/EC on the liberalisation of the electricity internal market.

¹⁷⁹ The lignite-fuelled plants for which the Hellenic Republic claimed stranded costs were the 43MW Liptol plant, the 550MW Megalopoli A plant and the 600MW Amyndeon plant. The stranded costs amounts for those plants were among the lowest per plant in absolute terms and represented together less than 3% of total stranded costs. The amounts per MW of installed capacity were further much lower than for all other plants.

December 2005, the Hellenic Republic adopted Law 3426/2005 to transpose the directive.

149. On 4 April 2006, the Commission sent another Letter of Formal Notice to the Hellenic Republic for failure to transpose certain elements of Directive 2003/54/CE, in particular as regards the absence of notification of public services obligations and as regards the absence of, or insufficient legal and management unbundling of transmission and distribution system operators in order to guarantee their independence. The Commission sent a reasoned opinion to the Hellenic Republic on 15 December 2006. On 11 December 2007 the Commission decided to close the infringement procedure.

4. Assessment

150. The EC Treaty, including Articles 86 and 82 are applicable to and in the Hellenic Republic since the date of its accession to the European Community on 1st January 1981. Therefore, this decision only concerns the period after that date. However, the logic of this case is directly related to the liberalisation of the electricity markets in Europe. It could thus be argued, in line with the Court's case-law¹⁸⁰ that the period after 1994, when the liberalisation of electricity generation was initiated at European level, also becomes relevant to this case. Given that it became clear for Greece in 1996, with the adoption of Directive 96/92/EC, that it would have to liberalise its electricity market, this decision can not disregard the practices of the Hellenic Republic from that moment onwards.

4.1. Applicability of Article 86 of the EC Treaty

151. Article 86 (1) of the EC Treaty¹⁸¹ 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."

152. Article 86 (1) applies to public undertakings and undertakings to which Member States grant special or exclusive rights. A public undertaking is defined by the Court of Justice as "(...) any undertaking over which the public authorities may exercise directly or indirectly a dominant influence. (...). Such influence is to be presumed when the public authorities directly or indirectly hold the major part of the

¹⁸⁰ Case C-17/03, Vereniging voor Energie, Milieu en Water e.a. [2005] par. 75-79.

¹⁸¹ For the period before 23 July 2002, the European Coal and Steel Community Treaty is not applicable to this case. Indeed, by virtue of point a) of its Annex I, that Treaty foresees that the "Commission shall exercise its functions in relation to ... brown coal other than for the making of briquettes...., only where this is necessary by reason of appreciable disturbances caused by these products on the market in fuels". In this case, lignite is almost exclusively used for the generation of electricity in power plants close to lignite mines and the measures relating to lignite did not create appreciable disturbances on the market for fuels. The measures concerning lignite create appreciable disturbances on the market for electricity production, as will be explained further in the text of this decision.

undertaking's subscribed capital (...).^{"182}. PPC is a public entity since it is controlled by the Hellenic Republic, as explained in point 5.

- 153. In the context of competition law, the Court of Justice has held that the concept of an undertaking encompasses every entity engaged in an economic activity¹⁸³. PPC is an undertaking within the meaning of Articles 86 and 82 of the EC Treaty, since it is engaged in the economic activities of extracting lignite and generating and supplying electricity.
- 154. It follows that PPC is a "public undertaking" within the meaning of Article 86 and this Article is applicable to the measures taken by the Hellenic Republic in favour of PPC.

4.2. State measure contrary to Article 82 and Article 86

- 155. Article 86 (1) imposes on Member States an obligation neither to enact nor maintain in force any measure contrary to the rules contained in the Treaty, in particular to the rules provided for in Articles 12 and 81 to 89. Article 86(1) must hence be applied in combination with other EC Treaty provisions. In the present case, the exclusive exploitation rights granted to PPC constitute a violation of Article 86 (1) in combination with Article 82.
- 156. According to Article 82 of the EC Treaty:

"Any abuse by one or more undertakings of a dominant position within the common market or in a substantial part of it shall be prohibited as incompatible with the common market insofar as it may affect trade between Member States.

Such abuse may, in particular, consist in:

(a) Directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;

(b) limiting production, markets or technical development to the prejudice of consumers;

(c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;

(d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts."

157. According to the case law of the Court of Justice, a Member State measure infringes Article 86(1) in conjunction with Article 82 if the undertaking in question, merely by exercising the exclusive rights granted to it, is led to abuse its dominant position or when such rights are liable to create a situation in which that undertaking is led to commit such abuse¹⁸⁴. The Court has also held that if inequality of opportunity between economic operators, and therefore distortion of competition, results from a

¹⁸² Cases 188-190/80 France, Italy and the United Kingdom v Commission [1982] ECR I-2545, [1982] 3, par. 25.

par. 25.
 ¹⁸³ See, in particular, Case C-41/90 Höfner and Elser [1991] ECR I-1979; Poucet and Pistre [1993] ECR I-637; and Fédération Française des Sociétés d'Assurance and Others v Ministère de l'Agriculture et de la Pêche [1995] ECR I-4013). For a more recent case, see Case C-218/00 Cisal de Battistello Venanzio [2002] ECR I-691, paragraphs 22 and 23.

¹⁸⁴ C-163/96 Raso (1998] ECR I-533, paragraphs 27-29.

State measure, such a measure constitutes an infringement of Article 86(1) in conjunction with Article 82^{185} .

4.2.1. The relevant markets

158. The State measure concerns the lignite supply market and the electricity wholesale market.

4.2.1.1. The relevant product markets

- 159. The relevant product market comprises all those products and/or services that are regarded as interchangeable or substitutable by the consumer, by reason of the product characteristics, their prices and their intended use¹⁸⁶.
- 160. The State measure concerns two markets.
- 161. Firstly, in previous decisions¹⁸⁷, the Commission concluded that there was a separate product market for <u>lignite supply</u>. As explained in section "1.2.1 Introduction on lignite", lignite is a fuel product that is usually not transported over long distances: supply usually occurs directly from deposits close to consumption sites, which are essentially power plants. There is almost no trading of lignite outside such direct and close supplies. Thus, in Greece, lignite supply is intrinsically based on lignite production from Greek deposits, whether private or public, and, potentially, to production from deposits in regions of neighbouring countries. Since private mines represent only 2% of exploitable reserves in Greece, this market is closely linked and influenced by the lignite exploitation licences granted by the Hellenic Republic.
- 162. The second market is the production of electricity at power stations and the import of electricity through interconnectors for the purpose of resale, hereafter the "<u>electricity</u> <u>wholesale</u> market".
- 163. The generation of electricity based on lignite forms part of the generation and wholesale supply market, which in principle is distinct from the retail supply of electricity¹⁸⁸. Today, the wholesale market in Greece consists of a mandatory pool where all generation and imports are sold (see section 1.3.4).
- 164. That being said, the wholesale supply of electricity in Greece was de facto only possible from May 2005 onwards when the mandatory pool was established. Before May 2005, PPC was the quasi-exclusive generator. The limited output of the other Greek producers was sold to HTSO at regulated prices and the only alternative source of wholesale supply was imports which were directly used for retail supply. Thus all generation and imports were directly used for retail supply. Taking into account this state of development of the electricity sector in Greece, the market segment of

¹⁸⁵ C-462/99 Connect Austria [2003] ECR I-5197, paragraph 84.

¹⁸⁶ Commission Notice on the definition of relevant market for the purpose of Community competition law (OJ C372, 9.12.1997, p.5), paragraph 7.

¹⁸⁷ In case IV M.402 PowerGen/NRG Energy/Morrison Knudsen/Mibrag, the Commission concluded that there was a separate product market for lignite (brown coal)

¹⁸⁸ See for instance cases COMP/M.2847 Verbund/Energie Allianz, COMP/M.3268 Sydkraft Graninge, COMP/M.3440 EDP/ENI/GDP and COMP/M.3729 EdF/AEM/Edison.

generation and wholesale supply was merged with the market segment for retail supply until May 2005. Thus, until May 2005, the second market concerned, i.e. the electricity market affected by lignite, was de facto supply of domestically generated and imported electricity to eligible customers¹⁸⁹.

- 165. On that basis and given the information provided to the Commission until then, the letters of formal notice¹⁹⁰ defined the second market concerned by this procedure as the market of electricity generation and supply to eligible customers. The analysis in those letters was based on the situation and data of the years up to 2004, as provided by the Hellenic Republic and PPC. It showed that PPC's share of total electricity supply both from the point of view of generation and imports¹⁹¹ and from the point of view of retail supply was close to monopoly¹⁹². The analysis of the market for generation and supply to eligible customers for the years until 2004 thus led to the same conclusions as the analysis that would have been carried out on the –then-potential wholesale market for electricity.
- 166. That being said, in May 2005, the wholesale market was set up as an independent mandatory pool, thereby creating a separate wholesale electricity market segment. This information was provided by the Hellenic Republic and PPC for the first time in their answers to the supplementary Letter of formal notice in January 2007. Taking into account this development of the Greek market reported by the Hellenic Republic, this decision will consider that the second market concerned is the electricity wholesale market. The decision will nonetheless address the arguments made by the Hellenic Republic on the basis of the initial market definition.

4.2.1.2. The relevant geographic markets

- 167. The relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas¹⁹³.
- 168. The geographical market for <u>lignite supply</u> is national.

¹⁸⁹ As regards the retail supply of electricity, non-eligible customers in Greece can legally only be supplied by PPC. Thus competition can only take place in the market for eligible customers.

¹⁹⁰ See the Letter of formal notice, paras 36-38, which defined the downstream market as "supply to eligible customers", and the supplementary Letter of formal notice, paras. 32-34, which detailed that the downstream market was the "market for electricity generation and supply to eligible customers".

¹⁹¹ This point of view is equivalent to an analysis on the then-potential wholesale electricity market.

¹⁹² For the last year of that period (i.e. 2004), PPC's share of total generation was 97%, PPC's share of total consumption was about 93% (89% for generation + two thirds of the imports, which took place essentially on the northern border where PPC controls two-thirds of capacity rights, i.e. about 4% of total consumption), and PPC's share of total sales to eligible customers was 97%.

¹⁹³ Commission Notice on market definition (see footnote 186) paragraph 8.

- 169. As regards lignite supply, in previous decisions¹⁹⁴ the Commission has considered that the market for lignite supply is not larger than national, and may even be regional. In the case of Greece, imports and exports of lignite are non existent (see point 13). As explained in section "1.2.1 Introduction on lignite", this is due to the characteristics of lignite. The Hellenic Republic and PPC argued however that PPC has received offers for supply of lignite from foreign suppliers and that imports could take place. They have not indicated which suppliers have made such offers but they mentioned three areas of production([...]) where such supply could come from. PPC further informed about one offer of supply that it received for limited quantities of lignite ([500-1000] thousand tonnes) from [...]over an undefined period of time. This would clearly not be sufficient to cover the needs of PPC power plants (it represents about one percent of total yearly lignite consumption in Greece). As explained in point 16, the evidence available to the Commission shows that the potential for lignite supply from such areas, if it materialises, is very limited: large deposits are far away or exploited by vertically-integrated electricity generators which would very likely rather use the lignite they produce to generate electricity than sell it to another electricity generator¹⁹⁵. Thus the geographical scope of the lignite supply market is not larger than national.
- 170. However, it may be that several geographic markets could be defined within Greece corresponding to each mining area, or even to the area near each mine, since lignite transportation costs are high in relation to its calorific value, making it economically unviable to transport over long distances. However, for the purposes of the present case it is not necessary to define more precisely the geographical scope of the market for supply lignite extracted in Greece since the conclusions of the analysis would remain the same.
- 171. The geographical market <u>for electricity wholesale</u> is "the territory of the interconnected system".
- 172. As regards electricity wholesale, in previous decisions¹⁹⁶ the Commission has usually considered that the market for electricity wholesale (generation and imports of electricity for further resale) is national or smaller in scope. This finding has been confirmed in the final report of the Sector Inquiry on electricity markets published in January 2007¹⁹⁷. In Greece, the situation stems in particular from the fact that import capacity and effective imports represent a small part of demand. In Greece, a further distinction may be made between "the interconnected system", i.e. mainland Greece and the interconnected islands, and "the non-interconnected system". Given that there is no competition possible at the wholesale level in "the non-interconnected system". Thus the

¹⁹⁴ See for instance the decision adopted by the Commission on 27.06.1994 in case M.402 PowerGen/NRG Energy/Morrison Knudsen/Mibrag.

¹⁹⁵ This is consistent with the information provided by PPC [...].

¹⁹⁶ See for instance for France, Commission decision of 28/09/1999 in the case COMP/M.1557, EDF/LOUIS DREYFUS (OJ C 323, 11 11 1999 p. 11. See also cases COMP/M.2847 Verbund/Energie Allianz, COMP/M.3268 Sydkraft Graninge, COMP/M.3440 EDP/ENI/GDP and COMP/M.3729 EdF/AEM/Edison for several other markets.

¹⁹⁷ The final report of the energy sector inquiry is available at http://ec.europa.eu/comm/competition/sectors/energy/inquiry/index.html.

¹⁹⁸ See point 65.

geographical scope of the electricity wholesale market concerned by this decision is the territory of the "interconnected system"

4.2.2. Dominant Position

173. According to settled case law, the dominant position referred to in Article 82 relates to a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by giving it the power to behave to an appreciable extent independently of its competitors, customers, and ultimately of its consumers¹⁹⁹.

4.2.2.1. Lignite

- 174. There is little competition in the lignite supply market in Greece, as PPC itself recognises: all the production of PPC is consumed by PPC itself, and the little production made elsewhere (on private deposits or on public deposits exploited by other entities than PPC) is either consumed internally or sold to PPC. PPC's share of total production of lignite has always been above 97% since 2000 (see Table 8). The potential for competing supplies from abroad is very limited (see point 16), and thus does not provide any meaningful constraint on PPC. Moreover, the potential for future competing supplies in Greece is limited and uncertain. The three exploitable deposits not yet under exploitation (Vevi, Drama and Elassona) together represent less than two thirds of total PPC reserves. There are no further known exploitable deposits. PPC will thus in any event remain in control of a very substantial share of supplies. These additional (potential) supplies in Greece will not be available for several years. Moreover, unless PPC is excluded from participating in tendering procedures, it has a clear economic incentive to outbid its competitors in order to maintain its control of lignite deposits. Against this background PPC is considered dominant on the lignite supply market in Greece.
- 175. The Hellenic Republic asserts that PPC cannot be dominant in a market in which it is not actually or potentially active as a seller. However, this is only because PPC has already monopolised this activity and vertically integrated it. Such vertical integration does not eliminate the fact that PPC is potentially active in this market. Indeed, according to the case law of the Court of Justice "it is sufficient that a potential market or even a hypothetical market can be identified", and that the fact that the service or product is not marketed separately does not preclude the possibility of identifying a separate market²⁰⁰. This logic was also followed by the Commission when it required PPC to unbundle its lignite and electricity accounts²⁰¹. This logic has further been applied in other sectors where vertical integration occurs²⁰².
- 176. As a conclusion, it can be said that PPC enjoys a dominant position on the lignite supply market in Greece.

¹⁹⁹ See Case 27/76 United Brands [1978] ECR page 207, paragraphs 65 and 66.

²⁰⁰ See the judgement of the Court of 29 April 2004, IMS Health, case C-418/01, in particular paragraphs 43 and 44.

²⁰¹ Commission decision of 16 December 2002 to initiate a Court case against Greece for not publishing separate accounts for lignite mining and for electricity generation, contrary to the requirements by Directive 96/92/EC of liberalisation of the electricity market.

²⁰² This issue has also arisen for instance in the telecommunications sector. See for example the Commission's decision in case HU/2004/0096 of 20 October 2004.

4.2.2.2. Electricity wholesale

- 177. As explained in sections 1.3.2²⁰³ and 1.3.4, PPC's share of the wholesale market remains above 85%, this situation has not been significantly affected by the entry into operation of the first alternative power plant mentioned in those sections and there is no perspective of new entry that would significantly take market share from PPC²⁰⁴. Imports represent 7% of total consumption and, despite a recent increase, they do not represent an effective competitive constraint because they remain capped by the fact that total import capacity is limited today to 900MW and can thus at most meet about 10% of total peak demand²⁰⁵. The expected increase of 200MW of capacity of interconnectors in 2008 will not alter substantially this situation²⁰⁶.
- 178. PPC thus holds a dominant position in the market for electricity wholesale in Greece.

4.2.3. The substantial part of the common market

179. The affected market is the Greek market for electricity wholesale in the interconnected system, which represents more than 90% of the total consumption of electricity in Greece. Given that the objective conditions of competition are sufficiently homogenous²⁰⁷ in the interconnected system, this market is a substantial part of the common market.

4.2.4. The incompatibility of the State measure

4.2.4.1. The legal framework

- 180. In the present case Article 82 needs to be considered in combination with Article 86. As explained before, a Member State measure infringes Article 86(1) in conjunction with Article 82 if the undertaking in question, merely by exercising the exclusive rights granted to it, is led to abuse its dominant position or when such rights are liable to create a situation in which that undertaking is led to commit such abuse²⁰⁸.
- 181. The Court of Justice has held that the system of undistorted competition laid down by the Treaty can only be guaranteed if equality of opportunity is secured between the various economic operators²⁰⁹. If inequality of opportunity between economic operators, and therefore distortion of competition, results from a State measure, such

²⁰⁷ See in particular points 65 and 171-172.

²⁰⁹ Case C-202/88 France v Commission [1991] ECR I-1223, paragraph 51 and Case C-18/88 GB-Inno-BM [1991] ECR I-5941, paragraph 25.

²⁰³ See in particular points 66 to 68.

²⁰⁴ PPC itself expects to still represent more than 75% of installed generation capacity in Greece by 2011 (see footnote 94).

²⁰⁵ This is based on the assumption that all interconnector capacity would be used for imports whereas in reality it is partly used for exports. Peak demand was between 7500 and 9500MW in 2005.

²⁰⁶ PPC itself expects to still represent about 70% of total capacity (generation + interconnection capacity) by 2011 (see footnote 94).

²⁰⁸ C-163/96 Raso [1998] ECR I-533, paragraphs 27-29.

a measure constitutes an infringement of Article 86(1) in conjunction with Article 82^{210} .

- 182. Moreover, the Court of Justice has consistently held that there is abuse within the meaning of Article 82 of the Treaty when the conduct of an undertaking with a dominant position in one market tends to extend that position to a neighbouring and separate market by distorting competition²¹¹. The Court has applied this principle to find a violation of Article 86(1) in conjunction with Article 82 when the State measure allowed the dominant firm to distort competition on a neighbouring market which absent the measure it would not have been able to achieve without infringing Article 82²¹².
- 183. In line with the ECJ case-law²¹³, the Hellenic Republic agrees that there is no need to assess whether PPC has committed an actual abuse.

4.2.4.2. The State measures

184. As described in point 37 *et seq.*, the Hellenic Republic has adopted a number of measures granting exclusive rights to PPC for all significant public lignite deposits for which rights have been granted. According to Legal Decree 4029 of 12/13 November 1959, PPC has the exclusive exploitation rights for the lignite in the Arcadia Department. As a result of Law 134 of 23/29 August 1975, PPC holds rights for prospecting, extraction and exploitation of lignite in the Ptolemais ligniferous areas. Additionally, on the basis of Law 134/1975, Ministerial Decisions taken in 1976, in 1988, and in 1994 determined the areas in which PPC "shall have the exclusive right of research and exploitation of solid fuels" (lignite) respectively in the Amynteon and Prosilion-Trigonikon, in the Amynteon and Komnina basins and in the Florina basin. PPC obtained all those concessions without tenders.

4.2.4.3. Analysis

185. These decisions constitute measures to grant exploitation rights to PPC *for all significant public lignite deposits for which rights have been granted*. Indeed, they cover 2106Mt of reserves, i.e. 91% of the total reserves for which rights of exploitation have been granted so far (see point 46). Further, the Hellenic Republic has subsequently maintained these measures by not granting rights on any significant deposit despite the possibilities offered by the Mining Code: it has allocated rights to other entities only for deposits with negligible reserves. Indeed, out of the remaining 9% of the total reserves for which rights of exploitation have been granted before the Second World War (i.e. the three deposits mentioned in point 34, representing 208Mt of reserves)²¹⁴ and other operators have

²¹⁰ Case C-462/99, Connect Austria [2003] ECR I-5197, paragraph 84.

²¹¹ Case C-462/99, paragraph 82.

²¹² Case C-18/88, RTT [1991] ECR I-5941, paragraph 20. See also on this issue Case C-462/99.

²¹³ Case C-163/96 Raso (1998] ECR I-533, paragraphs 27-29.

²¹⁴ The fact that the Vevi deposit is now available again for allocation to parties other than PPC does not change the situation, since it is only due to the fact that the previous exploitation rights-holder did not discharge fully its obligation and it will not mean that more deposits will be available to exploiting

only obtained rights for deposits with negligible reserves from 1985 onwards (namely 11Mt or 0.4% of allocated reserves).

- 186. In addition, PPC obtained exploration rights without tenders for the remaining exploitable deposits (essentially Drama and Elassona) for which exploitation rights have not yet been granted. The decision extending the duration of exploration rights for these deposits sets out conditions for PPC to request and obtain exploitation rights for those deposits (see point 31). This decision thus places PPC in a privileged position to obtain exploitation rights for the remaining available exploitable reserves.
- 187. As explained in section "1.3.2.3 Effective production and the specific role of lignite", lignite-fuelled plants are the most extensively-used plants in Greece: they represent around 60% of the effective generation used for the supply of the interconnected system. As a result, the rights for lignite exploitation affect the electricity wholesale in the interconnected system of Greece.
- 188. Lignite-fuelled plants are the cheapest plants in Greece, which is confirmed in particular by the fact that while they represent 43% of the generation capacity available in the interconnected system, lignite-fuelled plants account for around 60% of output. Other elements showing the comparative advantage of lignite as a source of electricity generation have been presented in section 1.3.2.3. Furthermore, this comparative advantage is going to remain: indeed, PPC has already scheduled to replace the lignite-plants that it has to retire in the near future and is seeking new exploitation rights for a number of deposits (Vevi, Drama and Elassona) for which it would have to build brand new power plants. Due to high transport costs power plants are built next to deposits. Thus, by granting and maintaining quasimonopolistic rights for PPC for lignite exploitation and thus privileged access to the cheapest source of generation, the Hellenic Republic has reinforced the dominance of PPC in the wholesale electricity market, in the sense that, due to these rights, PPC can maintain a quasi-monopolistic market share on this downstream market despite the liberalisation measures taken at European and National level to open this market to competition.
- 189. Since PPC is the former monopoly in electricity generation and supply it might be argued that it cannot be concluded that the State measures allowed PPC to create or strengthen its dominant position. However, the State measures have in any case the effect of hindering market entry by newcomers and thus reinforcing or maintaining PPC's position in the electricity wholesale market. In effect, more than five years after liberalisation, only one entity has built a new generation plant to compete with PPC in the wholesale market and the Hellenic Republic is obliged to have recourse to subsidised tenders for security of supply purposes to stimulate the building of new plants by competitors of PPC. The State measures substantially increase barriers to entry and place competitors at a competitive disadvantage by creating inequality of opportunity between economic operators as regards access to primary fuels for the production of electricity²¹⁵. This is the case independently of other market barriers that might exist in that market. The State measures would also constitute a barrier to

entities other than PPC (the share of total exploited lignite reserves exploited by PPC will remain at 91% at least).

²¹⁵ Case C-462/99, paragraphs 81-85

entry even if PPC would pay a fee or royalty since the inequality of conditions would persist²¹⁶.

190. It follows that by granting and maintaining quasi-monopolistic rights for lignite exploration and exploitation and thus privileged access to the cheapest source of generation, the Hellenic Republic has created inequality of opportunity between economic operators in the electricity wholesale market and therefore distorted competition in the favour of the public undertaking PPC, thereby reinforcing its dominance in the electricity wholesale market.

Arguments by the Hellenic Republic and by PPC on the framework of analysis

- 191. The Hellenic Republic referred in its letters to case law (in particular the Court's decisions in the RTT case²¹⁷, the Telecommunications Services Directive case²¹⁸ and the Connect Austria case²¹⁹, Commission decisions²²⁰ in the GSM mobile telephony cases in Italy and Spain and a draft Commission decision on the German postal legislation relating to postal preparation services) to argue that the extension of dominance theory requires the presence of three elements:
 - (a) Exclusive rights

The Hellenic Republic argued that there should be exclusive rights in both markets concerned according to case-law (see references above). The Hellenic Republic further denied the existence of any exclusive rights.

(b) Two markets.

According to the Hellenic Republic, the doctrine of the extension of dominance requires that the company benefiting from the exclusive rights be active in two neighbouring markets and furthermore be dominant in one of them.

The Hellenic Republic argued that in this case the two markets would be the market for supply of lignite ("lignite sales"), and the market for "electricity production". The Hellenic Republic submitted that PPC is not active in lignite supply, and that it is not a potential competitor in the

²¹⁶ It cannot be excluded that payment by PPC of some fee or royalty for the lignite extraction rights would eliminate another market barrier to entry. Then again, this aspect of the question is addressed by the State-aid investigation.

²¹⁷ Case C-18/88 RTT [1991] ECR I-5941.

²¹⁸ Cases C-271, 281, 289/90, Telecommunications Services Directive [1992] ECR I-5868.

²¹⁹ C-462/99, paragraph 84. In effect, in that case, the measure was not an "exclusive right" but a measure granting additional frequencies to the dominant operator without requiring it to pay for such frequencies.

²²⁰ Commission Decision of 18 December 1996 concerning the conditions imposed on the second operator of GSM radiotelephony services in Spain (OL L 76, 18.3.1997, p 19) and Commission Decision of 4 October 1995 concerning the conditions imposed on the second operator of GSM radiotelephony services in Italy (OJ L 280, 23.11.1995, p 49).

lignite supply market because PPC's lignite exploitation is inherent to the production of electricity, without prejudice to the issue of unbundling of accounts.

Further the Hellenic Republic argued that in most of the cases forming part of the case-law (see references above), markets were in a horizontal and not vertical relationship.

(c) A causal link between the alleged exclusive rights and the abuse of dominance.

The Hellenic Republic acknowledged that the abuse can be potential and not necessarily actual, in accordance with the relevant case-law. However, it claimed that in the RTT case²²¹ the dominant undertaking exercised regulatory functions vis-à-vis competitors, while in PPC's case no such regulatory functions are exercised.

Also, according to the Hellenic Republic the facts in Connect-Austria and Telecommunications Services Directive cases would be different from the facts of this case.

- 192. These arguments are not considered convincing.
- 193. As to the argument relating to exclusive rights, it is not necessary to conclude whether the rights granted to PPC are exclusive. First of all, as explained in section 4.1, in order to apply Article 86, it suffices that PPC is a public undertaking, which is the case here. Second, the Court has held that if inequality of opportunity between economic operators, and therefore distortion of competition, results from a State measure, such a measure constitutes an infringement of Article 86(1) in conjunction with Article 82²²². The Court did not state that the inequality of opportunity should come from an exclusive right, it simply stated that: "if inequality of opportunity between economic operators, and therefore distorted competition, results from a State measure, such a measure constitutes an infringement of Article 86(1) in conjunction with Article 82EC"²²³. Thus there is no need to have an exclusive right to apply the theory of extension of dominance.
- 194. The argument concerning the absence of two markets has already been refuted (see above sections 4.2.1 and 4.2.2). Two different markets exist: one for lignite supply and another for electricity wholesale. PPC is dominant on both markets. As regards the relationship between markets, it does not have to be horizontal: what is important is whether the measures create inequality of opportunity and thereby distorts competition. Indeed, in the RTT case, the two markets (telecommunications network operations and equipment supply) were in certain markets "vertically related" before liberalisation.

²²¹ Case C-18/88 RTT [1991] ECR I-5941.

²²² C-462/99 Connect Austria [2003] ECR I-5197, paragraph 84.

²²³ C-462/99 Connect Austria [2003] ECR I-5197, paragraph 84. In effect, in that case, the measure was not an "exclusive right" but a measure granting additional frequencies to the dominant operator without requiring it to pay for such frequencies.

- 195. As regards the causal link between the State measure and the abuse, it is to be noted that while the RTT case related indeed to a case where the dominant company held regulatory functions in a neighbouring market, the Court of Justice in its decision did not find that exercising such regulatory functions is a condition for the application of the extension of dominance principle. The Court held in general terms that where the "extension of the dominant position of a public undertaking or undertaking to which the State has granted special or exclusive rights results from a State measure, such measure constitutes an infringement of Article [86] in conjunction with Article [82] of the Treaty" in the absence of an objective justification²²⁴.
- 196. As regards the "Telecommunication Services Directive" case²²⁵, which related to the competence of the Commission to adopt a Directive on competition in the markets for telecommunication services, the reference made in the Letter of Formal Notice was included to note that the Court of Justice recalled its conclusions in the RTT case²²⁶ and applied the same reasoning to the more extreme form of extension of a dominant position from a monopoly in the market for the establishment and operation of telecommunications networks to the adjacent market for telecommunication services. This fact does not prevent the application to other cases of the theory of extension of dominance.
- 197. Indeed, the judgement in the Connect Austria case, which concerned the market for mobile telephony services, concerns a less extreme case. Referring to the RTT case, the Court reiterated that "a Member State breaches the prohibitions laid down by Article 86(1) EC in conjunction with Article 82 EC if it adopts any law, regulation or administrative provision that creates a situation in which a public undertaking or an undertaking on which it has conferred special or exclusive rights cannot avoid abusing its dominant position. [...] The same is true when the conduct of an undertaking with a dominant position in a given market tends to extend that position to a neighbouring but separate market by distorting competition"²²⁷.
- 198. The Court further recalled that "a system of undistorted competition, as laid down by the Treaty, can be guaranteed only if equality of opportunity is secured as between economic operators [...]. If inequality of opportunity between economic operators, and therefore distorted competition, results from a State measure, such measure constitutes an infringement of Article 86(1) EC in conjunction with Article 82 EC^{228} .
- 199. In the present case, there is no equality of opportunity since, due to the State measures, undertakings other than PPC do not have sufficient access to lignite, which is a primary energy source for the production of electricity, and unlike PPC they have not been allowed so far to build lignite-fired power plants (partly) due to a lack of access to lignite (see point 76). As has already been described, due to its comparatively low cost, lignite is the main primary energy source for the production

²²⁴ Case C-18/88, RTT [1991] ECR I-5941, paragraphs 21 and 24.

²²⁵ Cases C-271, 281, 289/90, Telecommunications Services Directive [1992] ECR I-5868.

²²⁶ Cases C-18/88, paragraph 36.

²²⁷ Case C-462/99, Connect Austria [2003] ECR I-5197, paragraphs 80 and 81.

²²⁸ Case C-462/99, Connect Austria [2003] ECR I-5197, paragraphs 82, 83, and 84.

and supply of electricity for eligible customers in Greece. The extent of the rights of lignite exploitation enjoyed by PPC is such (almost exclusive) that there is limited opportunity for competitors of PPC to invest in generation. Indeed, the Hellenic Republic and PPC admit at least that competitors need lignite to diversify their portfolio of fuel and compete in the wholesale market (see point 94). The result is that competition on the downstream market for electricity wholesale is distorted, allowing PPC to maintain its dominant position in spite of market liberalisation which led to the abolition of its exclusive right to generate electricity in Greece.

Arguments by the Hellenic Republic and by PPC on lignite exploitation

- 200. In its Letter of 24 January 2007, the Hellenic Republic underlined that the Commission does not take into account that there are many micro-deposits (the most significant being a 4.5Mt deposit at Asea), that some of PPC's deposits are of doubtful exploitation potential and that PPC's deposits are gradually being exhausted. The Hellenic Republic also found that PPC is not better placed than other operators to obtain exploitation rights for the Drama and Elassona deposits, because there are other companies which gained experience in Greece, there are other European companies which have experience in lignite exploitation in other markets and the information gained by exploration of those deposits will be available to all operators.
- 201. These arguments were supported by PPC in its letter of 19 January 2007. In addition, PPC argued that it was financially damaged by the arrangement for the exploration of the Drama and Elassona fields for which PPC was responsible in lieu of IGME (see point 32).
- 202. These arguments are not considered convincing.
- 203. First as regards lignite micro-deposits, the information provided by the Hellenic Republic does not include a list of such deposits: the Hellenic Republic mentioned two such deposits in its answer to the letter of formal notice²²⁹, seven deposits for which rights were granted from 1985 onwards in its Letter dated 21 November 2005 (see point 35), and the Asea deposit which, it says, is the largest. All these deposits together represent less than 20 million tons of reserves and they are scattered over the territory of Greece. The quantity of lignite required by a lignite-fired power plant over its lifespan (which is usually 40-45 years according to PPC) is a matter of tens of millions of tons²³⁰ of supply. Given that lignite cannot be transported over long distances and that micro-deposits are scattered over the territory of Greece, these deposits are far too small (the largest has 4.5Mt of reserves according to the Hellenic Republic) to constitute a realistic source of supply for power plants. Accordingly, micro-deposits do not affect the analysis of this case.

²²⁹ The written answer to the Letter of formal notice mentions, in the table following paragraph 4.1, two deposits with less than 5 million tons of reserves: Plakias (1Mt) and Leukogia (1Mt).

²³⁰ For instance, the Hellenic Republic expects that the 90Mt Vevi deposit will supply a 400MW lignite-fired power plant with lignite over its lifespan. That means that the Hellenic Republic expects that 2 million tons of lignite would be extracted on average each year. This is indeed equal to the average yearly production of the Achlada mine which constitutes the main source of supply of the 330MW Melitis lignite-fired power plant of PPC.

- 204. As regards the exploitability of PPC's deposits, it is true that the output of a deposit may turn out to be less than what was expected at the time exploitation rights were granted. However, this does not change the fact that PPC has already obtained exploitation rights for 91% of all reserves which have been licensed for exploitation. The same applies to the gradual exhaustion of exploited deposits.
- 205. As regards the cost incurred by PPC for the exploration of Drama and Elassona, such cost cannot "compensate" for the measures which distort competition and thus infringe Article 86(1) in combination with Article 82²³¹. At this stage exploitation rights for these two deposits have not been granted yet, but, if they were granted to PPC (even through a public tender), they would maintain its advantage in the wholesale market and, given the fact that other substantial deposits are not exploitable at this stage according to the Hellenic Republic, it would in fact even further deteriorate the situation. In that respect, it is thus not relevant whether PPC is better placed than its competitors to obtain the rights for these deposits: any additional reserves for PPC would further deteriorate the situation given that the remaining mines represent less than what PPC already exploits.

Arguments by the Hellenic Republic and by PPC on electricity generation, in particular lignite-based generation

- 206. In its letter of 5 July 2004, the Hellenic Republic claimed that the Commission has not taken into account that any operator can apply for a licence to produce electricity on the basis of lignite. It also argued that the Commission's analysis that lignite-based electricity production has lower costs does not take into account costs of exploration and extraction, higher costs of construction for lignite-based power plants than for gas-fired power plants, and the know-how that lignite extraction requires. The Hellenic Republic further argued that alternative operators prefer to build gas-fired plants for these reasons. PPC in its letter of the same date adds that most of PPC's plants are not fully amortised, and those which have been amortised have very high maintenance costs. The same Letter of 5 July 2004 from the Hellenic Republic also argued that PPC's business plan does not project additional lignite fuelled power plants.
- 207. In its Letter of 22 November 2005, the Hellenic Republic added that Greek lignite has a lower calorific value than lignite exploited in other countries and that environmental costs (CO2 emission costs) have made lignite a less attractive fuel. The Hellenic Republic further considered that lignite-fuelled plants do not correspond to the need for more plants serving peak-load in the Greek power system; it noted in that respect that such plants are not as flexible as natural gas combined cycle plants (lower start-up speed and frequency, slower ramp-up and ramp-down rates). This latter argument was withdrawn in its subsequent letter and will thus not be addressed.
- 208. In its Letter of 24 January 2007, the Hellenic Republic underlined that the competitiveness of lignite-fired generation is contradicted by several elements: lignite fired generation represents a gradually decreasing proportion of total generation in Greece, lignite-fired generation is polluting, lignite-fired plants of PPC will gradually be retired from [2010-2020] onwards and PPC only intends to replace part of them,

²³¹ This is without prejudice to any entitlement that PPC may have to compensation for costs incurred in the exploration of these two deposits. , However, the potential payment of any compensation in that respect will have to be made in line with rules of the Treaty, in particular article 87 thereof.

the costs of producing electricity with new plants show the disadvantage of lignite fired-plants (see point 135.7 above), and the Commission itself recognised in the Final Report of its Sector Inquiry that lignite-fired generation implies higher fixed costs.

- 209. These arguments were supported by PPC in its letters. In addition, in its Letter of 19 January 2007, PPC found that the rules of the wholesale market were detrimental to lignite-fired plants. Further, in its letter of 4 April 2007, PPC insisted that there are many new entrants in the wholesale market and that there are many projects of investment in generation, including by large foreign operators: PPC made in particular reference to participations of foreign companies in the call for tenders of capacity by HTSO, to announcements made by Endesa and its local partner Mytilineos about their project to build a new 412MW power plant, and to the view of Mytilineos that calls for tenders by HTSO would no longer be necessary.
- 210. These arguments are not considered convincing.
- 211. First, in relation to the possibility for other market actors to obtain licences to produce electricity on the basis of lignite, it is a fact (see section 1.3.2.2) that so far alternative operators obtained only licenses for gas-fired plants, whereas PPC obtained a licence to renew its lignite-fuelled plants, i.e. build new lignite-fuelled plants to replace the ones it has to retire. The applications made by other operators for lignite-fired plants have all been rejected on grounds *inter alia* that the applicants had inadequate financial capacity and that there were inadequate quantities or insufficient proof of adequate quantities of lignite available for the projects. The fact that applications are rejected *inter alia* because of the lack of adequate quantities of lignite (or proof thereof) demonstrates the difficulty of alternative operators to build lignite-fuelled plants in the absence of access to large mines, even if they satisfy all requirements to obtain licenses. In addition, the quality of the applicants may have been different if they had had access to larger mines and many more applications could have been made if lignite had been available and generation licences been the subject of public calls for tender from the regulator, like for gas^{232} . The fact that several applications were made for new lignite-fired plants shows in any event that operators other than PPC are interested in building lignite-fired plants, and it seems rather that the lack of access to sufficiently large mines not already committed to PPC is preventing them from developing sufficiently large projects that could rival the plants of PPC.
- 212. PPC itself continues to find lignite-fuelled plants competitive, even when it has to replace them and bear the costs and duration of construction: it has already scheduled the building of two 450MW <u>new</u> plants²³³ to replace ones scheduled for retirement and is even ready to bear the costs of exploiting an additional deposit (Vevi) [...](see point 79). Further, PPC has maintained its interest in exploiting the fields of Drama and Elassona, in spite of the fact that there is no existing lignite-fuelled power plant

²³² Heron Thermoelectrical Corp sent to the Commission information on 11 July 2003 saying that that company had not applied for a lignite concession or for an excavation licence among other reasons because "the RAE has not sanctioned licenses for electricity generation involving the use of fuels other than natural gas". Other companies like Phosphoric Fertilizers Industry SA (letter of 11 July 2003) or Alfa-Alfa Holdings (letter of 11 July 2003) declared that if they had access to lignite they would also consider building a lignite based power plant.

²³³ See point 68.

in the vicinity. Accordingly, PPC not only finds the building of a new plant economically viable despite alleged higher construction costs and longer construction time²³⁴, PPC is also ready to bear the costs of developing new complexes of new mines and new plants. Indeed, it is reported that PPC has been doing a feasibility study to install two 250 MW lignite-fired units at Elassona²³⁵, a lignite deposit for which exploitation rights have not yet been granted.

- 213. The actual conduct of PPC thus demonstrates that it is beyond doubt that lignite remains²³⁶ a very attractive fuel, in fact the most attractive.
- 214. As regards the low calorific value of Greek lignite, it does not mean that lignite is not competitive in the Greek market. In fact, the comparison of calorific values of Greek lignite and lignite extracted in other Member States is not relevant: what is relevant is the competitiveness of lignite vis-à-vis other fuels and technologies available in Greece, and such competitiveness remains despite the lower calorific values. Further, as regards environmental costs (such as CO2 costs), the Hellenic Republic and PPC have not demonstrated that these costs are so large that they would make lignite-fired generation not competitive vis-à-vis other sources of generation (mainly gas-fired generation) in Greece. As the Hellenic Republic recognised in its Letter of 22 November 2005, arguments about competitiveness of other fuel/technologies are not always clear-cut: the cost of gas likely makes gas-fired plants still more expensive than lignite-fired plants, despite higher CO2 costs for lignite-fired plants. Indeed, the fact that PPC has built a certain number of gas-fuelled plants and that one licence holder has built another plant does not prove that competitors are convinced that gasfired plants are more suitable for the purpose of entering the Greek electricity supply market, as the Hellenic Republic argues. To the very least, the little build-out by competitors of PPC (despite the many licences granted -see Table 13) shows that they have great difficulties entering with technologies based on fuels other than lignite. Given that PPC and its competitors argue that lignite provides a competitive advantage and that several of them are planning to build new lignite-fired plants once some lignite is available to them, such a situation can be further interpreted as showing that competitors' investment in lignite-based generation is even more needed for them to enter the Greek electricity supply market, as alternatives have proven difficult, despite the existence of construction, environmental and other costs.
- 215. The Hellenic Republic and PPC admit at least that the competitors need lignite to diversify their portfolio of fuel and compete in the wholesale market (see point 94). Indeed, competitors of PPC²³⁷ precisely argue that they need a mix of plants and that lignite-based plants provide the baseload plants that they lack.

²³⁴ The same applies for maintenance costs, to the extent that they are not already included by PPC in its calculation of variable cost reported in Table 15.

²³⁵ The IEA mentions in its Greek Energy Policy In-depth Review 2002 (IEA/SLT/CERT(2002)8 p. 69) that PPC was studying the feasibility of the mentioned power plants.

²³⁶ As detailed in section 1.3.2.3, data by PPC about its costs and the sales of PPC in the wholesale market showed that existing plants are very competitive in the wholesale market. As regards sales, the OECD IEA reported in its 2006 Report on Greece that the latest lignite-fuelled power station "has bid the lowest prices of all thermal generating stations in Greece, reflecting the low fuel cost of lignite and the comparatively high efficiency of Florina".

²³⁷ For instance, Aluminium of Greece, which produces some electricity for auto-consumption, in its letter of 10 July 2003 notes that "(i)n order to have competition, the energy producing companies

216. The anti-competitive effect of PPC's privileged access to lignite was already identified by the OECD in its 2001 report on "Regulatory Reform" in Greece²³⁸ which underlined that "PPC's favourable access to lignite may discourage competitive entry, not only because an entrant might want to use lignite-fired plants, but also because the entrant would have to be able to supply electricity that can compete successfully against power generated using low-cost lignite. Offering to sell lignite to other generating companies would allow the state to set a market price for licences, which would also end concerns that the zero-royalty price might constitute State-aid". And PPC itself recognised in all its annual reports²³⁹ :

"PPC S.A. ... enjoys a low cost competitive advantage due to the use of lignite for electricity production."

- 217. These findings were further confirmed in the 2006 OECD report on Greece, where it is stated that "Greek lignite is a competitive fuel in the current environment". The report noted that "it may be an option for the government to consider allowing another operator to construct a power station using lignite from these deposits, either transferring mining rights, or using PPC mined lignite". The report further recommended to "ensure full information disclosure of the costs of the lignite produced by PPC to increase transparency in electricity price formation, and allow potential non-PPC power station operators full access on commercial terms to PPC's lignite deposits".
- 218. This is consistent with existing estimations of the competitiveness of lignite-fuelled generation compared to other sources of generation: the Commission for instance indicated in its Communication on "An energy policy for Europe" the estimated costs of generation of the main sources (fuel and technologies) of electricity generation²⁴⁰.
- 219. As regards the fact that lignite fired generation represents a gradually decreasing proportion of total generation in Greece, this is bound to happen whatever the competitiveness of lignite-fuelled generation given that consumption continues to grow every year (on average by more than 2%) whereas lignite-fired generation capacity has remained stable since 2003. What is important is the relation between capacity and generation: the fact remains that lignite-fired generation represents about 60% of total generation in the interconnected system despite the fact that it represents only 43% of total installed capacity in that system.

should be able to use a mixture of fuels similar to the one used by DEH (*PPC*) (~70% solid fuel, ~10% hydroelectric, ~10% natural gas and ~10% liquid fuels). Today the only applications for electricity production which are being considered by RAE (Regulatory Authority for Energy) are those that rely on natural gas and the renewable sources of energy."

²³⁸ OECD report "Regulatory Reform – Greece", OECD2001 p.270.

²³⁹ Report for the year 2004, page 3, similar statements have been repeatedly made by PPC in its previous annual reports.

²⁴⁰ COM/2007/0001 Communication from the Commission to the European Council and the European Parliament - An energy policy for Europe. The figures included in Annex 2 of that communication about the costs of various sources of generation are based on the 2005 report of IEA and NEA about "Projected costs of generating electricity" which is available at http://www.iea.org/textbase/nppdf/free/2005/ElecCost.pdf

- 220. Also, it is true that PPC's lignite-fired plants will gradually be retired from [2010-2020] onwards: [100-400]MW of lignite-fired capacity will be retired in [2010-2030], [200-500]MW in [2010-2030], etc (see Table 16). But this is only gradual and not short-term (major retirements are foreseen only for [2010-2025] onwards). Further, PPC has already planned to replace 900MW of lignite-fired capacity by 2012 and already enjoys a lump license for 1600MW to renew existing capacity within its portfolio (see paragraph 79). Thus, in the short-term, PPC will not experience a significant decrease of the advantage that it enjoys with lignite-fired plants.
- 221. As regards the costs of producing electricity with new plants indicated by the Hellenic Republic (see point 135.7 above), they are not consistent with other estimations mentioned above. Moreover, both PPC and its competitors are interested in building new lignite-fuelled plants despite the fact that prices on the Greek market are well below the cost estimations provided by the Hellenic Republic²⁴¹: the operators seem thus to disagree with the cost estimations made by the Hellenic Republic. In any event, the fact that both PPC and its competitors are interested in building new lignite-fuelled plants is an unequivocal sign of the competitiveness of lignite-fired generation in the Greek market.
- 222. As regards the assertion that the Commission itself recognised in the Final Report on its Sector Inquiry that lignite-fired generation implies higher fixed costs, this is correct. However, as explained in the sector inquiry report, this has to be read in the context of the "merit curve" of electricity markets. The price of short-term electricity markets is determined based on the variable costs of plants, ranked in the order of their variable costs: the price is equal to the variable cost of the most expensive plants called to meet demand in the merit order of the plants. This price mechanism however ensures the coverage of fixed costs of the most investment-intensive technologies²⁴² because the technologies with the highest fixed costs are the ones with the lowest variable costs, whereas the technologies with the lowest fixed costs are the ones with the highest variable costs and because demand varies between peak and off-peak horus, ensuring thus that there are always a number of hours where "other plants" are setting the price²⁴³. Thus the statement that lignite-fired generation have higher fixed costs does not affect the competitiveness of lignite-fired generation vis-à-vis other generation sources. It is the sum of fixed and variable costs which is key to determine competitiveness and the evidence demonstrates the competitiveness of lignite-fired generation in the Greek market.
- 223. Separately, it may be the case that wholesale market rules are detrimental to lignitefired generation during nights as PPC argues. But that stems from the priority given to imports and to the rules about technical minima of plants. It does not affect the fact

²⁴¹ The price of the pool was 64€MWh on average in 2006 (see paragraph 106) whereas the Hellenic Republic estimated (in paragraph 3.3 of its answer to the supplementary Letter of formal notice) that the total costs of new lignite fired plants would be [75-85] €MWh. The Hellenic Republic also estimated that the total costs of new gas-fired plants would be [70-80] €MWh, whereas the only competitor of PPC reported substantial profits from its gas-fired plant in 2006 with the price level of 64€MWh. It seems thus that the estimations of the Hellenic Republic are exaggerated.

²⁴² This was corroborated in a study of six European wholesale markets commissioned by the Commission and published on 20 April 2007: see the report by London Economics available at http://ec.europa.eu/comm/competition/sectors/energy/inquiry/index.html.

²⁴³ The plants with the highest variable costs are usually old plants whose fixed-costs are fully amortised and which do not need thus to have contribution to fixed costs.

that lignite-fired plants remain the most competitive thermal plants. In effect, despite these rules they continue to produce about 60% of total generation. In any event, the fact that another measure may marginally reduce the use of lignite-fuelled power plants does not remove the infringement of Article 86(1) in conjunction with Article 82. The measures allow PPC to maintain its dominant position.

- 224. Finally, the statements of PPC that market entry is now easy are not consistent with the facts. While one joint-venture (Endesa-Mytilineos) involving a foreign operator has decided to build a gas-fired power plant without subsidies from the tender procedure carried out by HTSO, four other competitors of PPC (including three jointventures involving foreign generators) continue to rely on the HTSO tender procedure (and on subsidies) to make an entry into the Greek market. Indeed, the project of Endesa-Mytilineos, when construction starts, would be only the second merchant power plant decided upon in the market more than five years after liberalisation. This shows that entry remains difficult with access only to gas as a fuel. At the same time two competitors of PPC are ready to build lignite-fired plants without subsidies now that some lignite would be available from the Vevi deposit: TERNA applied for the Vevi deposit and included the construction of a lignitefuelled plant in its business plan and HERON Thermoelectrical applied for the Vevi deposit and applied in March 2007 for a licence of a lignite-fired plant. These facts confirm that competitors of PPC need lignite to be able to compete in the electricity wholesale market, as recognised by the Hellenic Republic and PPC.
- 225. In conclusion, the facts at hand demonstrate that lignite is the most competitive source of generation and that, by not granting sufficient access to lignite to alternative operators, the Hellenic republic is protecting the position of PPC and extending its dominance in generation.

Arguments by the Hellenic Republic and by PPC on electricity supply

- 226. Additionally the Hellenic Republic and PPC argued in their answers to the Letter of formal notice that the following facts contradict the extension of dominance by PPC: the increase in demand for electricity in Greece, the fact that tenders for electricity capacity have been organised where PPC has been excluded, and that PPC's tariffs also for eligible customers are regulated. More specifically, as regards the issue of regulated tariffs, according to the Hellenic Republic, rights granted to PPC would not constitute an entry barrier, since tariffs for non-eligible and for eligible customers are set by the State so long as PPC supplies over 70% of the eligible market. PPC adhered to this argument, indicating that PPC does not have the power to reduce tariffs. Furthermore, PPC indicated that tariffs are not a barrier to entry and suggested that the Commission agrees with this allegation. These arguments were not further made or detailed in subsequent letters, except that PPC found that the level of the tariffs may have been too low for new entrants to even stay in the retail market if they had entered it (see point 116).
- 227. These arguments are not considered convincing. Some of these arguments relate to the initial definition of the second affected market (electricity generation and supply to eligible customers -see point 164), they will be addressed hereafter as regards the period (before May 2005) for which such definition was valid.

- 228. First, it is not clear how the fact that there is an increase in demand for electricity in Greece could contradict the conclusion as regards the violation of Article 86(1) in conjunction with Article 82. The increase in demand is explained by the fact that electricity demand evolves with economic development, and increases constantly every year, not only in Greece but also elsewhere. However, this increase does not alter the substantial advantage enjoyed by PPC vis-à-vis its competitors, as it has unique access to very important reserves of the cheapest source of fuel for plants which represent around 60% of total effective power production in the interconnected system (see paragraph 85). Thus, maintaining the privileged access to lignite and to lignite-based power protects the dominant position of PPC by raising barriers to entry for other suppliers even if demand increases.
- 229. As regards tenders for new capacity. HTSO was obliged by law 3175/2003 to contribute to ensuring security of supply and organise tenders for electricity capacity-availability agreements which excluded PPC. In effect, more than five years after liberalisation, only one entity has built a new generation plant with a view to competing with PPC in the wholesale market²⁴⁴. The fact that the Hellenic Republic is forced to organise tenders for security of supply purposes and to offer a subsidy element to stimulate the building of new plants by competitors of PPC only emphasises the difficulty of competitors of PPC to enter into the Greek wholesale market without access to lignite.
- 230. As regards the impact of regulated tariffs, several elements should be noted for the period before May 2005.
- 231. First, tariff setting in Greece and its relationship with the Community competition rules is not the object of this decision.
- 232. Second, the Commission does not dispute that regulated tariffs may have had an impact on market entry: the Commission indicated in its Letter of Formal Notice that "(t)he results of the Commission's investigation indicate that potential entrants do not all regard the level of tariffs as <u>the main reason</u> deterring entrance in the Greek electricity supply market". The Commission notes that PPC found that regulated tariffs had an impact on market entry for retail supply²⁴⁵.
- 233. Third, the Commission notes that these tariff-related entry barriers may have compounded the effect of the measures which are the object of this decision. This is due to the fact that, for that period, regulated tariffs were based on the cost of generation of PPC, including low-cost lignite-fired generation which the competitors of PPC could not enjoy²⁴⁶. The regulated tariffs thus have strengthened the

As explained in point 81, the plant of Heron S.A. was built for reserve purposes and is allowed only to a limited extent to supply the wholesale market.

²⁴⁵ In its letter of 11 July 2003 (page 5), PPC declared that "(s)ince electricity tariffs in Greece, as established by the Minister of Development, are currently among the lowest in the European Union, it may be the case that these tariffs are possibly more favourable than the prices that could be offered by new entrants in the supply market"

²⁴⁶ The tariffs were computed on the basis of generation costs of PPC (see footnote 168), which included the low-cost of lignite-fired generation that competitors could not enjoy. This created a competitive advantage for PPC which admitted it in its report for the period 1 January 2001 to 31 December 2002 (Report of May 2003 provided by PPC as an attachment to its letter of 30 May 2003). In that report it is stated on pages 44 and 45: "Furthermore, tariffs in Greece are currently lower than the European average both for residential and industrial customers. At such levels, they are unlikely to provide

competitive advantage enjoyed by PPC with lignite-fired generation. In the absence of a comparable generation portfolio, new entrants had difficulty to compete with PPC for retail supply.

234. But, in any event, the fact that there may be other barriers to entry does not exonerate the Hellenic Republic from the application of the Treaty rules for the measures which are the object of this decision. Thus, regulated tariffs do not diminish the violation of article 86(1) in combination of 82 by the measures which are the subject of this decision.

Arguments by the Hellenic Republic and by PPC on when measures were put in place and the lack of further measures since then

- 235. In their letters, the Hellenic Republic and PPC noted that the contested measures had been adopted before liberalisation effectively took place in 2001.
- 236. While this is true, Article 86(1) states that "Member States shall neither enact <u>nor</u> <u>maintain</u> in force any measure contrary to the rules contained in this Treaty". What is contested is the maintenance of the advantage conferred to PPC, which creates inequality of opportunity between operators in the electricity wholesale market. Given that PPC already enjoys exploitation rights half of all lignite reserves and for more than 60% of all exploitable reserves, the maintenance would be reinforced if PPC were granted, even through open tenders, exploitation rights for the further deposits for which the Hellenic Republic has decided to grant exploitation rights.
- 237. The Hellenic Republic also argued that the legislation invoked by the Commission (Law 134/75 and Legislative Decree 4029/1959) had fallen into disuse. However, the legislation used to grant rights to PPC (Law 134/75 and Legislative Decree 4029/1959) has not fallen into disuse: PPC continues to enjoy the exploitation rights granted on the basis of these acts, which have not been repealed. By maintaining these rights and not granting exploitation rights on significant deposits to competitors of PPC, the Hellenic Republic is creating an inequality of opportunity between operators in the downstream wholesale electricity market.

4.2.4.4. Conclusion

238. By granting and maintaining in force quasi-monopolistic rights giving the public undertaking PPC privileged access to lignite exploitation, and accordingly to lignitebased electricity, the Hellenic Republic assured PPC a privileged access to the cheapest available fuel for electricity production, which gave this company the possibility to maintain a dominant position in the wholesale electricity market at a level close to monopoly by excluding or hindering market entry by new-comers. The Hellenic Republic thus enabled PPC to protect its quasi-monopolistic market position despite liberalisation of the wholesale electricity market, thereby maintaining and reinforcing its dominant position in that market.

sufficient incentive for new generating capacity...(...)...We believe that the competitive advantages of our low generation costs and our expertise in the Greek electricity market put us in a strong position to capitalise on its potential growth prospects."
4.2.5. No justification under Article 86 (2)

- 239. Article 86 (2) of the Treaty provides that undertakings entrusted with the operation of services of general economic interest are subject to the rules on competition, in so far as the application of such rules does not obstruct the performance, in law or in fact, of the particular tasks assigned to them. This article can only be applied if it is invoked by the Member State or by the undertaking in question and once they have substantiated that its conditions are fulfilled²⁴⁷.
- 240. The Hellenic Republic has not relied on this provision to justify the adoption of the legislative measures granting PPC lignite extraction rights.

4.2.6. *Effect on trade between Member States*

- 241. According to established case-law, it suffices to establish "a mere potential effect of the undertaking's conduct" on trade in the Common Market²⁴⁸ to conclude that there is the requisite effect on trade between Member States. It is thus sufficient that the abusive conduct is capable of having such an effect²⁴⁹.
- 242. Also the notion of trade is wider than cross-border exchanges in goods and services, and extends to all cross-border economic activity, including establishment²⁵⁰.
- 243. The undertaking's conduct and the State measures render entry into the electricity supply market and trade more difficult, and thus affect trade between Member States.
- 244. The undertaking's conduct or the State measures also affect in an appreciable way interstate trade since they affect potential new entrants such as the complainant and others, that would like to become active in the electricity supply market in Greece. These potential entrants include all those who, due to the State measures in favour of PPC, are discouraged from investing in electricity generation and supply in Greece, including those who applied for and obtained electricity generation and electricity supply licences. These operators are not using these licences yet, and are thus not using their right of establishment in Greece.

4.2.7. Remedies

245. The Hellenic Republic has not proposed any remedies which would eliminate the effects of the infringement in question, despite the invitation by the Commission to do so in October 2006. The Hellenic Republic only stated that it will carry out in the future open tenders for the allocation of new exploitation rights on lignite deposits and continue its policy as regards the electricity sector: "the Hellenic Republic does

²⁴⁷ See Case 155/73 Sacchi of 30 April 1974, at para. 15; case 41/80 British Telecommunications of 20 March 1985 at para. 33; case T-260/94 Air Inter of 19 June 1997, at para. 138.

²⁴⁸ C-41/90 Höfner [1991] ECR I-2015, paragraph 32-33; C-179/90 Port of Genoa [1991] ECR I-5889, paragraph20;

²⁴⁹ C-322/81 Michelin[1983] ECR, p.3461, paragraph32

²⁵⁰ C-309/99, Wouters, par. 95; C-475/99, Ambulanz Glöckner, par. 49; Joined cases C-215/96 and C-216/96 Bagnasco, par. 51; C-55/96, Job Centre, par. 37; C-41/90, Höfner and Elser, par. 33

not consider that there is any issue of infringement of Community rules that would justify the taking of <u>additional</u> measures"²⁵¹.

- 246. The State measures subject of this decision produce effects distortive of competition that are felt in the market for lignite supply and, prominently, in the wholesale market for electricity. Remedies should thus ensure that the effects of this infringement are removed. This can only be achieved if the competitors of PPC have access to sufficient amounts of lignite and to generation of electricity on the basis of lignite, in order to allow them to compete with PPC in the electricity wholesale market. This overriding criterion for ending the infringement remains valid, irrespective of any possible evolution of national policy in the Hellenic Republic regarding the question whether or not to allocate *additional* exploitable lignite deposits in the light of considerations such as environmental protection, health policy or security of supply. National policy in this regard is in no way affected by the present decision, it being clear that access to lignite for electricity generation purposes will in any event retain its significance for the possibility of effective competition on the wholesale electricity market.
- 247. According to current national policy of the Hellenic Republic regarding the exploitation of public lignite reserves in its territory, the lignite reserves that can be made available to competitors of PPC include both presently available²⁵² exploitable lignite reserves and exploitable lignite reserves which can be made available in the foreseeable future²⁵³. Lignite reserves that can be made available to competitors of PPC and that are not currently exploited by PPC thus amount currently to only 40% of the total exploitable lignite reserves²⁵⁴. At this stage, the Commission considers that this proportion of the total exploitable lignite reserves of PPC in order to effectively ensure that these competitors are able to exert competitive constraints on PPC in the electricity wholesale market²⁵⁵. This proportion of exploitable lignite reserves that can be made available to competitors may increase in the long-term if the remaining reserves of lignite which have not been explored so far are found to be exploitable²⁵⁶.

²⁵¹ Letter of the Hellenic Republic dated 24 January 2007, paragraph 7.2.

²⁵² These are essentially the deposits of Achlada and Vevi.

²⁵³ These are essentially the deposits of Drama and Elassona.

²⁵⁴ This ratio of 40% does not take into account the fact that PPC enjoys at this stage lignite supply from the Achlada mine, whose reserves represent 3% of exploitable reserves. Thus in practice, potential access is at this stage slightly lower than 40% of total exploitable reserves.

²⁵⁵ Competitors of PPC need lignite-fired capacity for two reasons. First, they need to have some baseload capacity in their generation portfolio (see Recital 215) and there is little other baseload capacity available. Secondly, they need to be able to exercise competitive pressure on PPC during off-peak periods (where lignite-fired capacity is expected to set the price provided that a constraint on lignite-fired production does not force recourse to much more expensive gas-fired plants). Lignite-fired capacity represents most of baseload generation in Greece, the rest being covered by hydro (partly) and RES (see Table 14). Thus, assuming that the relationship between lignite reserves and lignite-fired generation capacity is broadly the same for all sites, 40% of lignite reserves represent less than 40% but at a minimum one third of baseload production. This is considered a minimum to exercise competitive constraints during off-peak periods and to allow competitors to have a sufficient baseload production to build balanced generation portfolios.

²⁵⁶ Total reserves not exploited by PPC represent 52% of all lignite reserves, including Achlada reserves which constitute 2.4% of total reserves.

The same minimum proportion of total allocated exploitable reserves would also have to be made available in the event that the Hellenic Republic would decide not to make available additional exploitable reserves, or to do so to a more limited extent than currently foreseen.

- 248. Against this background, in order to ensure that the effects of the infringement are eliminated it is imperative that measures which ensure that PPC's competitors obtain access to lignite are put in place. It is the responsibility of the Hellenic Republic, within the framework of its overall policy regarding lignite-based generation in Greece, to identify concrete measures which achieve the result of such adequate access to lignite and thereby put an end to the infringement. The Commission can at this stage identify, non exhaustively and on an indicative basis, the following examples of potential concrete measures which could be adopted by the Hellenic Republic, cumulatively or separately:
 - 248.1. the Hellenic Republic could reallocate some of the rights currently enjoyed by PPC. In such a case, given the fact that deposits are linked to nearby plants, the access to the deposits would have to be combined with a transfer of the ownerships or rights of use of the corresponding plants;
 - 248.2. the Hellenic Republic could organise for the allocation of new exploitation rights to competitors of PPC; this would mean ensuring that PPC does not obtain these exploitation rights unless no other reliable offer is availableFurther, this measure could be accompanied, as regards the production of electricity, in light of Article 6 of EC Directive 2003/54, by the organisation of open and non-discriminatory public selection procedures for future lignite fuelled power plants <u>using the lignite of deposits still to be allocate, d</u>but with the exclusion of PPC.
- 249. It is incumbent upon the Hellenic Republic to adopt effective measures with a view to removing the effects of the infringement. It must be noted that if the Hellenic Republic revised its policy of allowing further exploitation rights on lignite deposits in Greece, with a view to taking into account EU environmental policies regarding CO2 emissions, the measures would have to be aligned with that revised policy.
- 250. Finally, the Commission is attentive to the need to ensure that measures promptly enhance competition in the wholesale electricity market. The Commission is aware that, should remedies consist of the allocation of new exploitation rights on available exploitable lignite deposits for competitors of PPC, these remedies would not have immediate effects.²⁵⁷ In order to not let the effects of the infringing measures continue for a very long period and in order to give an incentive to put the correcting

²⁵⁷ The exploitation of such deposits would not take place immediately and electricity generation on the basis of lignite from these deposits is not possible before several years: building a new plant requires a minimum of five years according to latest practice (see recital 92) and licensing for such plants takes a minimum additional one year. For instance for the Vevi deposits, rights may be granted in the near future but the licensing process for the corresponding plant has not started and thus lignite-fired generation on the basis of lignite extracted from the Vevi deposit will not occur before six years. As regards Drama and Elassona, the selection procedure for exploitation rights on may not be concluded before one to two years from the moment of adoption of this decision. Assuming that the set-up of lignite mines and the building of power plants occur in parallel, such a remedy would not have any effect on the electricity wholesale market before six years at least (with Vevi) and would not have significant effects on the electricity wholesale market (with Drama and Elassona) for seven to eight years at least.

measures in place quickly, it appears necessary to envisage transitory measures. For example, it may thus be necessary to make lignite-fired generation available on costbased terms to future owners of lignite-fired plants competing with the plants of PPC, until they can operate their plants to compete with PPC. It is incumbent upon the Hellenic Republic to adopt effective transitory measures if the measures that it adopts with a view to effectively removing the effects of the infringement only do so several years into the future.

- 251. Within 2 months from the notification of this decision the Hellenic Republic should inform the Commission about the measures it intends to take in order to comply with this decision. Given that the necessary remedies may entail the modification of the legislative framework and the organisation of transitory measures where needed, it is considered necessary to grant a further deadline to the Hellenic Republic for adopting and implementing the relevant measures. Such deadline should be no later than eight (2 +6) months from the notification of this decision. In any event, the Hellenic Republic should abstain from adopting any measure that may aggravate the situation.
- 252. Should the Hellenic Republic fail to comply with its obligations within the prescribed deadlines, and in particular should the envisaged or implemented remedies not be satisfactory, the Commission retains the possibility either to take action pursuant to Article 226 of the Treaty or to adopt a further decision pursuant to Article 86 of the Treaty establishing specific measures to correct anti-competitive effects of the present infringement.

HAS ADOPTED THIS DECISION:

Article 1

Article 22 paragraph 1 of the Legislative Decree 4029/1959, Article 3 paragraph and paragraph 1 of the Law 134/1975 and Ministerial Decisions of 1976, 1988 and 1994 (Decisions by the Minister of Industry, Energy and Technology published in the Official Journal of the Hellenic Republic, volume B, issue n° 282, of 3 March 1976, volume B, issue n° 596, of 24 August 1988, and volume B, issue n° 633, of 22 August 1994) are contrary to Article 86(1), read in conjunction with Article 82 of the EC treaty, to the extent that they grant and maintain in force privileged rights to PPC for the exploitation of lignite in Greece, thereby creating inequality of opportunity between economic operators as regards access to primary fuels for the production of electricity and enabling PPC to maintain or reinforce its dominant position on the Greek wholesale electricity market by excluding or hindering market entry by new-comers.

Article 2

The Hellenic Republic shall inform the Commission, within two months of being notified of this Decision, of the measures it intends to take in order to correct the anti-competitive effects of the state measures referred to in Article 1.

Such measures shall be adopted and implemented within eight months from the notification of this decision.

The Hellenic Republic shall abstain from adopting any measure that may aggravate the situation.

Article 3

This decision is addressed to the Hellenic Republic.

Done at Brussels, 5 March 2008

For the Commission

Neelie Kroes Member of the Commission