



## COUNTRY STUDIES

# Greece - Regulatory Reform in electricity, domestic ferries and trucking 2001

### Introduction

The Review is one of a series of country reports carried out under the OECD's Regulatory Reform Programme, in response to the 1997 mandate by OECD Ministers. This report on regulatory reform in electricity, domestic ferries and trucking in Greece was principally prepared by Ms. Sally Van Sicken for the OECD.

### Overview

### Related Topics

## **BACKGROUND REPORT ON**

### **REGULATORY REFORM IN ELECTRICITY, DOMESTIC FERRIES AND TRUCKING\***

\* This report was principally prepared by **Sally Van Sieten**, Principal Administrator, of the OECD's Division for Competition Law and Policy. It has benefited from extensive comments provided by colleagues throughout the OECD Secretariats, by the Government of Greece, and by Member countries as part of the peer review process. This report was peer reviewed in June 2000 by the Working Party on Competition and Regulation of the Competition Law and Policy Committee of the OECD.

## TABLE OF CONTENTS

### REGULATORY REFORM IN ELECTRICITY

1. INTRODUCTION TO THE ELECTRICITY SECTOR
- 1.2. Description of the electricity sector
- 1.3. Governance and regulatory institutions
  - 1.3.1. Policy objectives
  - 1.3.2. Corporate governance
  - 1.3.3. Regulatory institutions under the 1999 Law
- 1.4. Analysis
  - 1.4.1. Rate of return regulation
  - 1.4.2. Public service obligations and cross-subsidies
  - 1.4.3. Foreign entry
  - 1.4.4. Domestic entry
  - 1.4.5. Structural change
- 1.5. Conclusions and policy options
  - 1.5.1. Policy options

### REGULATORY REFORM IN DOMESTIC FERRIES

2. INTRODUCTION TO THE DOMESTIC FERRY SECTOR
- 2.1. Policy objectives
- 2.2. Description of the sector
- 2.3. Regulatory regime
  - 2.3.1. Institutions
  - 2.3.2. Economic regulation
- 2.4. Conclusions and policy options
  - 2.4.1. Transitional period
  - 2.4.2. Policy options

### REGULATORY REFORM IN TRUCKING

3. INTRODUCTION TO THE TRUCKING SECTOR
- 3.1. Regulation
  - 3.1.1. European Union regulation
  - 3.1.2. Greek regulation
- 3.2. Conclusions and policy options

### NOTES

### BIBLIOGRAPHY

#### Tables

1. Assignment of regulatory powers
2. Structure of the Greek ferry sector
3. Earnings and sales of Athens stock exchange-listed shipping companies
4. Trucks registered in Greece
5. Development of goods transport in Greece

## **Figures**

1. International price comparisons – Industrial electricity prices in selected OECD countries, 1998
2. International price comparisons – Household electricity prices in selected OECD countries, 1998
3. One and two firm concentration levels for selected countries or regions, 1998

## **REGULATORY REFORM IN ELECTRICITY, DOMESTIC FERRIES AND TRUCKING**

1. In its 1998 Economic Survey of Greece, the OECD reported that almost all public enterprises had been poorly managed, and had often been used to implement multiple policy objectives unrelated to their primary objective of efficiently providing quality goods and services. As a result, public enterprises were usually inefficient, provided low service quality, and were a costly drain on the public purse. From 1996, however, the need for change, to respond to the demands of market opening under EU Directives, and the desire to meet the Maastricht public finance criteria to join the European Monetary Union, spurred concrete reforms.

2. This chapter reviews regulatory and competition issues in Greece in the transport (road and ferry) sector and electricity sector. The electricity company, Public Power Corporation (PPC), is the largest Greek corporation, and improving its commercial performance will support the continued growth of the Greek economy. The other sectors reviewed in this chapter, domestic ferries and trucking, are privately owned but the regulatory regimes for these sectors can also be improved so that they operate more efficiently. Both sectors provide key inputs into large parts of the economy.

### **REGULATORY REFORM IN ELECTRICITY**

#### **1. INTRODUCTION TO THE ELECTRICITY SECTOR**

3. The electricity sector in Greece is comprised almost completely of a single state-owned corporation, Public Power Corporation, or PPC. PPC is vertically integrated in all aspects of the electricity sector, from lignite mining to selling power. Only trivial amounts of power are supplied by others or imported. The Greek gas sector, too, is monopolised by a vertically integrated state-owned company.

4. The most immediate spur to reform of the Greek electricity sector is its obligations under the EU Electricity Directive.<sup>1</sup> Under this Directive, Greece must *inter alia* open at least 30% of its electricity demand to competition by 19 February 2001. Greece's 1999 Law (Law No. 2773 *Liberalisation of the Electricity Market – Regulation of energy policy issues and other provisions*, 22 December 1999) was adopted to comply with the Directive.

5. The 1999 Law establishes the Energy Regulatory Authority (ERA), an advisory body attached to the Ministry of Development. The Minister for Development continues to regulate the sector. PPC remains intact, but must separate accounts for its electricity activities. Its legal monopoly in generation and supply of liberalised customers is removed. Conditions to supply liberalised consumers are set out, and Greece will liberalise 30% of demand, meaning that those customers will be free to choose their electricity supplier. The establishment of a System Operator, owned by the state, PPC and, later, other generators, is provided for. The criteria defining liberalised customers will be set out in further regulation.

6. These reforms are clearly positive. The relationship between PPC and the State is now formalised. A professionally-staffed advisory body is established. Provision is made for privatisation of up to 49% of the company. Under the right conditions, consumer choice could help promote market efficiency. But, unless the industry structure and regulatory regime are reformed further, competition to generate and supply electricity is not likely to develop in Greece in the foreseeable future. The Government chose not to split PPC to create competing generators. Entry is discouraged by access conditions for fuel, the governance of access to transmission and distribution, and low tariffs to the largest customers. Conditions for supply from outside the European Union are sufficiently burdensome to preclude such supply.

7. For Greece to enjoy significant efficiency gains, it will need to take additional steps to promote the development of effective competition. These steps include reducing barriers to entry for generators, splitting PPC into competing generating companies with distinct ownership, transferring regulatory responsibility to an effective regulatory authority that is independent of the industry and of the day-to-day political pressures of government, and improving the corporate governance of PPC. These steps would improve economic performance in Greece, and make easier attainment of its environmental objectives.

## **1.2. Description of the electricity sector**

8. PPC (Public Power Corporation) is, essentially, the Greek electricity sector. PPC was a state-owned corporation in private law until 1 January 2001, when it became a *société anonyme*. It is vertically integrated into all aspects of the electricity sector — generation, transmission, distribution and supply — as well as lignite mining. Only 2% of electricity is generated by others, electricity that is mainly used by the industrial companies that generate it, with the rest sold to PPC (IEA, 1998).

9. The Greek mainland and a number of islands are served by an interconnected grid. Other islands – of which the largest are Crete and Rhodes – have isolated systems. Lignite, mined domestically, accounts for two-thirds of generation, in seven power plants. Oil-fired (43 plants) and hydroelectric stations provide the remainder, primarily for peak and mid-load both on the mainland and islands. Natural gas has been available via pipeline since 1997: Four gas-fired units (1 107 MW capacity) are in operation and one other is under construction.

### **Box 1. Greek electricity sector at a glance**

Installed capacity (1998): 10.5 GW, of which 1.1 GW is on islands with independent systems and 0.2GW autoproducers

Annual generation (1998): 42.7 TWh of which 0.9 TWh autoproducers

Annual PPC sales (1998): 39.2 TWh

Peak demand (1998): 7.4 GW

Growth rate: about 4% per annum (1997 to 1998 was 4.8%)

Fuel mix (capacity, 1998): lignite (47%), hydro (28%), oil (20%), gas (5%), other (0.2%)

Fuel mix (generation, 1998): lignite (68%), hydro (9%), oil (19%), gas (4%), other (0.1%)

Interconnections: Albania (1 540 MVA), Bulgaria (1 400 MVA), FYROM (1 540 MVA)

Imports/exports: net imports equal to about 4% of total supply (1998)

*Source: PPC Annual Report 1998.*

10. PPC faces no competition from abroad. Net electricity imports in 1998 accounted for about 3.7% of Greek demand, but this dropped to 0.4% of demand in 1999 and, in the first four months of 2000, Greece was a net exporter of electricity. Greece has no direct electricity connections with other EU or IEA Member countries. The substantial links to other Balkan countries are used only for balancing and back-up transactions amongst the electricity monopolists. If, in future, the Bulgarian nuclear plant is closed, or other plants are closed for environmental reasons, capacity constraints in the Balkan area will be exacerbated. Investments that would increase generation capacity in the Balkans have been announced.

There is no interconnection with Turkey, but PPC and TEAS, the Turkish utility, are studying one under the Transeuropean Energy Networks Programme of the European Union. After 2001, a small 500 MW link to Italy, co-owned by PPC and ENEL, may provide limited competition.

11. While the 1999 law removes the legal prohibition on entry of new generators, only two companies, both with independent access to fuel, have expressed much interest. Hellenic Petroleum may construct a plant at one of its refineries. Prometheus Gas may build a plant to export electricity. This company is 50% owned by Gazprom and has the right, under certain conditions not currently fulfilled, to use part of the gas pipeline. Other possible entrants are auto-generators who, by definition, would use most of the electricity themselves, and combined heat and power producers. Other companies have also expressed some interest in building or participating in power projects in Greece, but have not announced any specific project.

12. Transmission, distribution, supply to captive consumers, and supply on the non-connected islands is reserved to PPC (Art. 24).

13. Access to fuel is a key requirement for entry into generation. Most new generating plants use natural gas. Greek Public Gas Corporation (DEPA) is the vertically integrated monopolist in the Greek gas sector. DEPA is owned directly by the State, except for a blocking 35%, owned by Hellenic Petroleum, itself 80% state owned. DEPA has the exclusive right to import, transport and supply large customers – such as power plants – with gas. The Greek gas sector will not be liberalised before 2003, three years before Greece’s derogation from the EU Gas Directive ends. Gas is a “developing sector” in Greece, with the first gas deliveries only in the late 1990s.

14. Lignite is, at present, the most important fuel for electricity generation in Greece. While the Greek State owns the lignite deposits, PPC exploits the deposits under license from the state. (Private mines extract and sell to PPC less than 5% of total lignite mined.) The state does not collect royalties on lignite (although a 0.4% levy goes to local authorities).

**Box 2. Description of the electricity sector**

The electricity sector has four main stages of production, which vary in terms of their scope for competition and the regulation that can be applied. These stages are:

- Generation – the production of electric power using a variety of fuels and technologies
- Transmission – the high-voltage “transport” of electric power over distances from generators to distribution networks and large industrial customers
- Distribution – the low-voltage “transport” of electric power to smaller customers
- Retailing or supply – a set of services including metering, billing and sale of electric power to final consumers.

A fifth component is system operation. The electricity system must remain in balance, with demand and supply equal at each moment in time. Demand varies unpredictably. Hence to remain in balance, supply must respond immediately to changes in demand. System operation is the control of the generating units and other equipment attached to the transmission grid to ensure this demand-supply balancing, as well as to maintain other quality attributes of electricity.

Transmission and distribution are, for the foreseeable future, natural monopolies at any given geographic location. Further, even where a transmission grid has different owners in different geographic regions, the physical properties of electric power imply not that the sections of the grid could compete but rather that they would each “transport” a share of the power. Consequently, competition in transmission and distribution is infeasible.

By contrast, both generation and retailing are potentially competitive activities and indeed are competitive in many countries for at least some final consumers. It should be noted that generators may be located on either the same or the opposite side of an international border from the users of the electric power.

Behaviour by one user of an electricity system can change the costs of other users. These externalities imply that, at least up to relatively large geographic areas, system operation over a larger area is more effective than over a smaller area. This implies that system operation at any given geographic location is a natural monopoly activity and competition is infeasible.

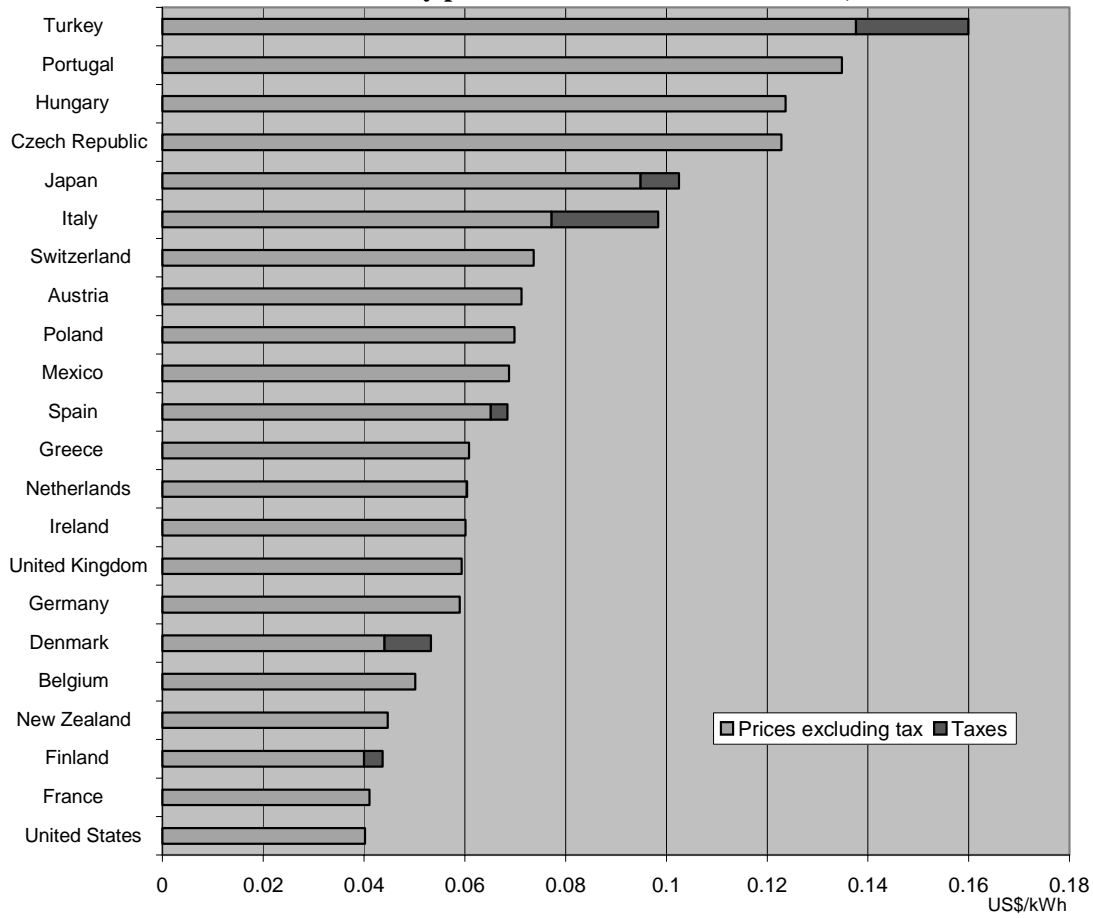
15. The 1999 law largely retains the structure of PPC. PPC remains vertically integrated, retains exclusive ownership of transmission (Art. 12) and distribution (Art. 21), and retains ownership over its generation and supply facilities. While formally PPC loses control over the operation of the transmission grid and dispatching of generation – it must develop and maintain the system according to instructions of the Transmission System Operator (Art. 12) – the ownership and staffing of the System Operator mean that there will be no immediate *de facto* change. PPC may use the transmission system for non-energy related activities, such as for a telecommunications system, so long as the energy objectives are not impeded (Art. 13). PPC must produce separate accounts for generation, transmission and distribution and, for non-electricity activities, consolidated accounts (Art. 30).

16. Average industrial prices of electricity in Greece are low, and household prices are about average, compared with other European IEA countries. But these price comparisons do not reflect PPC's relative efficiency: input prices are distorted and the company has non-commercial public service obligations, such as supplying some consumers below cost. Electricity prices were used as an anti-inflation tool, hence the real (inflation-adjusted) price fell 24% in the decade to 1999. Average industrial prices are distorted because PPC supplies large quantities of electricity at about half price to the aluminium and nickel firms (OECD, p. 119). These subsidies are due to be phased out in 2006 and 2003, respectively. Commercial and small industrial customers pay prices well above their cost of supply. Revenues collected from households covered in 1997 only about 60% of the costs attributed to them, and agricultural and other special categories of customers pay even less. The Greek government states that by 1999 household revenues covered about 90% of their costs.

17. Transfer prices for fuels are not necessarily market prices. Besides lignite, described above, other fuels are bought from other predominantly or wholly state-owned firms, although in some cases, PPC pays market-based prices. Personnel costs are high – one informed observer estimates that a reduction of 20% would be easily obtainable – and rose through the 1990s from 16% of revenues to 23% by 1999. Return on equity has been far below normal. PPC has received DR212bn (Euro 0.65bn) between 1981 and 1998 of EU grants, and E29m in 1999. PPC has a high debt to equity ratio for a company without recent acquisitions – its gearing was 185% at the end of 1999. In sum, PPC has used financial resources that might have been put to better use elsewhere, and has charged higher prices to those parts of the economy that are normally responsible for the greatest job creation.

18. A major challenge to restructuring and liberalising PPC was the company's under-funded pension liability. According to the 30 July 1999 agreement between the Government and the union representing PPC's employees, the State as sole owner of PPC takes on all PPC's insurance liabilities to its employees and pensioners, including those not covered by annual contributions. Also, a certain fraction of proceeds from the partial sale of PPC would be put into this fund. This agreement was incorporated in the 1999 Law.

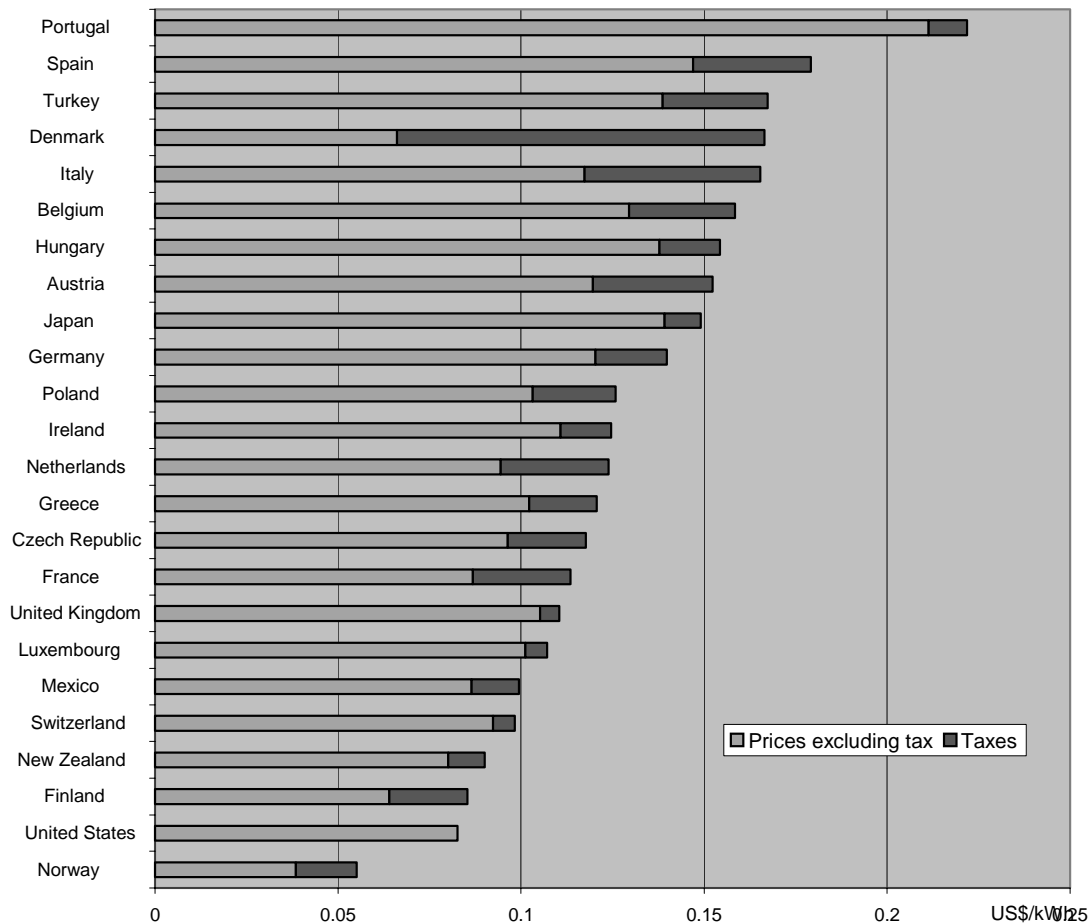
Figure 1. International price comparisons  
**Industrial electricity prices in selected OECD countries, 1998**



Note: Data not available for Australia, Canada, Korea, Luxembourg, Norway, and Sweden.

Source: IEA/OECD (2000), *Energy Prices and Taxes*, 3<sup>rd</sup> quarter, Paris.

Figure 2. **International price comparisons**  
**Household electricity prices in selected OECD countries, 1998**



Note: Ex-tax price for the United States. Data are not available for Australia, Canada, Korea and Sweden.

Source: IEA/OECD (2000), *Energy Prices and Taxes*, 3<sup>rd</sup> quarter, Paris.

### 1.3. Governance and regulatory institutions

#### 1.3.1. Policy objectives

19. A number of potentially conflicting objectives coincide in the governance, ownership, and regulation of PPC. On the one hand, the government wishes for PPC to become more economically efficient, but on the other hand it has assigned to PPC a variety of non-commercial tasks, and has used it as a tool to achieve macroeconomic objectives. The government might seek to raise funds through partial privatisation, but more competition, or uncertainty over the future regulation and degree of competition, would reduce the price received. In the government's role as owner-regulator, it can seem convenient to fine-tune PPC's behaviour, but this sort of regulation tends to be unclear and unpredictable and, in a potentially competitive environment, opaque regulatory relationships can discourage entry and investment in the sector, and reduce the market value of the company.

20. The immediate objective is to implement the EU Electricity Directive on time. Under the Directive, Greece must liberalise 30% of its market by 19 February 2001, and 33% by 2003 (Greece had a two-year derogation.). If Greece liberalised all consumers whose annual consumption exceeds 1.5 GWh,

this would correspond to 30.26% of demand and about a thousand customers. Individual Member States retain discretion in how they implement the Electricity Directive.

21. The new law sets out the objectives of the Minister of Development and the ERA as including:
- To protect the environment from the consequences of electricity activities
  - To satisfy the total energy needs of the country
  - To control whether the recipients of authorisations for generation and supply can fund those authorised activities
  - To promote sound competition in generation and supply of electricity, as well as any other forms of energy
  - To protect the interests of consumers, particularly as regards prices, terms of supply, security of supply, regularity and quality of service
  - To promote the use of efficient and economical methods and practices by authorisation holders, as well as the efficient and economical use of electricity and other forms of energy supplied to consumers (Art. 3(4)).

### 1.3.2. Corporate governance

22. PPC is a corporation under private law. It will be transformed into a *société anonyme* by a Presidential Decree. In 2000 it is entirely state-owned, but the 1999 Law foresees eventual partial privatisation in that it requires that the state retain at least 51% of the voting shares (Art. 43).

23. PPC is managed by the Managing Director, the Board of Directors and the Management Board. The Board of Directors consists of six members (including the Managing Director) elected by the General Assembly of company's shareholders, two representatives elected by the employees, two members representing minority shareholders and one member appointed by the Economic and Social Committee. If there are no minority shareholders, the General Assembly of company's shareholders elects eight members instead of six. The Management Board consists of the Managing Director and the company's General Directors. The managing Director and the Management Board run the utility day-to-day. The company is subject to external financial control.

24. The State has financial and operational responsibility. The State appoints most of the board of directors and the top management. The Ministry of National Economy approves the company's financing programmes. The Ministry of Development controls total revenue, as well as some individual tariff classes. The Ministry of Development controls tariffs to captive customers, after the opinion of the ERA has been given. The Ministry of Development otherwise exercises formal control, such as through review of investment plans. It has been the practice, however, for PPC to supply the Ministry with key personnel.

### 1.3.3. Regulatory institutions under the 1999 Law

25. The 1999 Law provides for the creation of two new entities, the Energy Regulatory Authority (ERA) and the System Operator. Primary regulatory responsibility remains with the Minister for Development: Licensing, tariff setting, and the imposition of public service obligations are assigned to the Minister. The ERA will have monitoring, advisory and referral responsibilities. It will be able to impose fines, revoke licenses, and settle disputes. It is to enjoy a certain degree of independence from the Minister

of Development. The various Codes – Grid, Power Exchange, Distribution and Consumer Protection – will be drafted by the System Operator or PPC acting as Distribution Network Operator, evaluated by the ERA, approved by the Minister, and enforced by ERA. The Competition Committee retains authority over competition matters in this sector but has not been active.

Table 1. Assignment of regulatory powers

	Minister of Development	Energy Regulatory Authority	System Operator (51% State-49% PPC*)	PPC
Final tariffs (for captive consumers)	Approves	Provides opinion		
Authorisations				
Generation	Grants	Provides opinion		
Supply	Grants	Provides opinion		
Impose fines		Decides		
Public service obligations	Decides			
Transmission access				
non-tariff terms	<i>Included in Grid Code</i>			
tariffs	Approves	Provides opinion	Proposes	
Distribution access				
non-tariff terms	<i>Included in Distribution Code</i>			
tariffs	Approves	Provides opinion		Proposes
Grid Code	Approves	Provides opinion	Drafts	
Power Exchange Code	Approves	Provides opinion	Drafts	
Distribution Code	Approves	Provides opinion		Drafts

\*PPC's initial share would decrease as other generators receive authorisations and buy shares in the System Operator.

#### Ministry of Development

26. The Minister of Development has primary regulatory responsibility, but before he exercises that power he generally must receive the opinion of ERA, though he is not bound to follow that opinion. The Minister has three main regulatory responsibilities: issuing authorisations, setting tariffs, and specifying public service obligations. Under the 1999 law, tariffs must cover costs and reasonable profits; consequently, the Minister may no longer use electricity tariffs to control inflation.

27. Participation in the electricity sector requires authorisations. The Minister issues authorisations for generation for the mainland and connected islands (Art. 9) and for suppliers to liberalised customers. For generation on non-connected islands, the Minister issues a call for tender and, after a specified procedure carried out or monitored by ERA, awards the corresponding authorisation (Art. 11). The Ministers of Development and Finance, by common decision, set a fee for the issuance, as well as annual fees for the usage of, authorisations (Art. 28(2)). Tariffs and public service obligations, which can take the form of restrictions on tariffs, are set by the Minister after he has received the opinion of ERA (Art. 29(3), 28(3)(a)).

#### Energy Regulatory Authority

28. ERA will have the following powers and responsibilities:

- Monitor and control the operation of the energy market and propose to the competent bodies the necessary measures required to comply with competition rules and consumer protection.
- Provide opinion regarding the granting of authorisations and control the exercise of rights granted under the authorisations
- Collect and evaluate information required for the fulfilment of its duties regarding entities active in the energy sector
- To impose fines on violators of this and other acts issued in accordance with this law, including the Grid Code and other Codes
- To co-operate with corresponding authorities in other countries or international organisations.
- ERA acts and decisions are entered into a special official book, easily accessible to the public, except in cases involving national defence or public security (Art. 5).

29. Decisions of ERA can be appealed within 30 days to ERA. The next levels of appeal are to, respectively, the Athens Administrative Court of Appeal and the Supreme Administrative Court.

30. ERA will be governed by five members. The members are appointed by the Minister of Development, through a published invitation, after the competent Parliamentary Committee has expressed its opinion. The term of office is five years, and may be renewed once. Members cannot be removed, unless they commit offences that would require the dismissal of a civil servant. Members may not have any ties with energy companies (Art. 4).

31. The budget of the ERA is attached to the budget of the Ministry of Development (Art. 6), but it is not included within the overall budget envelope of the Ministry. The law provides for 50 employment positions in the Secretariat of the ERA (Art. 7). Employees of state corporations in the energy sector may be transferred to serve in these positions, by specific decision of the Minister of Development and the competent Minister (Art. 7, para. 6), provided ERA agrees. These employees thus change their employer and enter a new employment contract with ERA.

**Box 3. Main features of Law No. 2773/99: Liberalisation of the electricity market – regulation of energy policy issues and other provisions, 22 December 1999**

The law:

- Establishes the objectives of the Minister of Development and the Energy Regulatory Authority in this sector.
- Provides for the establishment, of an Energy Regulatory Authority, an administratively independent agency within the Ministry of Development, to advise and monitor the energy markets, and impose fines.
- Retains regulatory powers in the Minister of Development, notably with respect to authorisations for any electricity activities, tariffs, and public service obligations, in all cases after receiving the opinion of the Energy Regulatory Authority
- Sets out regulatory principles, notably that tariffs must cover all costs, including public service obligations, as a reasonable profit, and that PPC cannot cross-subsidise between liberalised and captive customers.
- Requires PPC to keep separate accounts for its generation, transmission, and distribution-supply activities
- Removes PPC's legal monopoly on generation by introducing an authorisation regime for the mainland and interconnected islands and a tendering process for non-interconnected islands.
- Removes PPC's legal monopoly on supply by introducing an authorisation regime, but retains PPC as the unique supplier to captive consumers.
- Retains PPC as the exclusive owner of transmission, and exclusive owner and operator of distribution.
- Requires that a supplier *own* adequate generation capacity in an EU Member state, and prove long-term access to the necessary transmission and distribution capacity.
- Provides for the establishment by June 2000 of a system operator, Greek Electricity Transmission System Operator, S.A. to operate, manage, secure the maintenance of, and plan the development of the transmission system. It also procures ancillary services. It will be owned 51% by the state and 49% by generators connected to the system, initially only PPC. PPC is obliged by the Law to sell equity at a price fixed by the Minister, to independent power generators connected to the system.
- Provides for access to the transmission and distribution grids at tariffs set by the System Operator and PPC, respectively, which must be approved by the Minister after receiving the opinion of ERA.
- Provides that, on 19 February 2001, consumers totalling 30% of demand, including all customers with annual consumption over 100GWh, will become eligible to choose supplier.
- Provides that the cost of commitments or guarantees of operation given before the entry into force of the Directive may be included by PPC in its tariffs. [The Government has applied to the EC for transitional regime ("stranded cost") treatment].

#### **1.4. Analysis**

##### **1.4.1. Rate of return regulation**

32. PPC has not been subject to formal regulation, such as rate of return or price caps. Rather, its tariffs are affected by national policies, for social and development reasons. Similar considerations prevail

on the cost side, notably as regards staff levels and joint hydropower-irrigation investments. PPC has not, historically, been run as a profit-making entity. Rather, in addition to the above objectives, it has had the objective of providing electricity at the lowest possible cost, an objective that has been pursued in part by manipulating input costs.

33. The 1999 law specifies some of the principles of economic regulation that will be applied to electricity companies. Tariffs (for captive customers) are to take into account the recovery of a reasonable profit and costs, including operational costs, investment depreciation and return on invested capital (taking into account the risk and capital cost of similar activities), and cost of compliance with public service obligations (Art. 29).

#### *1.4.2. Public service obligations and cross-subsidies*

34. Although only PPC may supply captive customers, any holder of supply authorisations may be required to differentiate tariffs for groups of customers (Art. 29(3)) or to offer specific tariffs or terms for categories or classes of customers (Art. 28(3)(a)). Each authorisation holder would be able to recover all costs incurred, and PPC cannot cross-subsidise between eligible and captive consumers (Art. 29).

35. Competition problems can arise where PSOs, or indeed any “reserved activity,” are not thoroughly separated from competitive activities. It can be difficult to distinguish between those revenues which are intended to cover the cost of PSOs and those which are profits from commercial activities, or indeed to distinguish between costs incurred to comply with PSOs and costs of assets that also can be used to supply the competitive market. Although PPC cannot cross-subsidise between eligible and captive consumers, the required accounting separation – between generation, transmission and distribution (Art. 30) – is insufficient to detect this sort of cross-subsidy because many of the assets are used both to supply eligible and captive customers. It may be less costly to insist on appropriate separation from the beginning, than to rely upon ERA to collect and scrutinise accounting data.

#### *1.4.3. Foreign entry*

36. Other countries or regions have increased competition in their markets through competition from imports. The Netherlands, countries in NordPool, and the German *Länder* are examples. However, Greece has erected barriers to competition from imports.

37. The conditions to receive a supply authorisation are burdensome. An applicant must own adequate generating capacity, installed in an EU Member State, and provide “satisfactory long-term confirmation” that it has access to sufficient transmission and interconnection capacity to transmit the electricity it will supply (Art. 24). These conditions foreclose supply from Greece’s immediate neighbours. Requiring PPC to provide this reserve capacity, at a price reflecting the cost of providing it, would allow generators in neighbouring countries to overcome this near-absolute entry barrier. The weak links through the Balkan Peninsula and weak legal framework for transit make that route difficult for EU generators. Thus, competition from imports is virtually precluded, except from Italy.

38. A small interconnector with Italy is expected to begin commercial operations after 2001. Its capacity, 500 MW or about 4 000 GWh, would allow the supply of about 8% of total Greek demand, or less than a third of demand to be liberalised in 2001. Actual deliveries would likely be reduced by engineering constraints and commercial incentives. The link is intended and designed to reinforce the EU grid, as its financing by the EU indicates. Since electricity prices are higher in Italy than in Greece, the flow is likely to be westward. Southward capacity constraints across the Alps imply that only Italian generators would be able to supply through the link. The competitive impact of the link will be limited.

39. While the Italian Authority for Electricity and Gas allocates access to supply liberalised customers over the alpine interconnectors, the allocation and pricing mechanisms for the Italy-Greece link have not been announced. Access to the Italy-Greece interconnection should be allocated and priced to maximise the competitive impact of Italian generators. If the access price is high, then competition from Italy can be blocked. If access is limited to specific firms, then they can offer high prices secure in the knowledge that other firms cannot undercut them.

#### 1.4.4. Domestic entry

40. Large-scale domestic entry is unlikely because entrants face high barriers. Sources of these barriers include access to transmission and distribution, access to fuel, switching costs of potential customers, and low prices to large industrial customers.

41. One key concern of entrants is non-discriminatory access, at efficient prices and terms, to transmission and distribution. PPC owns 49% of the System Operator, itself staffed by personnel seconded or transferred from PPC. PPC remains wholly vertically integrated – except for the state owning directly 51% of the System Operator – and must accounting separate its electricity activities. Access conditions – set out in the Grid and Distribution Codes – will have been drafted by the System Operator or PPC itself as Distribution Operator. While both Codes must be approved by the Minister, the law does not provide for review of access price by ERA or the Minister. However, the ERA does monitor access prices. That is, the System Operator and PPC set the access prices to transmission and distribution, respectively (Articles 18(7) and 22(4)).

#### Box 4. Access regulation to the Greek grids

Access to the transmission and distribution grids is essential to the development of competition. The law provides for the establishment of a new entity – the System Operator – a new role for PPC as Distribution Network Operator, and the writing of several Codes that will govern grid access.

The System Operator (Greek Electricity Transmission System Operator, S.A.) shall operate, use, ensure the maintenance and development of, and interconnections with other networks of the transmission system. The SO shall publish transmission tariffs, and will draft the Grid Code. The SO shall contract for electricity only as needed to provide ancillary services.

The SO will initially be owned 51% directly by the State, 49% by PPC. As other generators arrive, the share owned by PPC will be decreased as transfers of SO shares – at prices decided by the Minister – to those other companies are made. The law makes provision for the secondment of PPC personnel to the SO, with confidentiality agreements (Articles 14-17). The SO will pay PPC for the operation and use of the transmission system, where this payment includes a reasonable profit and covers reasonable expenses including a reasonable return on invested capital (Art. 18). The SO must protect commercially sensitive information.

PPC is the distribution network operator (Art. 21). As such, PPC sets the tariffs (Art. 22(4)) and draws up the terms and conditions of access to the distribution network by generators, suppliers, and eligible customers (Art. 23(1) and 23(2)(b)). PPC draws up, also, the criteria for the calculation of expenses attributed to access to the distribution network (Art. 23(2)(g)).

Three codes governing access to the transmission and distribution grids, and settlement, will be written.

- The Grid Code regulates access to transmission and dispatch. The price and other access terms must be non-discriminatory, and the System Operator sets the access price (Arts 18-19). Dispatch priority may be given to generating units that use indigenous sources (lignite, up to 15% of the total), as well as renewable energy sources, and co-generation (Art. 19).

- The Power Exchange Code governs the economic relationships among the sector participants. *Inter alia*, it provides the basis for calculating the System Marginal Price at which settlement takes place (Art. 20).
- The Distribution Code sets the terms of access by generators, suppliers, and eligible customers to the distribution network (Art. 23).

42. All access terms and prices for transmission and distribution should be subject to independent regulation. High but non-discriminatory access pricing is just as harmful of competition as high and discriminatory pricing, since the price a company “charges” itself has no economic effect. While it is commendable that the law includes a provision to limit the duration of access negotiations, the law provides for arbitration by ERA to be established by Presidential Decree (Art. 8) or the Minister. Hence, it seems that a generator offered only anti-competitive transmission access prices and terms may have to request the ERA to refer the complaint to the Competition Commission, under Art. 5(1)(a). This could involve considerable delay until final resolution. Delayed access benefits the incumbent.

43. The continued vertical integration of PPC leaves intact its incentives to discriminate. Other countries have experienced problems in ensuring non-discriminatory transmission access. Accounting separation is ineffective in preventing discrimination against non-integrated companies. Divestiture, that is, separation of ownership of generation from transmission, is the only form of separation that eliminates incentives to discriminate. Lesser forms of separation can reduce the ability to discriminate, provided appropriate regulation is in place and the regulator is vigilant.

44. The fuel arrangements discourage entry. With respect to gas, a potential entrant must negotiate price with the monopolist, DEPA. The “most favoured customer” arrangement between DEPA and PPC implies not only that the entrant cannot buy gas on more favourable terms than PPC, but also that DEPA has reduced incentives to lower its price to an entrant since it would have to apply any price decrease to PPC’s purchases. Both of these raise the price of gas to customers. If the state is involved in DEPA’s commercial decision-making, then the price DEPA charges to competitors of PPC may reflect the state’s ownership interest in PPC. The structure of the gas supply sector is unlikely to change before 2003, three years before Greece’s derogation from the EU Gas Directive ends.

45. 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 the extraction royalties, which would also end concerns that the zero-royalty practice might constitute State aid.

46. Entrants are discouraged if liberalised customers incur costs to switch suppliers. Under the law, PPC can charge liberalised customers who are supplied by another company for additional expenses incurred by PPC because that customer was or is supplied by another company (Art. 26). While this additional charge cannot discriminate between liberalised customers, and its amount is regulated, it does increase the customer’s uncertainty about the benefits and cost of switching his business to a new entrant. This reduces his willingness to switch.

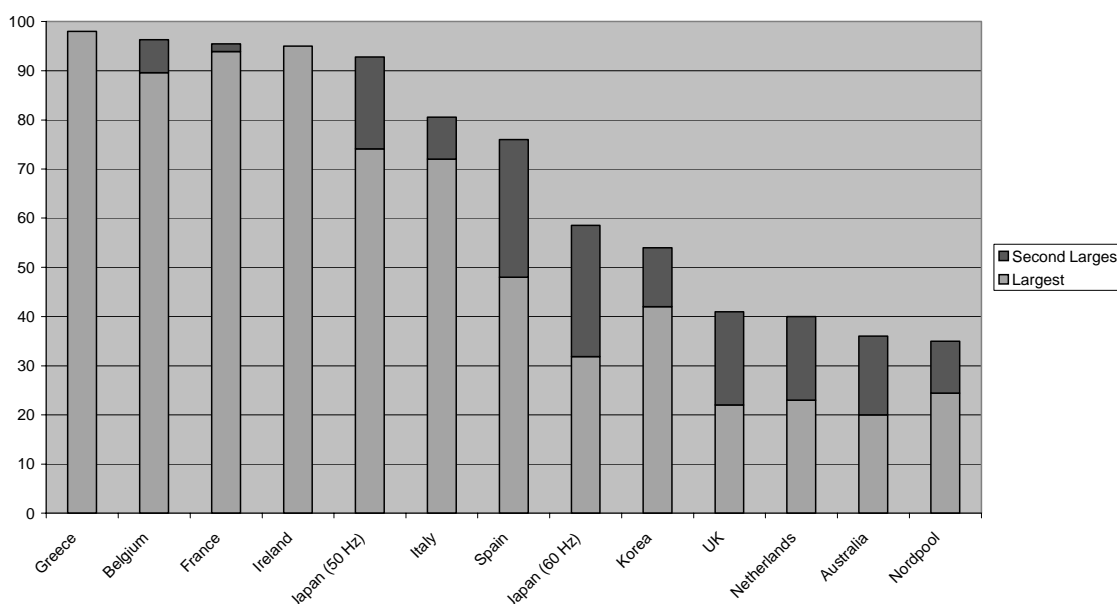
47. Low prices to large customers discourage entry. In many countries under the old regulatory regimes, large industrial companies had been paying above their cost of supply. Thus, after liberalisation, new entrants had incentives to seek them as customers. In Greece, the existing contracts with the aluminium and nickel companies provide for prices below the cost of supply. Matching those prices would

be unprofitable for an entrant. By reducing the size of the potentially profitable liberalised market, entry is less attractive. (These subsidies are scheduled to be phased out in 2006 and 2003, respectively.)

#### 1.4.5. Structural change

48. Since entry is unlikely to have a significant effect on the Greek electricity sector for the foreseeable future, the objectives of efficiency, competition, and sufficient investment must be sought in a different manner. Structural change, in the form of creating competing generating companies, promotes these objectives. Other countries have created competing generating companies both before and after privatisation because that promotes greater efficiency and private investment into the sector. This has been done in the United Kingdom (England and Wales), New Zealand, Australia (three largest States), some States of the United States, and Argentina, and it is planned in Italy and South Korea.

Figure 3. One and two firm concentration levels for selected countries or regions, 1998<sup>1</sup>



1. Data refers to 1999 for Greece and Ireland.

Source: OECD, IEA, Electrabel annual report (Electrabel + SPE), EdF and Charbonnage de France annual reports, Edison April 1999 presentation to shareholders, Spanish and Korean Ministry of Industry and Energy, Ofgem (NatPower and PowerGen in England and Wales 97/98), NEMMCO, Macquarie and Delta annual reports (SE market only), Nordpool annual report and Vattenfall, Statkraft.

49. Efficiency is promoted by competition. Endesa, in Spain, estimates it can cut operating costs by half between 1996 and 2006 (OECD, 2000, para. 141). ENEL, in Italy, is expected to be able to reduce the number of its employees by a quarter by 2004, largely through incentivised early retirement (CNN, 1999a). There is significant scope for reducing costs in PPC, partly by reducing investments in unprofitable activities and partly by reducing the number of employees (up to 20% according to one valuator). These efficiency gains are passed onto consumers in the form of lower prices, or taxpayers in the form of lower subsidies.

**Box 5. Effects of competition in electricity**

Significant time series on efficiency and prices are only available for the UK. Since 1990, productivity has skyrocketed (as output rose by 8% from 1988 to 1995, employment was reduced by 50%), and prices have plummeted. In real terms, over the 1990-1997 period, household (“domestic”) prices decreased by 20%, and prices to other consumers fell 19 to 27% (Littlechild, 1998, cited in IEA, 2000). In 1998, in real terms, the standard domestic tariff in England and Wales was 26% lower, and for industrial customers the price was 23 to 32% lower than in 1990 (Office of Electricity Generation 1998, p. 58). Only shorter time series are available for other reforming countries. For example, 1997 prices in the Australian state of Victoria fell to less than half their 1995 level, reflecting the introduction of competition, privatisation, and excess capacity. However, prices in Norway and New Zealand, where the sector remains state owned and there is a high reliance on hydropower – thus subjecting the system to cost variations due to hydrological variations – did not fall with the introduction of competition (IEA, 2000).

50. Some might object to splitting up PPC’s generating capacity, claiming that the resulting firms would be “too small.” However, small generating companies persist, or are being deliberately created, elsewhere. In Denmark, the two partnerships, Elsam and Elkraft, owned 6.7 GW and 4.8 GW capacity, respectively, primarily coal-fired. In Spain, Union Fenosa and Hidrocantabrico, own 5.2 and 1.7 GW capacity, respectively. In Hungary, the generating companies have capacities of 2.1, 1.8, 1.3, 0.8, 0.4, 0.4 and 0.3 GW, respectively. (However, these are not all independent companies.) In Nordic countries, there are several small hydropower based generators. The generating spin-offs from ENEL will have capacities of about 7, 5.4, and 2.6 GW, respectively. The total installed capacity of PPC is 10.5 GW, or 9.4 GW excluding capacity on islands with independent systems. There are tens of generating plants on the Greek mainland. Thus, it would be feasible to spin-off for several competing generating companies from PPC.

51. The predominance of lignite-fired plants in the PPC portfolio makes designing an effective “split” more difficult. It may be difficult to find buyers of such plants: the plants cannot operate without their adjacent mines, or long-term contracts with the mines, and the demonstration of the lack of cost-competitiveness of lignite plants in other highly competitive markets would be discouraging.

52. Selling the two gas-fired plants along with their long-term gas supply contracts, to two separate companies, would give an immediate boost to competition. The single gas-fired plant in operation alone accounts for 6% of total capacity. Together, these two plants, along with imports, would be able to supply a significant fraction of liberalised demand. This step alone would not create effective competition in Greece, but it would be the necessary first step and would enable the regulatory system to develop. However, opponents of such a sale have pointed out that these are PPC’s best generating plants, being new and gas-fired, and located in areas of heavy load.

53. A less intrusive policy would be to cap PPC’s generation capacity at its current level. However, simple calculation shows that, if all new demand were met by new entry – that is, if PPC did not increase or decrease the amount it generates – then even after six years, new entrants would account for only one-quarter of the market. Only after more than a decade would PPC’s share fall below half, assuming a total demand growth rate of 4% per annum. This is a very long time to wait, especially as other members of the European Union are enjoying the benefits of competitive electricity markets.

54. Some might claim that the cost of capital of non-integrated electricity companies would be higher than for a single large company. Differences in firms’ cost of capital reflect differences in their exposure to uncertainty. Uncertainties to which electricity companies are exposed include, in general, regulatory uncertainty (that changes in regulations will change profits), uncertainties in related markets like capital and fuel, and electricity market uncertainty. By splitting PPC into several competing companies, some of these risks are reduced because the resulting companies would follow different strategies. While other large electricity companies have a lower cost of capital, this is often because they “spread their risks”

across a number of countries. Any “size of company” effect would be swamped by the effect of regulatory risk on the cost of capital. The major uncertainty, which gives rise to a regulatory risk premium, can only be reduced by strengthening the regulatory framework, and increasing its credibility and predictability.

55. Another way to consider this risk premium is in the stock market value of a company. Sophisticated potential investors will form their own expectations in valuing PPC when it is floated. In particular, they will have knowledge of the path of electricity sector reforms in other countries over the past two decades, so in bidding for shares, they will assign a discount to the sale of an intact monopoly subject to economic regulation by a non-independent regulator. This discount is an expression of the regulatory risk premium of the cost of capital.

56. Another possible claim is that a monopoly provides more security of supply. However, supply security is provided in competitive markets. Sufficient investment must be attracted so that sufficient supply is available for the quantity of demand, at the relevant price, and liability for failure must be assigned. The attractiveness of an investment opportunity depends, partly, on the regulatory regime to which that investment will be subject. If the regime does not allow an adequate return, then the private capital will be invested elsewhere. In the 1990s, PPC reported returns on equity of 1-2% for 1991, 1994 and 1998, but 3.44% for 1999. Any potential investor would of course estimate his own expected returns based on his own forward-looking costs and revenues. But a return of 1-2% would be unlikely to attract private investment, hence the improvement toward the end of the decade is promising. By contrast, when the United Kingdom had one of the most liberalised electricity sectors in the world, some observers felt that there was excess investment in generation during the “dash for gas.” Thus, competition can reinforce security of supply by promoting investment in generation.

57. Security of supply, in another meaning, is provided by the flexible prices in electricity spot markets. When demand nears capacity, market price rise. This price rise chokes off some demand – some users shift their heavy usage of electricity to other times, when electricity prices are lower. This type of supply security requires that at least a portion of demand be exposed to short-term price fluctuations that, in turn, reflect short-term cost fluctuations. Another benefit from the resulting demand smoothing is lower total cost for the whole system, since peak capacity can be smaller. A third meaning of security of supply relates to continuity of access to fuel. So long as such a large share of generation is fuelled with lignite, security of supply in this sense is unlikely to change.

58. The creation of competing generation companies in Greece would promote the goals that are set out in the law. Relying on entry to create competition delays the arrival of the benefits of competition for several years, if not decades.<sup>2</sup> The link with Italy will not allow much competition from generators located in Italy, and the law as written, combined with Greece’s physical location, almost precludes supply by other foreign generation. In order to meet the stated goals, the fastest and easiest route for Greece to follow would be to make the structural splits in PPC’s generation.

### ***Regulatory framework***

59. A greater reliance on independent regulation can reduce regulatory barriers, promote entry and investment, and accelerate the development of competition in the Greek electricity sector. Other OECD countries have independent regulators, including Australia, Finland, Italy, the United Kingdom and the United States. Germany and New Zealand use the competition authority to regulate electricity. While specific arrangements differ in each country the main features of independent regulation are: complete independence from the regulated companies, a legal mandate that provides for separation the regulatory body from political control, a degree of organisational autonomy, and well defined obligations for transparency (*e.g.*, publishing decisions) and accountability (*e.g.*, appealable decisions, public scrutiny of expenditures). Key to independent regulation is independent expertise and sources of information.

60. There are three sources of concern about the Greek regulatory framework. First, the Minister of Development, rather than the ERA makes regulatory decisions. The Minister controls authorisations, sets tariffs, and can impose tariff and other conditions on all authorisation holders under the rubric of “public service obligations.” The concern is that ministers, whether in Greece or in other countries, tend to be subject to greater day-to-day political pressure, and to be replaced more frequently, than are regulators who are given a specific public mandate and appointed for fixed terms. Ministers may also make trade-offs that discourage investment: in Greece, there would be concern that the Minister might continue the practice of using electricity prices to influence inflation. Thus, ministers find it more difficult to maintain predictable policies over longer periods of time, whereas regulators maintain policies unless Parliament instructs them otherwise. Unpredictable regulation discourages private investment, and changing regulation renders investment less efficient.

61. Second, PPC itself retains substantial influence over regulation. The System Operator and the Distribution Network Operator have regulatory powers associated with granting access and operating their respective grids. PPC will own, initially, 49% of the System Operator and the law provides that PPC personnel may be seconded to the System Operator. PPC is assigned the role of the Distribution Network Operator. Each of these is a route for PPC influence. To the extent that the aim of regulation is to protect consumers and promote competition, this influence is inappropriate. In other countries, the objectives of the regulator and the policy-maker differ from those of the regulated firms. Thus, the influence of PPC can influence policy and regulatory outcomes in ways detrimental to consumers and competitors.

62. Third, the Ministry needs to develop an independent ability to make energy policy. The practice of transferring and seconding PPC personnel is indicative of this need. In Greece, state-owned energy companies provide an important source of information, expertise and advice in relation to energy policy matters on an *ad hoc* basis if not formally (IEA, pp. 28, 30). This practice discourages the development of independent expertise within ERA and the Ministry. In other countries, the regulatory institutions – both independent authorities and ministries – hire or train their own personnel to perform the regulatory functions and to make policy. The expertise of companies is tapped during public hearings or public comment periods. The transparency provided by public hearings and consultation also ensures that the views of all affected parties are heard, rather than only those that the ERA or the Ministry have chosen to consult. Greece needs to develop the expertise of its agencies, and broaden the consultation process, in order to develop the credibility of its regulatory regime.

63. The establishment of a non-discriminatory, stable regulatory framework in Greece starts with the establishment of appropriate institutions. Providing for the establishment of the Energy Regulatory Authority is a sound first step, if it will be strong enough. However, once the ERA is functioning, final regulatory authority for generating and supply authorisation, tariffs, and access to transmission and distribution need to be transferred to ERA. ERA needs to regulate the electricity sector independently of PPC, with its own dedicated employees as far as that is possible. Both the Ministry and ERA need to develop expertise to regulate and to make policy. If it was once efficient to integrate the company, the regulator and the policy-maker, and make use of a common pool of expertise for each task, it no longer is. Such practices can leave the interests of consumers underrepresented, and can discourage entry by competing firms that may believe that their concerns will not get the same consideration as the incumbent's.

64. Part of building a stable regulatory framework, in the Greek case, is improving the corporate governance of PPC. The Ministry, as owner, retains a deep control over decisions that would normally be made by corporate managers. Listing on the Athens Stock Exchange will force some changes in this relationship, but following yet more stringent principles of corporate governance would make this relationship more arms' length. This, too, would reassure potential entrants that they would be treated by the Ministry in a way similar to the treatment of PPC.

## **1.5. Conclusions and policy options**

65. The economic objectives of the electricity sector are to satisfy demand, to promote “sound competition” in generation and supply of electricity and to ensure that generators and suppliers can fund their activities, to promote efficiency, and to protect consumers particularly as regards price, security and quality of supply. These objectives are linked, because competition promotes efficiency and protects consumers as regards price and, if an appropriate liability system is in place, security and quality of supply as well. A sound regulatory regime would help attract sufficient investment to ensure that demand is satisfied and that competition is sustainable.

66. The Greek electricity sector is an example of the importance of domestic support for structural reform. Many of the changes incorporated in the 1999 law are made to comply with Greece’s obligations under the EU Electricity Directive. The liberalisation of 30% of demand, the creation of the Energy Regulatory Authority and System Operator, and the formalisation of the relationship between PPC and the Ministry of Development are positive steps. However, as a package, they are half-way steps, and do not create a dynamic for reform. Market entry and the vigorous competition needed to provide pressure for greater economic efficiency are impeded by the sector’s structure and by the regulatory framework. Instead, under present arrangements, any pressure to improve the economic efficiency of the monopolist, PPC, is more likely to arise through partial privatisation. This will create external stakeholders who will have incentives to advocate for regulation that allows greater efficiency and thus profitability. Accounting reforms will also make better information available, and thus make better decision-making feasible. However, shareholder and consumer interests are not identical. Reliance on shareholder interests would place too little emphasis on promoting efficiency and greater resistance to subsequent creation of effective competition. For the latter reason, competition should be established before privatisation.

67. The Greek authorities have made several policy choices whose effect is to ensure that the sector remains a stable monopoly, such as not creating immediate competition by splitting generation. Some of these choices will discourage entry. Without entry or the creation of competing companies, the regulatory framework will not be developed and modified to sustain a competitive sector. Potential entrants cannot learn what the regulatory framework would be were they to enter, and hence entry is discouraged and the structure of the sector is perpetuated.

68. These policy choices include those related to access to transmission and distribution, and access to fuel. Self-regulation of transmission and distribution access prices, albeit monitored by the ERA, and virtual self-regulation of other access terms, imply that an entrant would not be offered access to all of these essential facilities at efficient prices and terms. In other countries, access to transmission, especially, has been a source of discrimination if not carefully regulated. Sorting out disputes are likely to be lengthy, as the energy law does not provide a mechanism for expedited resolution. (Establishment of arbitration at the ERA by Presidential Decree is foreseen, however.) Access to fuel, particularly gas, constitutes a further barrier to entry, since gas is sold on negotiated terms by a monopolist until 2003, and there is not yet a framework for access to lignite. Entry from abroad is virtually precluded, at least until the link to Italy is completed.

69. The reduction of entry barriers, creation of competing generating companies, and significant strengthening of the regulatory regime, provide a way toward the Greek objectives of greater efficiency through the development of competition. Competition in generation and supply has worked in other countries to deliver efficiency gains and prompt private investment in the sector. Competition is feasible in Greece, too, but requires a stronger regulatory regime, and more skilled human and other resources. Resources and regulatory powers must be placed in a regulatory body, independent of Ministry and the regulated companies. These conditions, combined with the steps already taken in the 1999 Law, will bring Greece substantially closer to its goals in the electricity sector.

### 1.5.1. Policy options

#### 1. Develop effective competition in generation and supply.

- Effective competition requires an adequate number of competitors and efficient, non-discriminatory access to essential networks. Separate ownership of the networks from the potentially competitive activities of generation and supply reduces incentives for discrimination, whereas separate operation of the system from generation reduces the ability to discriminate. An Independent System Operator, with a governance structure that ensures the reflection of consumers and generators' interests, is more likely to operate the system in an efficient and non-discriminatory manner. *Therefore, separate the ownership of the networks from that of generation and supply. Where this is not feasible, create an Independent System Operator with a governance structure to ensure efficient and non-discriminatory access.*
- Even where ownership, or operation, of the networks is separated from that of generation, there remain incentives to price access above efficient levels. Independent regulation can ensure that the access terms are efficient. *Therefore, access to transmission and distribution grids should be subject to regulation by an independent regulator.*
- The structure and small size of the Greek electricity market imply that foreign competitors will be important in reducing market power. *Therefore, ensure efficient and non-discriminatory access to international transmission links. Reduce barriers to foreign supply, including specifically by requiring PPC to make available reserve capacity at regulated, cost-reflected prices.*
- Domestic entry, also, would increase the number of independent competitors. There are a number of features of the regulatory regime that discourage entry. Among these are the self-regulation of transmission and distribution access prices, and the limited enforcement regime for access. *Therefore, take steps to reduce barriers to domestic entry, notably regulate access to the grids so that access is granted on terms that are efficient and non-discriminatory. Also, provide an expedited procedure to resolve access disputes.*
- Splitting generation into competing companies, sold separately, would create a healthier competitive environment. It would also reduce the need to rely on competitors from outside the European Union. *Therefore, create competing generating companies, without common ownership, designed to create effective competition.*
- One of the safeguards of competition in this sector is the competition law. Therefore, *ensure that the application of competition law to the electricity sector prevents abuse of dominance or anti-competitive agreements, mergers, and long-term contracts that risk frustrating the development of competition.*

## **2. Develop regulatory institutions that promote investment, efficiency, and competition.**

- Greece needs to establish a non-discriminatory, stable regulatory framework. The first step is to establish the institutions of this framework. Among the requirements is for the regulator to be independent of day-to-day political pressures, and independent of the regulated companies. *Hence, transfer to the Energy Regulatory Authority final regulatory authority for generating and supply authorisation, tariffs, and access to transmission and distribution. Endow the ERA with human and other resources that enable it to independently and effectively regulate the sector. Ensure that the budget, personnel and other internal decisions, of ERA are independent of the Ministry. Ensure that the ERA decision-making process is transparent, such as through public consultation processes, and that it is accountable.*
- The Ministry, also, needs independent policy-making capabilities. Hence, ensure that the Ministry of Development acquires or develops the technical expertise, independent of any company, to make electricity policy.

## **3. Improve the corporate governance of PPC.**

Developing a more arms' length relationship between the Ministry and the regulator, and the entry of new competitors into the market, imply developing a more arms' length relationship between the Ministry and PPC. *The government should transform the relationship between itself and PPC to a more commercial basis. The government should expect to receive dividends at the same rate as a private shareholder and should not be responsible for guaranteeing any new debt of PPC.* The management and board of directors of PPC require *sufficient autonomy so that they can make investment and other decisions on commercial criteria.* Finally, after PPC is partially privatised, to enhance the board's decision-making process, *the government should make appointments to the board of directors that would represent the interest of the minority shareholders.*

## **4. Evaluate the state of the sector, after some time, with a view to further reform.**

Reform of the electricity sector is an on-going process, with experience prompting demand for further reform or fine-tuning. Therefore, *review the sector in the short term (e.g. two to three years) to judge whether effective competition is developing and electricity companies are increasing efficiency.* Comparisons with other countries would be particularly valuable.

# **REGULATORY REFORM IN DOMESTIC FERRIES**

## **2. INTRODUCTION TO THE DOMESTIC FERRY SECTOR**

70. Domestic ferries ply the waters of the Greek seas, linking the economies of the islands and mainland. About 114 Greek islands are inhabited. There are about 150 ports, and about a thousand ferry links are made a day. Piraeus, the main port for Athens, is the centre of the ferry network.

71. Demand for ferry services is highly seasonal and demand among the routes is highly skewed. Some islands would not be served at all without subsidies. The sector has recently consolidated, coalescing around three corporate groups. However, a fringe of smaller companies remains. The main innovation in the past few years has been the introduction of higher speed ferries, financed through partial floatation on the Athens Stock Exchange. The ferry companies are entirely privately owned, but ports are in public ownership.

72. The domestic ferry sector is at present highly regulated by the Ministry for Merchant Marine (MMM or YEN for its Greek acronym). Licenses, specific to the vessel, are granted for specified itineraries at specified, invariant frequencies. Licenses for service to islands for which service is non-profitable are often bundled together in the same itinerary with islands for which service is profitable, or are imposed on companies as conditions for receiving profitable routes. Licenses are granted by the MMM on the basis of criteria that are not transparent, and it is difficult to get a new license. Fares are also set by MMM. Many details of running the hotel aspects of the ship are specified (for safety reasons, details of running the engineering aspect of the ship are also specified.) A research analyst called the institutional framework “complex, rigid, outdated and cumbersome” (Psaraftis, p. 3). The European Commission characterised the legal and regulatory framework for domestic ferries as “rigid...particularly as regards the grant of operating licenses and the fixing of fares by the Ministry for the Merchant Navy” (EC, par. 105).

73. Full application of the EU Directive on cabotage<sup>3</sup> should begin in November 2002, pending adoption of the draft law currently being developed by the Greek government. Under the EU Directive, the latest date to begin is 1 January 2004. This may mean that entry restrictions or regulation of frequency and fares will be lifted, which is preferable, but it may mean that the existing regulatory framework, perhaps slightly modified, would be applied equally to Greek- and other EU Member state-flagged ships.

74. There is tremendous scope for freeing ferry companies to serve customers better. One of the broad objectives of the Government of Greece is to improve the relationship between the state and its citizens. Changing the regulatory framework to enable consumer wishes to be met more closely, more flexibly, and at a lower price, would respond to this goal. The role of the Ministry, in the area of domestic ferries, could move to one of protecting competition and ensuring safety. Flexibility and resiliency could be built into the regulatory system, in order to deal better with uncertainty. Competition would also provide incentives for innovation, which would result not only in lower costs and prices, but also in the introduction of services that better meet consumer wishes. Public policy objectives, primarily related to sufficiently frequent service to designated islands and to safety, can be met in ways that do not unnecessarily impede competition.

75. Reform to the regulation of the sector is urgently needed, as recognised by market participants and by the responsible ministry, which has launched a programme of reform. In late 2000, the government developed a draft law to liberalise the domestic ferry sector, aiming at free and fair competition and protection of public interest, that should be the basis for further reform. The ministry’s earlier move toward an integrated approach to the sector, focusing on passenger transport needs and the interactions with port infrastructure, is another positive development.

## **2.1. Policy objectives**

76. This sector is regulated to secure the territorial integrity of the country and the cohesion of the Greek islands and mainland. This implies that designated islands should receive service of specified frequency. Regulation is also aimed at improving the quality of service, renewing the fleet, and securing existing jobs and creating new jobs. As a member of the European Union, Greece also must adapt the regulatory regime to the requirements of the relevant EU Directives. These objectives are set in a safety-ensuring framework.

77. The Ministry for the Merchant Marine has, over the past two years, moved toward a focus on the satisfaction of the passenger transport needs, viewing all of the constituent parts (network, ships, port infrastructure, institutional infrastructure, shipyards, communication services) as parts of a single integrated system of domestic marine transport. This contrasts with the former focus on ships, in isolation from demand and the complementary infrastructure. As part of this effort, the Ministry has drafted an

action plan to revise the institutional framework, and plans to put into place a System of Internal Sea Transports (SETHAM) to enable objective criteria to be used as input into the management of the domestic marine transport system. A contract has been awarded to a consulting consortium for the analysis and design of SETHAM.

## 2.2. *Description of the sector*

78. Piraeus is the main port for Athens and forms the central hub of the ferry system. Thessaloniki in the north, Patras in the Peloponnese, and Rafina and Lavrio near Athens are the other large mainland ports. The Aegean Islands, which compose the majority of the islands, are rather compact. Rhodes, to the Southeast and nestled within sight of the Turkish coast, is 260 nautical miles from Piraeus. The Aegean Islands are conventionally grouped into the Saronic, Cyclades, Dodecanese, Sporades and Northern Aegean. Crete is a major ferry destination with several ports. The Ionian Islands lay to the west of the Greek mainland.

79. Demand for ferry services is highly seasonal, with August accounting for some 23% of total annual passengers, and February for only 2%. Some routes have much higher demand for travel than others. *E.g.*, in 1990 almost one-fifth of all traffic was accounted for by travel between nine ports at Athens/Piraeus, Mykonos, Santorini and Crete (Psaraftis, p. 5). This disparity is caused not only by differences in tourism at the island destinations but also by differences in permanent population on the islands. Although the single island cluster with the most traffic in passengers is the Agrosaronikos system near Piraeus, most of the traffic in passenger-miles is between Piraeus and Crete. Some islands have fewer than 100 residents; Crete has half a million. The largest islands have airports, which provide alternative transport for passengers and certain goods.

80. In addition to the domestic ferry sector, the subject addressed here, there is substantial ferry traffic between Greece and Italy. The three largest companies in the Aegean are three of the four large companies in this Adriatic Sea trade. The Adriatic has been the proving ground of some of the innovation that is now arriving to the domestic sector. However, the two networks are governed by different regulatory frameworks, with the international routes of the Adriatic under European Commission competence and subject to liberalisation of entry, pricing, and frequency since 1993. International traffic between Greece and Italy does not come under the Greek domestic cabotage institutional and legal umbrella, except that part that links Greek ports, *e.g.*, among Patras, Igoumenitsa and Corfu. Also, international routes are subject to enforcement of European Union competition laws by the Commission.

81. After a recent spate of consolidations, three groups dominate the domestic sector. These groups are Minoan Lines, ANEK, and, indirectly, Attica Enterprises through its alliance with Strintzis Lines. Many much smaller ferry companies also remain in the Greek domestic market. Total turnover in Greece, which includes revenues from international routes, notably to Italy, was about DR200bn in 1999 (*Kathimerini*, 13 December 1999). All ferry companies are privately owned. Also, Minoan Lines owns 28% of the merged Aegean Airlines and Air Greece, the largest private air carrier in Greece (*Kathimerini*, 30 December 1999) and other private airlines are owned by other ship owners.

Table 2. Structure of the Greek ferry sector

Parent or leading company	Subsidiaries or alliance members	Share of combined international and domestic ferry revenues
Attica Enterprises	Superfast (38%) Strintzis Lines	45%
Minoan Lines	Minoan Flying Dolphins (MFD) Hellas Ferries (subsidiary of MFD) (46%) GA Ferries	30%
ANEK (Cretan Maritime Company)	(50%) LANE (16.5%) NEL (Lesvos Shipping Company) (43.3%) DANE (Dodecanese Company S.A.) (50%) ETANAP	12%

Source: *Kathimerini*, 13 December 1999 and 15 February 2000; ANEK, 2000a.

Table 3. Earnings and sales of Athens stock exchange-listed shipping companies

Company	Sales 1998	Earnings 1998
Minoan Lines	48 560	10 113
Attica Enterprises	26 802	9 067
ANEK	30 343	5 055
Strintzis Lines	18 266	2 375
NEL (Lesvos Shipping Company)	9 052	1 046

Source: "Review of Attica Enterprises Holdings SA," an article by Invest in Greece, available at <[http://www.invgr.com/members/attica\\_enterprises.htm](http://www.invgr.com/members/attica_enterprises.htm)> on 27 April 2000.

82. The companies specialise in particular routes, often reflecting their historical roots on particular islands. For example, Minoan and ANEK, both based in Crete, have all the licenses for routes to Crete from the mainland (*Kathimerini*, 8 March 2000). Minoan Flying Dolphins has been buying the majority of smaller companies operating in the Cyclades (*Kathimerini*, 24 January 2000), under the name of its Hellas Ferries subsidiary, whereas ANEK focuses on the northern Aegean and Dodecanese routes (Inv.gr, 2000b). The small Rhodes-based company DANE operates in the Dodecanese and Cyclades, and to Thessalonika.

83. The main innovation in this sector is faster ferries. The new ships are half again or twice as fast as the ships they replace, and often have larger capacity. Hence, it is sometimes feasible to replace two older ships with one new ship. These vessels greatly reduce travel time, e.g., between Patras, Greece and Acona, Italy to 20 hours from 30 hours, Piraeus to Rhodes via Kos to 10 hours from 18 hours, and Piraeus to Chania to 5¼ hours from 10 hours. Since one of the costs passengers bear is the value of their time, the reduction in travel time made possible by faster ferries significantly reduces passengers' total cost. However, to date, with the exception of hydrofoils and some catamarans that cannot carry vehicles, there are very few high speed ferries in the Greek domestic market: The MFD High Speed I (catamaran) and the fast monohull AEOLOS by NEL. MFD expects to add another high speed catamaran in the summer 2000.

84. The introduction of faster ferries significantly affects markets and market structure. For example, the two 27-knot ships that entered the Patras-Bari via Igoumenitsa route in the Adriatic won about two-thirds of the market in less than a year, increased the size of the market by 5 to 36% (depending on whether trucks, private vehicles, or passengers are measured) and shifted traffic toward Bari from other southern Italian ports (Attica Enterprises 1999b, pp. 30, 31, 33).

85. Faster ferries were introduced first in the liberalised Adriatic market. In 1993, Gerasimos Strintzis introduced a "fast ferry" in this market, innovating also by raising funds for this ship in the Athens SE (ANA, 1998, p. 4) Pericles Panagopoulos (Attica Enterprises) followed in 1995, with initially two 27-

knot but later four 27-knot ferries operating in the Adriatic. Then, in summer 1998, Minoan Lines entered the Adriatic with two 27-knot ferries (Minoan Lines, 2000a) ANEK has announced that it, too, will introduce two faster ferries on Patras-Italy routes in 2001.

86. In the Aegean, the introduction of faster ferries has been delayed. In September 1997, Panagopoulos (Attica Enterprises) applied to the Ministry of Merchant Marine for a license to operate a faster ferry between Piraeus and Heraklion, Crete. The new ferry would have cut the journey time from 11 to 6 hours, and the price would have been cut by 20%. MMM turned down the request on the grounds that the port facilities could not accommodate the ship, existing ships served demand adequately, and that the proposed lead time, 18 months, was too long. Attica Enterprises found the reasons for the rejection “truly unfounded,” and pointed out that the port was vacant at the times proposed and that no businessman would build a ship for domestic service without an operating license in hand (Forbes, Attica Enterprises 1998, pp. 8-9). Instead, the incumbent licensee, Minoan Lines, promised to introduce a newly built ship on the route by spring 1999. It takes delivery of the new ship for this route in autumn 2000 (Lloyd’s List). In general, faster ferries are being introduced into the domestic market under the threat of loss of protection from foreign-flagged ships, and with the expectation of growth in demand.

87. Individual companies use their newer and faster ships on the longer, liberalised Adriatic routes and slower, older ships on the Aegean. For example, Minoan Lines uses ships with maximum speed of 27 knots on its Patras-Igoumenitsa-Ancona route, but ships with maximum speed of 19 knots on its Piraeus-Heraklion route, and 20 knots on its routes to islands from Thessaloniki or Crete (Minoan Lines, 2000a). For ANEK, the difference is smaller, with the Adriatic routes served by ships with speeds of 25 and 23 knots, and Aegean routes served by ships with speeds of 16 to 22 knots (ANEK, 2000a). Attica Enterprises was reportedly looking for “room” in the Aegean for the “superfast” ferries to be delivered by August 2001 – it has not yet been able to get licenses to serve the Aegean routes – but would operate them on new routes in the Mediterranean if none appears (Athens News Agency, p. 5, *Kathimerini*, 24 January 2000).

88. In parallel, passenger-only catamarans are being introduced to the Aegean. In 1998 Strintzis began service with a catamaran to the Cyclades. In mid-1999 it announced it would serve two other domestic routes, in the Cyclades and Northern Aegean, with new high-speed ships (Strintzis 1999). Other high-speed ships operate in the Aegean (*Kathimerini*, 26 April 2000). And NEL has just launched a ship capable of carrying cars and passengers at 36 knots (*Kathimerini*, 20 April 2000). The route specifications, with their multiple stops, do not allow the speed advantages of catamarans to be exploited.

89. These programmes of investment in new ships are closely linked with the development of the Athens Stock Exchange as a source of capital. Traditionally, shipping companies were family owned, and they are still mostly family run and owned. However, the capital requirements for fleet modernisation are large. In one case a \$125m ship is replacing a \$10m to \$15m ship. One estimate is that the investment programme of Minoan totals close to \$1bn since 1995, (*Kathimerini*, 24 January 2000) and the investment programme of Superfast, part of Attica Enterprises, totals \$ 1 billion for eight more ferries (Superfast, 2000).

## **2.3. Regulatory regime**

### **2.3.1. Institutions**

90. Domestic ferries are under the responsibility of the Ministry for the Merchant Marine (MMM). The Ministry is responsible for regulating and overseeing the whole of the sector – market entry, licensing, pricing, route scheduling, manning (hotel as well as engineering), imposition of public service obligations, determination of and tendering for unprofitable routes, enforcement of licence terms, certification, control,

vetting and inspection of ferries for navigational and environmental safety. The Minister issues *inter alia* licenses and decrees controlling prices.

91. The Minister is aided by an advisory body, the Coastal Transport Advisory Committee (CTAC)<sup>4</sup>. The CTAC makes non-binding recommendations about licenses and prices which, in practice, the Minister has always followed. For inter-island routes, the Ministry of the Aegean is also involved. Before September 2000, six of the twelve members of the CTAC were government officials or appointed by the Minister. The remaining six were split among four representatives of shipping, a representative of the Piraeus Chamber of Commerce and Industry, who arguably could also be expected to support shipping interests, and the National Tourist Organisation (to represent consumers).

92. This institutional arrangement seems ill-suited to the announced focus on passenger needs. The arrangement seems to correspond more with self-regulation, and industry participants seem to have influence over the economic regulation enforced by the Ministry (discussed below). In this situation, new investors, whether Greek or foreign, would have a basis for concern that their potential competitors would be making decisions about, *e.g.*, licenses. This concern would discourage entry.

93. Increased representation of consumer interests on the CTAC, whether tourist, island resident or non-marine transport companies, would help offset the influence of producer interests. Indeed, in September 2000, membership in the CTAC was expanded to include more consumer groups, both commercial and island residents. More use of public hearings in the decision-making process would also increase transparency. At least as important would be for each Ministerial decision to be accompanied by a public, reasoned explanation of the objective criteria applied, as well as the policy objective driving the decision. It may or may not be appropriate for CTAC recommendations to be made public. However, a consistent public record, along with clear policy objectives against which the record can be viewed, would help provide assurance to market participants and potential investors that the market was a level playing field.

### 2.3.2. *Economic regulation*

#### European Union

94. European Union level legislation also governs the Greek domestic ferries sector. The European Union Regulation 3577/92 on cabotage [Applying the principle of freedom to provide services to maritime transport within Member States (maritime cabotage), 7 December 1992, OJ L 364 12.12.92 p. 7] lifted cabotage<sup>5</sup> restrictions for EU Member States for any ship flying the flag of an EU Member state. This Regulation defines how the principle of freedom to provide services has to be applied to maritime transport within Member States.

95. This Regulation includes a derogation for Greece, until 1 January 1999 for cruise ships and vehicle ferries over 650 tons sailing between mainland ports, and until 1 January 2004 for regular passenger and ferry services and services under 650 tons. The eleven-year delay, of which eight years have already passed, was intended to allow Greece to prepare for the opening of the market to competition.

96. Provided certain conditions are met, the Regulation allows the Member State to conclude public service contracts with or to impose public service obligations as a condition for the provision of cabotage services on shipping companies participating in regular services to, from and between the islands. Also, the Regulation establishes manning conditions (European Commission 1999, pp. 168-9). Reimbursement of operating losses incurred as a direct result of fulfilling certain public service obligations is not, as a matter of general practice, considered to be State aid by the Commission, provided an adequately public tender is

made, the contract duration is reasonable and not over-long, the reimbursement is directly related to the calculated deficit, and there is no cross-subsidisation (*Ibid*, p. 173).

97. Despite the liberalisation of cabotage in the northern Member States, as late as 1998 there was no non-national flag involvement in domestic passenger trades of EU Member States (European Commission, 2000, p. 18). In Greece, there has been no impact to date from the lifting of cabotage restrictions on EU-flagged vessels over 650 tons at the beginning of 1999.

98. The scope for public service obligations is particularly wide in Greece. In the electricity sector, for example, public service obligations can take the form of charging specified prices.

99. The MMM has indicated that it will implement the same rules for all ships, Greek or EU, and it contends that this uniform approach will comply with EU regulations (Athens News Agency, p. 1). Thus, the lifting of the cabotage restrictions does not necessarily imply that other aspects of the regulatory framework will change, nor that new entrants will actually be licensed.

#### Ministry for Merchant Marine

100. The Minister for Merchant Marine issues licenses to a specific vessel for a specific itinerary.<sup>6</sup> The licenses have an indefinitely long duration. The licenses impose a number of economic conditions on the licensees, *inter alia* with respect to frequency, service to uneconomical islands, pricing, and employment practices. It had not been unusual for license applications to be turned down. After the reform of the CTAC in 2000, however, almost all requests for licenses have been granted.

101. The economic conditions attached to the license protect a number of cross-subsidies. First, the licensed itinerary that must be followed may include islands for which the cost of providing the service exceeds the revenues gained. Second, the crews must be employed and on the payroll throughout the year, whether the vessel is operating or idle, and regardless of the seasonal variation in traffic. The crew must be nationals of Member States of the EU or of the European Economic Area. Third, there are only two levels of frequency of service – winter and summer – except that there is a statutory right to remain idle for 60 to 90 days annually for dry docking, maintenance, repairs, surveys, and inspection. Fourth, fares charged must be equal to those issued in the Ministerial decree. Finally, the vessels must carry mail free of charge and must be made available to the State during times of war for military purposes. These economic conditions are discussed below.

#### Licences

102. The licenses have a long duration because the system is designed to assign routes to particular ships for the ships' complete working lifetime. Licenses are vessel-specific and the entry and exit regulations are based on the ship's age. No vessel entering the domestic market can be older than 20 years, and the license is valid, if its terms are respected, until the ship is 35 years old. Recently, the Minister has quit granting licenses for ships over 10 years old. Thus, new licenses are valid for at least 25 years. (The Greek Coastal Shipping Association has asked for the 35-year limit to be scrapped) (*Kathimerini*, 25 February 2000).

103. License applications require information about the vessel's technical characteristics, including carrying capacity of vehicles and passengers, as well as a feasibility study, including data on operating costs, transportation flows on the requested route, capacities of the ports of call and other data to prove the commercial viability of the proposal. The date on which the vessel could begin serving the requested route must be provided.

104. New licenses are not issued on demand. Instead, the CTAC examines the request in light of the needs and current level of service, and considers *inter alia* the age of the vessel, the credibility of the company, and the speed with which the vessel can enter the requested service. In the formulation of its opinion, the CTAC takes into account many others' views on the feasibility of the requests, many times of those in direct competition with the company requesting the licence. However, the evaluation does not include a review of the economics of the proposal. It does not include the objective criteria that would promote competition among companies serving the same route or would discourage monopolistic or oligopolistic situations. It should be noted that there currently exist sectors of the domestic ferry market, such as in Argosaronikos or certain segments of the Cyclades where all maritime services are provided by only one company, MFD and its subsidiaries.

105. It is not always clear how these objective criteria are weighed. Negative licensing decisions have been controversial, and obtaining a new license had been called "difficult" (Athens News Agency, p. 3). There seemed, in practice, to be a tendency to maintain the *status quo*, enabling incumbent companies to remain unchallenged. This was the case in 1997, when an applicant to provide faster and cheaper service on the Piraeus-Heraklion, Crete route was turned down while the incumbent was pressured to upgrade its ship (Athens News Agency, p. 3, *Forbes Global*, p. 45, Attica Enterprises 1998 pp. 8-9, 14, Lloyd's List). Another example involves NEL. When NEL learned that competitors had attempted to enter the Piraeus-Hios-Lesvos route, where it had the license, it ordered a new ferry (Athens News Agency, p. 6). However, later the MMM did award three new licenses on that route (*Kathimerini*, 11 February 2000). And since the CTAC was reformed in 2000, it has granted almost all requests for licenses, 32 as of mid-February 2001.

106. The restrictions on route entry harm consumers. Companies who wish to enter a route can offer lower prices and better quality of service than customers are now receiving. (If they could not, then they would not apply to enter.) Even if the incumbents eventually upgrade their offerings, consumers suffer in the interim. By contrast, entry is free on the Adriatic routes: The quality of service has risen, the number of passengers has grown, and prices are lower, per kilometer, than in the Aegean. Passengers on Adriatic routes have benefited from liberalised entry.

**Box 6. Prices in the Aegean vs. Adriatic**

The Adriatic has had free pricing for several years. Fares in the Adriatic are much lower, per unit distance, than fares in the Aegean. Two very popular routes are Piraeus-Heraklion, Crete, a distance of 175 nautical miles, and Patras-Ancona, Italy, a distance of 510 nautical miles. As the table shows, the price per unit distance is much lower for the Adriatic route.

	Piraeus-Heraklion		Patras-Ancona	
	Fare (GRD)	GRD/nautical mile	Fare (GRD)	GRD/nautical mile
Passengers	63 000	360	145 600	285
Car	33 700	193	31 200	61
Truck	156 750	896	140 000-170 000	275-333

Assumptions: Passengers: two persons in a double outside cabin; Truck: 16.5 meters (price includes tax, which is normally rebated).

*Labour regulation*

107. Under MMM regulation, crews must be maintained year round, even when a ship is idle, thus insulating labour from the seasonal fluctuation of demand for ferry services. Other MMM regulation is quite specific. For example, the hotel composition, including number of cooks and stewards, is specified as a function of ship size (ORMS Today). These rules apply to all ships in the Greek market, since the EU Directive provides that the host state's rules on manning for island cabotage are imposed on all ships (EC, 1999, p. 10).

108. The Ministry has explained some of its crewing requirements as aimed at increasing employment. Other crewing regulations relate to safety. The effect on employment may well be the opposite of that intended, since the rule on year round employment discourages seasonal expansions in capacity – with its associated employment – by raising the cost of that expansion. The hotel manning rules discourage the introduction of new year round capacity by raising the cost of using that capacity.

#### *Unprofitable service to islands*

109. Under the current regulatory framework, two sets of islands are served despite such service being labelled unprofitable. One set, called “public service” islands, are islands that are served as intermediate stops in a licensed itinerary to or from a mainland port, as a condition of the license. An example of this is the packaging together of daily service between Piraeus and Rhodes, one of the most lucrative domestic routes, with weekly service to a number of small islands along the way, in such a way that the whole package may be uneconomic (Lloyd’s List).

110. The other set of islands that are served despite the service being unprofitable are islands that are served over “unprofitable routes.” By definition, these routes are inter-island routes. The routes are designated by joint Ministerial decree (Ministers of Finance, Development, and Merchant Marine) issued on request or proposal of the local authorities or other interested parties, and after CTAC’s opinion has been pronounced. This designation is reviewed every five years. The obligation to provide services on unprofitable routes is allocated by annual tender, where companies bid for minimum subsidy. However, the amount of subsidy appears to be subject to some negotiation.

111. The shift of focus to inter-island routes is to be applauded. It may well be more cost-effective to provide services to low demand islands from a local hub, itself linked to Piraeus, rather than directly from Piraeus. This shift in focus promotes the development of such hubs. However, the shift in concept could go yet further, for example by designing transversal or circular routes that link the spokes of radial lines emanating from major hubs.

112. The focus should be on islands rather than routes. Islands now served, unprofitably, as a license condition and those now served over “unprofitable routes” would be combined into a single concept, with a common policy framework for all. In this way, the MMM does not pre-judge the route over which each island would be most economically served, that is, which island would be the local hub. The commercial decision about where to locate a hub would normally take a number of features into account. These features, such as location and availability of labour, port facilities, and others, influence the cost and reliability of the hub, especially under a variety of weather conditions. It is not clear that the MMM would have available better information, or compelling commercial incentives, to make a better choice of hub than the companies themselves.

113. The shift to focus on islands for which there is low traffic demand would have a number of positive effects. The development of hub-and-spoke service to “public service” islands would enable them to be served at lower cost. The (profitable) destination islands could be served at greater speed – time would not be spent at intermediate stops, and it may be economic to use faster ships – and thus lower total cost to those passengers. It would eliminate the problem of a ship being too large to enter a port that it is obliged, by its license, to serve.

114. The development of a hub-and-spoke network would, as it has in liberalised airline industries, probably benefit most those passengers on heavily travelled routes with hubs at both ends. These passengers would see greater frequency, lower prices and faster service. Residents of low demand islands may see a reduction in travel time to the mainland, if higher speed ferries offer service between their local hub or hubs to the mainland. They may also experience improved scheduling, as it may be feasible to shift

some middle of the night service to more convenient times of day. On the other hand, just as with the liberalised airline industry, residents of low demand islands might experience an increase in total travel time, particularly if connections at the hubs are not well co-ordinated or the service between their hub and the mainland is not provided by faster vessels. This inconvenience may be greater if vehicles also transit at hubs. There should be a role for the Ministry, along with the ports, to facilitate schedule co-ordination and optimisation of capacity utilisation, as well as to provide a legal framework to facilitate passengers using two or more ferry companies on the same trip.

#### *Funding and providing non-profitable service*

115. Service to islands with low demand is subsidised. Service to islands as part of a licensed itinerary are cross-subsidised by passengers on other routes, and service to those on “unprofitable route” are subsidised by the State and, perhaps, other passengers. The annual State subsidy is 2.5 billion drachma. A more flexible framework for providing these services would lower their cost. Indeed, with lower costs, some services may become profitable and subsidies to those services could be withdrawn. Nevertheless, there would remain some islands to which service of adequate frequency must be subsidised.

116. The provision of service to islands with low demand has two aspects, funding and identifying the provider. Usually, funding such subsidies from the general government budget causes the least economic distortion. However, an alternative, common in other sectors in other countries, is to fund such subsidies out of a small fee, acting like a tax, on the price of all tickets. Thus, as at present, other passengers would fund this service. An advisory body to the MMM has already suggested this type of funding for service to some islands.

117. The most efficient way to identify the least-cost provider is to competitively tender (for a subsidy out of the above-described fund) the obligation to serve a low-demand island. The Ministry already uses such a method for “unprofitable routes.” However, the MMM uses a different method to assign the provider of service to “public service” islands. The licensee whose vessel passes by an island is not always the lowest-cost supplier: the value of the time lost in making an intermediate stop, particularly for an expensive and fast ferry, can be quite large. By extending the tendering process to all low-demand islands, the Ministry would in general reduce the cost of service. This would reduce the total amount of subsidy needed.

118. Hence, the first step in implementing this new system is to define precisely the public policy requirements for service to low-demand islands in terms of frequency, price, and perhaps minimum travel time to the mainland. The second step is to identify which islands are low-demand. That is, some islands will receive service that meets or exceeds the public policy criteria because shipping companies find it profitable. The remaining islands, those that will not receive service meeting the public policy criteria, are defined to be “low-demand islands.” The third step is to hold competitive tenders for subsidies. The tenders are to provide the service to low-demand islands that was defined in the public policy requirement, but which was not provided by commercial decision by the companies in the second step. In this system, companies would make their own, independent commercial decisions about routes and islands served, much as these same companies are already experienced in doing in the Adriatic and other seas.

#### *Seasonal fluctuations in demand*

119. Several license provisions are aimed at moderating the effect of seasonal fluctuations in demand. One requirement is that there be only two levels of frequency of the service – winter and summer – except for the statutory right to remain idle for 60 to 90 days annually for maintenance, repair and inspections. Another requirement, mentioned above, is that crews be employed and on the payroll throughout the year,

regardless of whether the vessel is operating or idle. Both of these have the effect of raising the cost of providing ferry services.

120. Ensuring a minimum frequency of service, of appropriate quality and price, year round, contributes to securing the cohesion of the Greek islands and mainland. Ensuring sufficient winter service is equivalent, conceptually, to the task of ensuring sufficient service to low-demand islands. Indeed, it is as though during winter more islands fall into the low-demand category.

121. The policy response to ensure sufficient winter service at minimum cost is also the same as for ensuring service to low-demand islands. In particular, if the companies that make the commercial decision to serve an island during the summer do not make the commercial decision to serve that island during the winter (or they choose to serve it too infrequently), then holding a tender for minimum subsidy to provide the required service would both identify the lowest-cost provider of that service, and the lowest subsidy that will induce that service. It may well be that the winner of the tender is the same company who provides summer service, perhaps because his costs are lower than his competitors', or perhaps because there are benefits, like building consumer loyalty, that justify a bid for lower subsidies.

122. The value of holding the tender for winter service, and allowing free commercial decision-making year round, is that the winter and the summer service are provided at lowest cost and companies are forced to find ways to appeal to consumers. Under the present system, the winter service is subsidised by the summer service, and this cost is hidden. The incumbent, protected by entry barriers and price constraints, may not even know the lowest cost way to provide the services. By forcing him to be alert to possible entry by a competitor in summer, he must seek ways to keep his consumers – lower prices, better quality, more convenient sailing times – and ways to keep his costs down. For winter service, if the politically-determined level of service is not commercially interesting, then the service is put up for tender for minimum subsidy, and the funds to pay the subsidy to the winner of the tender come from the above-described fund. Because the obligation to provide winter service is put out for tender, the lowest-cost company will win, and all bidders will have had incentives to seek ways to lower their costs.

123. Unbundling winter and summer service makes possible additional cost-saving through allowing flexibility of vessel and route network during winter, in order to better match demand conditions.

#### *Fares*

124. The Ministry regulates fares and freight rates of all services and companies in the domestic sector. The Ministry sees its involvement as aimed at protecting consumers, especially island residents. The fare setting process involves exchanges of information between market participants and the regulator, as well as among market participants themselves. A hearing at the CTAC is required. Finally, a Ministerial decree is issued.

125. The same price formation scheme is applied throughout the country, but a large number of variables can be used to adjust the price for a specific route. Fares may be adjusted downwards by 10% during October-March and 10% upwards during April-September. Further, a company can discount its fares by submitting a request to the Minister in September of each year. The discount requires CTAC's consent and the Minister's approval. The discount is subsequently published in the Official Gazette.

126. The institutional framework provides substantial scope for collusion. Competition officials usually see three conditions as needing to be met in order for collusion to work: The competitors can reach agreement, they can detect cheating on the agreement, and they can punish cheating. The commercial information that must be disclosed in the license application, and then discussed by CTAC and other interested parties during its review, ensures the first condition is met. The second condition seems to be

met, since prices and discounts are published in the Official Gazette and there seems to be no secret discounting. The third condition is met when the Ministry enforces its own decrees.

127. It is not clear why the commercial data need to be submitted with a license proposal. If the Ministry of CTAC uses the data to judge the commercial feasibility of a proposal, then it is difficult to imagine conditions under which they would be able to – or have the role to – protect a company from a commercially disadvantageous proposal. If the Ministry does not use the commercial data to judge commercial feasibility, it is not clear why the data should be required or submitted.

128. In its decision on price-fixing from the late 1980s to 1997 by seven ferry companies on routes between Italy and Greece,<sup>7</sup> (EC, para. 97, 153-154) the European Commission published some information about price-fixing by ferry companies in the domestic market. During the period of the Commission's investigation, there was a usual practice of fixing domestic ferry fares in Greece. The consultation process of the MMM involved all domestic operators submitting a common proposal, and the Ministry making an *ex post* decision (para. 163). The companies knew in detail the relevant economic components to analyse the operational costs of the ships, because of the publication of their operational licenses and the meetings held under the aegis of the MMM (para. 71). It has been suggested that the process of agreeing prices, before the meeting of the CTAC, has continued into the present.

**Box 7. Destructive competition**

The MMM is concerned that “destructive competition” is against the long-term interests of consumers and producers. Competition, it fears, would reduce profits from the high season that are used to subsidise services in the winter and to fund new investments. The MMM sees regulation as creating less uncertainty than competition.

The risk of destructive competition in the Greek domestic ferry market does not seem high. First, those who would be injured by such an outbreak, the incumbent ferry companies, are in favour of liberalisation – or “playing by European rules” – of routes, fares, and frequency. Second, the market does not have the characteristics to engender this rare phenomenon: excess capacity can easily exit the market by switching to any number of other Mediterranean routes.<sup>8</sup> This sort of route-shifting is expected as faster ferries are delivered and begin operating in the Adriatic, and the replaced vessel moves to domestic operations (*Kathimerini*, 24 January 2000). Third, competition, rather than “destructive competition,” eliminates excess profits that can be used for cross-subsidies. The provision of unprofitable services can be assured by a transparent combination of competition, “tax” or “fee” on the competitive services to fund the subsidy, and tendering for subsidy to provide the unprofitable service.

129. The asymmetric regulatory structure between the Adriatic and the domestic routes creates anomalies. For example, while domestic prices are regulated, companies operating on both routes can – and do – offer discounts on the combined tickets (Minoan Lines brochure 1999, ANEK Lines brochure 1999). While these 10-15% discounts are signs of competition in the Adriatic, it also reduces the efficiency of that competition since the discounts represent a subsidy from the non-competitive, price-regulated markets.

130. By freeing fares over potentially competitive routes from Ministerial control, and thus automatically making them subject to the competition law prohibition against collusion, the Ministry could greatly increase the efficiency with which vessels are used. The large difference between peak and off-peak demand, combined with few alternative uses of the ships during winter and the year round manning requirements, mean that companies would find it profitable to seek ways to increase the use of their ships during winter. Just as airlines in liberalised markets offer different prices at weekend and midweek, and mid-winter and school vacations, or combine their offers with hotels or car rentals, so too would the ferry companies have an incentive to find ways to increase passenger numbers in winter. This would have a positive effect not only in this sector, but also for others. Any increase in the number of ferry passengers would have a positive effect on demand for complementary tourist services such as hotels, restaurants and

car rentals. Each of these has an impact on job creation. Hence, liberalisation of prices on potentially competitive routes would aid the economy as a whole.

**Box 8. Predatory pricing**

Predatory pricing, cutting prices to drive rivals out by forcing them to lose money, is only profitable if the rivals exit the market and do not re-enter. After the rivals are forced to exit, the company would have to raise the price to a monopolistic level and then gain more than enough profits to repay the losses it incurred while driving out the rivals. But this will not work if the rival – or any other firm – can re-enter the market to share in those high prices and, by doing so, reduce the predator's profits.

Concern is sometimes expressed about predatory pricing in network transport sectors, since firms without extensive networks are thought to be vulnerable to predation by those with such networks. On the other hand, concern is also sometimes expressed that tough competition can be mistaken for predation, since in both cases higher cost firms suffer. In the case of tough competition, though, consumers benefit.

One way to reduce the possibility of predation is to ensure that entry and exit are low-cost and rapid. Exit can be facilitated by a wide range of alternative uses of vessel and crew, *i.e.*, by low entry barriers across all routes. Ubiquitous low entry barriers would, paradoxically, have a stabilising influence as firms would recognise the pointlessness of predation, and perhaps turn to value-creating product differentiating strategies, as airlines in liberalised markets have generally done.

131. Within the Greek ferry system, there are severe capacity and environmental problems at a number of mainland and island ports. Certain ports are clearly at a saturation point. The three mainland ports, Igoumenitsa, Patra and Piraeus have clearly reached capacity in one or more dimension; indeed, all three are now operating beyond capacity in important aspects. In two cases, Rafina and Lavrio, further expansion of the port is not contemplated and alternatives are needed. The completion of the Rio/Antirio bridge will relieve some congestion at Patra by shifting some ferry routes to Rio.

132. In 2004, an increase in the number of ships wanting to use the ports must be expected. Thus, a detailed survey of the ports, to identify both the urban factors on the landward side of the port, such as road congestion and quality of life for the residents, and the berthing capacity on the seaward side, is indicated. Until the survey is completed, and indicated increases in ports' capacities are made, then there would need to be a system of slot allocation, comparable to take-off and landing slots at congested airports. As at airports, slots would need to match the realistic expectations of arrival and departure, taking into consideration actual sea speed, including acceleration and deceleration, time to enter, manoeuvre within, and clear the port, and time to load and unload. Some problems that would need to be overcome include slow loading and unloading, perhaps due to an excessive number of vehicles. Tradable slots would provide incentives for faster loading and unloading, since longer slots – or two adjacent slots – would be more valuable. They would also ensure that more congested ports are more costly to use, thus providing incentives to some ferry routes to switch to less congested ports.

133. The Ministry of Merchant Marine has launched a programme of reform. In late 2000, the government developed a draft law to liberalise the domestic ferry sector, aiming at free and fair competition and protection of public interest, that should be the basis for further reform. The ministry's earlier move to expand the representation of consumer interest on the CTAC, and toward an integrated approach to the sector, focusing on passenger transport needs and the interactions with port infrastructure, are other positive developments.

**Box 9. Creating a new regulatory framework for domestic ferries**

In mid-2000, the Greek government took the first steps to reform of the domestic ferry sector by expanding participation in the Coastal Transport Advisory Committee and by convening law-drafting committees. The draft law

under discussion in early 2001 aims to create non-discriminatory conditions for competition and to otherwise protect the public interest. Public interest objectives include securing the safety and quality of service, and safeguarding the country's territorial integrity and the economic and social cohesion of the island parts of Greece. The Minister for Merchant Marine will be able to impose public service obligations, such as ports served, capacity to provide transport service, freight rates, and manning. For those routes where entry does not occur in a free market, a Europe-wide tender for a contract to provide service will be issued. An independent Regulatory Authority for Domestic Maritime Transport will be established to monitor the sector, impose fines, and submit its opinion to the Minister on issues falling within its competence. Transparent assessment procedures and proposal selection will be introduced. Licensing procedures will be abolished, and controls limited to ship safety, capacity and reliability of the ship owner and quality of service. These steps are in line with many of the OECD's recommendations on reform of the sector.

#### **2.4. Conclusions and policy options**

134. Domestic ferries are vital to the economic life of Greece's islands and, through their role in tourism, the health of the national economy. Demand for ferry services has grown rapidly through the 1990s, and further growth is expected. However, reform to the regulation of the sector is urgently needed, as has been recognised by market participants and by the Ministry, which has launched a programme of reform. The move toward an integrated approach to the sector, focusing on passenger transport needs and the interactions with port infrastructure, is a positive and thoughtful development.

135. More extensive reform of the sector in three main directions would benefit consumers. First, regulatory institutions need to be modernised. At present, institutions are more appropriate to a system of self-regulation than a regime of transparent, accountable regulation focused on the needs of passengers and ensuring equitable treatment of all market players. Second, economic regulation needs to be eased, so that the companies make choices about their own commercial operations in response to consumer wishes and developments in the marketplace. As producers make more commercial decisions, the Ministry should ensure that the regulatory framework is transparent, accountable, and pro-competition. Third, criteria that would encourage competition and discourage monopolistic or oligopolistic situations should be devised.

136. The reforms recommended here would fundamentally change the relationship between the MMM and the domestic ferry companies.

- The Ministry and its advisory committee, CTAC, would withdraw from regulating routes entry, prices, and other dimensions of competition. The MMM would ensure service to low-demand islands. The Ministry would retain its monitoring role, and take on greater responsibility to prevent collusion and, carefully defined so as to distinguish it from tough competition, predation.
- The CTAC would have greater consumer representation, but economic liberalisation and greater use of broader consultation methods would diminish its role.
- Transparency and accountability of regulation would be increased by publishing explanations of regulatory decisions, both in terms of the objective criteria used and the way in which the decision promotes public policy objectives. This would assure both consumers and market participants of the reliability, effectiveness, and neutrality of the new regulatory framework.

137. Experience in the routes across the Adriatic Sea shows that competition and liberalised entry speeds innovation – faster ferries were introduced sooner – and lowers prices. Entry should be liberalised in the domestic market by changing the economic licensing system from authorisation to notification (safety-related licensing is not addressed in this report). Licenses should cease to be route-based, so that companies can design their own networks on the basis of commercial criteria. Fares and frequencies should

be decided on a commercial basis by individual companies, so that capacity can be better utilised throughout the year. The competition thus engendered would provide incentives for fleet modernisation, just as competition across the Adriatic does today.

138. These recommended reforms are a package, the effectiveness of one part depending on the others. For example, the flexibility of routes is necessary to use the threat of competitive entry as a tool to limit abusive pricing, as well as the feasibility of predatory pricing. If this flexibility is absent, for example if an authorisation must be granted, then the abusive pricing may go on for some time.

139. The Greek ferry sector is, as the Ministry has recognised, a network. Like other transport networks, an optimal shape may involve hubs and spokes, and like those other networks, it may involve feeder lines and main lines. In liberalised airline markets, such networks have developed as an outcome of competition among several companies. There was no central planning, but rather each company extended and withdrew its network in response to commercial pressures. In those markets, too, the network is ever-changing not only in terms of routes served but also in other dimensions, since companies have equipment flexibility and fare flexibility to respond to changes in consumer demand. It is a resilient system built upon flexibility. And in those markets, giving firms the freedom to design their own services has led to the reappearance of point-to-point systems, too, in competition with hub-and-spoke systems.

140. One of the main policy objectives for this sector is ensuring service to all the designated Greek islands. The recommended reform would expand the public tendering system to ensure service to all islands that would be left unserved, under-served, or served only at high price under free commercial decision-making. Service to some islands would continue to require subsidy, and the subsidy of service to additional islands in winter would be made explicit. By holding a public tender, competition in bidding ensures that the subsidy is no higher than necessary to provide the service, and it ensures that the service is provided at lowest cost. Funding for these subsidies would come either from general funds, or from a fee, acting like a tax, on all ticket sales, so that, as now, other passengers support these vital services.

141. These reforms would likely have a long-term positive effect on employment. More demand for ferry services means more demand for seamen as well as more employment in destinations. More shipbuilding means more employment in shipyards, including perhaps those in Greece. To the extent that hub-and-spoke networks develop, the increase in inter-island traffic would mean more employment on the islands. If year-round employment requirement were eased, this would introduce greater seasonal variation in employment, but expand the average. The introduction of more modern ships, which require smaller crews, will however negatively affect the number of jobs for seamen. This report has not addressed safety regulation, which is of primary concern to consumers, regulators, and ship owners alike. It can be noted, however, that the safety regulations as regards crewing would continue to imply that Greek crews would be required on Greek domestic routes.

#### *2.4.1. Transitional period*

142. The time needed to implement a change in regulatory regime influences its acceptance, the preparedness of institutions and market participants, and the value of the change for consumers. The further in the future it is, the easier change is to accept but it is of lower value. In Greece, reform did not advanced very far, as illustrated by the absence of institutional change, relatively minor policy changes, and the limited changes by market participants in the purely domestic market, during the first seven years of the eleven-year transitional period for the EU Directive. Yet the economic value to consumers of the reform of the regulatory regime of the domestic ferries sector is higher, the sooner it is implemented.

143. Operating, during a transition period, two regulatory systems simultaneously can be costly, difficult, and risky with respect to regulatory failures. And there are situations where only one system can

prevail, such as entry restrictions: either service to a particular island is subject to free entry rules or not, but it cannot be both simultaneously.

144. Too-rapid change of a regulatory regime, which decreases the value of capital invested in a sector, might be considered “unfair”. But determining what rate of change is excessive is a matter of judgement, which would have to consider both the seven-year transitional period since the EU Regulation on maritime cabotage entered into force elsewhere in Europe, and the experience Greek ferry companies have gained in liberalised markets throughout European waters. Notably, the Adriatic routes did not have an eleven-year transition period. The transition period would also take into account the economic impact of reform, in light of the fact that ships can be used to provide services in other markets, so that much of their capital costs are recoverable.

#### 2.4.2. Policy options

145. The recommendations are divided into two parts, those addressing the institutions and those addressing economic regulation.

### **1. Reform the institutions to reflect the shift in focus toward consumers and viewing the domestic ferry sector as an integrated system.**

- Increase transparency and accountability of regulation, establish objective criteria by which the Ministry’s regulatory powers will be exercised, ensure a public comment period or public hearing for major decisions, and ensure that Ministerial decisions are accompanied by public reasoned explanations of how the decision conforms with the objective criteria, as well as the responses to public comments.
- To increase the focus on consumer interests, expand the representation of consumers – whether tourist or island residents or non-marine transport companies – on the CTAC.
- Adopt in the Ministry of Merchant Marine practices of good regulation identified in the *OECD Report on Regulatory Reform*, such as regulatory impact analysis, that help to ensure that regulation is of good quality. Good regulation *inter alia* is regulation that is needed to serve clearly identified policy goals, effectively achieves those goals, minimises costs and market distortions, promotes innovation, is consistent with other regulations and policies, and is compatible as far as possible with competition, trade and investment-facilitating principles.

### **2. Reform the regulatory system to stimulate competition, while preserving service to all designated islands.**

#### **Reduce barriers to entry.**

- A centrally planned network has a number of inefficiencies compared with one that is the outcome of decentralised decision-making by profit-seeking companies. In order to free ferry companies to design their own most efficient route networks, and to enter into service to islands of their choice, *replace the authorisation principle of the economic licensing system by a notification principle. Allow companies to serve islands in any combination or order.*

#### **Promote competition and efficient commercial decision-making.**

- Competition takes place in a number of dimensions. Two key dimensions where competition can be effective are price and quantity. Hence, *eliminate licensing provisions regarding fares and constancy of frequencies.*
- Competition can be reduced or eliminated by collusion, and consumers suffer as a result. Reducing information exchange can reduce the risk of collusion. Hence, *eliminate the license requirement for a commercial feasibility study.*
- Consumers benefit when companies find ways to reduce costs, which still maintaining safety and environmental standards. Hence, *eliminate licensing provisions regarding manning, particularly the hotel staff, that do not affect levels of safety or compliance with international standards or agreements. Review licenses for other provisions that intervene into normal commercial practices, with a view to eliminating those not required to achieve safety, environment, or other public policies.*

#### **Protect service to low-demand islands.**

- It is a public policy objective to maintain service to low demand islands. The efficiency of such service can be improved at the same time route entry can be liberalised, which in turn will increase both efficiency and the satisfaction of consumer demands. To achieve this requires the simultaneous institution of a number of related reforms.
  - *Define the public policy requirements for service to all potentially low-demand islands.*
  - *Replace the licensing provisions regarding “public service” islands with an expansion of the tendering process for “uneconomic routes” to include all islands that are not served – to the standards set out in the requirements – as a commercial decision by the ferry companies. This includes not only unserved islands, but also those islands where the price charged exceeds a maximum determined by the Ministry, or where the frequency of service is below a minimum determined by the Ministry. Some islands may have low traffic demand for only the winter season, but be in the commercial domain in the summer season.*
  - Establish a fund for service to low-demand islands. It may be a combination of funds from the central budget, or a fee, acting like a tax, on each ticket the proceeds of which go into a central fund, administered by the Ministry, for the sole purpose of this service.

## **REGULATORY REFORM IN TRUCKING**

### **3. INTRODUCTION TO THE TRUCKING SECTOR**

146. The geography of Greece profoundly influences its land transport sectors. Other countries can rely more heavily on rail, but the islands, as well as Greece’s location without a direct land connection to the main part of the Single Market of the European Union, give trucks a greater importance.

147. The regulation of the trucking sector is consistent with the regulation of other sectors in Greece. There is a heavy reliance on traditional, command-and-control methods. There are numerical restrictions on entry, and prices are regulated. These constraints unnecessarily raise costs. If EU influence were not so pervasive in this sector, these constraints would also protect incumbents. However, competitors from other countries, operating under different rules, have been able to enter the Greek market and take away customers. The current regulatory regime, therefore, is unsustainable. In March 2001, a formal joint

committee was set up by a ministerial decision, published in the Official Gazette. This committee consists of representatives of ministries, hauliers, unions, and transport experts, and aims to map out a reform of the entire sector.

148. Greece should follow the path of other countries that have reformed their trucking sectors by freeing domestic entry and prices while enforcing safety and environmental standards by direct regulation and inspection. Greek truckers would then be able to compete on a level playing field and be subject to the same rules as truckers from other Member States.

### **3.1. Regulation**

149. The regulatory framework in Greece combines both European Union and Greek elements.

#### *3.1.1. European Union regulation*

150. The first major reform of road freight transport markets at the EU level was limited to international markets. That is, it was limited to services in which a vehicle is loaded in one Member State and unloaded in another. Under Council Regulation 881/92 of 26 March 1992, any carrier registered in a Member State could provide bilateral or transit services if it had an authorisation for international service. These authorisations were not restricted by quota (European Commission 1999, p. 33).

151. The next major reform (Council Regulation 3118/93 of 25 October 1993) gradually liberalised national or “cabotage” markets, that is, where a vehicle is loaded and unloaded in the same Member State. During the transition period, trucks could receive an authorisation to perform cabotage services in another Member State. These authorisations were valid for only one or two months and were subject to an increasing quota. Since 1 July 1998, the system of cabotage authorisations was abolished and any truck authorised to perform international transport services under regulation 881/92 may perform cabotage services in any Member State.

152. Council Regulation 3118/93 introduced an anomaly. Whereas truckers who carried goods between two points in the Member State where they were registered were subject to that State’s rules, truckers who performed the same service but were registered in a different State were subject to Community rules (*Ibid*, p. 35).

153. Important aspects of regulation of this sector relate to driver safety. Council Regulation 3820/85 of 20 December 1985 establishes driving time maxima and rest time minima (*Ibid*, p. 49). Council Directive 88/599/EEC specifies how regulators should check that these standards are indeed met, specifying road-side checks and inspection visits to the offices of the transport companies. (*Ibid*, p. 52).

154. A later directive (Council Directive 96/26/EC) harmonised entry standards. A licences can only be denied on the grounds of a lack of a good repute (as measured by criminal convictions), financial standing (the undertaking must have specified capital and reserves) or professional competence (the manager of the undertaking must pass an examination). Short-haul truckers are exempt (*Ibid*, p. 53).

#### *3.1.2. Greek regulation*

155. Greek domestic regulation is aimed at ensuring “balance in the market.” Laws and regulations in Greece, as elsewhere, distinguish between two parts to the road freight sector:

- Transport on one’s own account (which is covered by Law 1959/91) and

- Transport of goods for another party in return for remuneration (which is covered by Law 383/76).

156. Road freight transport in Greece is also divided into prefectorial, national, and international. Prefectorial transport is outside the scope of restrictions on entry (moral character, capital, professionalism). There are also separate licenses for dangerous goods, for carrying fresh fruits and vegetables, and so on. These are not addressed here.

Table 4. **Trucks registered in Greece**

Type of permit	Number (1994)
Own account	812 538
Third party	36 495
Total	849 033

Source: Greek National Statistical Service.

157. Those who transport on their own account, account for the vast majority of truckers in Greece, and their number has been increasing.

158. Prefectoral authorities issue permits to companies for trucks to provide transport for that company, if the company can prove need. The amount of turnover determines the number of trucks permitted. This is a binding constraint — there are companies that would like more permits. These permits are not transferable. However, under Directive 84/647 and Presidential Decree 91/89, a company may hire or hire out trucks, with gross weight up to six tonnes, for which the company has a permit to transport goods on its own account.

159. Permits for trucks to haul goods for third parties are, by contrast, subject to a numerical limit and are transferable. The permits are bought and sold freely, if a transfer fee is paid to the Ministry. The current law allows the number of permits to increase, if the need were pinpointed. The need can be pinpointed only after a study is conducted. Since no study has been conducted, the number of permits for third party trucking has not increased.

160. Prices for trucking services within Greece are regulated according to Law 383/76. The law specifies both a minimum, set to cover operating costs, and a maximum, to limit the profits of the trucker. The difference is 18 to 20%. Under the law, the parties to a particular contract negotiate the price within these limits. However, actual transaction prices are, reportedly, often below the minimum due to competition.

161. The degree of competition from non-Greek registered trucks can be seen in the following table. In 1997, almost 16% of national and international hauling was done by trucks not registered in Greece, thus subject to European Union rules.

Table 5. **Development of goods transport in Greece**

(in thousand million tonne-kilometres)

	Rail	Road (Haulage on national territory, national and international)		
		Total	Haulage by vehicles registered in the country	
			National	International
1970	0.7	4.9	n.a.	n.a.
1980	0.8	7.3	n.a.	n.a.
1990	0.6	10.9	n.a.	n.a.

1994	0.3	12.8	10.8	0.6
1995	0.3	14.8	12.4	0.9
1996	0.3	15.9	12.5	0.8
1997	0.3	16.5	13.0	0.9

Source: European Commission at [http://europa.eu.int/en/comm/dg07/tif/4\\_goods\\_transport/](http://europa.eu.int/en/comm/dg07/tif/4_goods_transport/).

### 3.2. *Conclusions and policy options*

162. The deregulation, in other countries, of third-party haulage, has resulted in lower prices, improved quality of service and more flexibility. The general trend throughout Europe is to shift away from own-account to third party provision of trucking services. Deregulation has been partly responsible for the shift. But also, in competitive manufacturing and service sectors, companies are moving toward out-sourcing non-core activities, including own-account trucking (OECD 2000, p. 6). Outsourcing trucking, or indeed the entire logistics chain, allows companies to have access to an entire network and pay only for usage. This, in turn, lowers barriers to entry into the markets for which transport is an input, which increases competition in those markets. Thus, the development of a flexible, reliable trucking or logistics sector has significant positive effects throughout an economy.

163. The trend toward outsourcing trucking services, however, cannot be followed among Greek registered trucks since the number of permits for third party transport is fixed. Instead, the number of trucks registered for own-account transport is growing. This suggests inefficiency: Presumably Greek manufacturing and service companies would make the same shift as other European companies if they had the same choices. Another indicator of efficiency is the number of empty back-hauls: Truckers for third-parties tend to have fewer empty back-hauls than own-account truckers.

164. If the objective of the regulation is to protect the third party truckers, then it is failing. Under EU rules, other European truckers can, provided they have an authorisation to operate internationally from any Member State, unrestrictedly enter the Greek national market. Competitors – own-account transport, EU registered trucks, non-EU trucks that nevertheless carry goods within Greece – are in law or in practice able to expand their capacity in the Greek market. They will continue to operate there so long as it is feasible and profitable. Hence, they will continue to put pressure on Greek third party truckers' prices and costs. Indeed, actual prices allegedly sometimes lie below the legal minimum.

165. If the purpose of the regulation is to increase safety levels and reduce environmental effects, then the regulation is mis-directed. Even if the regulation could increase truckers' profits, increasing profits does not change the cost of compliance with these standards, the penalties for non-compliance, nor the enforcement practices of the regulator. In order to cause a shift in investment and practices to support environmental and safety standards, then the cost of compliance must fall, or the penalty for non-compliance rise, or enforcement increase.

166. The current regulatory framework is unsustainable. Liberalised foreign truckers compete against Greek truckers who are hampered by national restrictions on entry and pricing. Greece should follow the path of other countries that have reformed their trucking sectors by freeing entry and prices. Safety and environmental standards are enforced by direct regulation and inspection. Most recently, Laws 2800/2000 and 2801/2000 enforce these inspections at national and prefectural levels. These changes would increase efficiency of the sector. And these changes would allow Greek truckers to compete, under the same rules, with foreign truckers. The establishment in March 2001 of a formal joint committee, with representatives of ministries, hauliers, unions, and transport experts, to map out a reform of the entire sector is a positive development.

167. Therefore,

- *Greece should, within the constraints of European Union rules on entry, liberalise entry by domestic trucks, whether for transport on their own account or for third parties. It should, in particular, abolish quotas and other numerical restrictions.*
- *Greece should remove price regulation for domestic trucks.*

## NOTES

1. Directive 96/92 of 19 December 1996 concerning common rules for the internal market for electricity, OJ 1997, L 27/20.
2. Simple calculation shows that, if all new demand were met by new entry – that is, if PPC did not increase the amount it generates – then even after six years, new entrants would account for only one-quarter of the market. Only after more than a decade would PPC’s share fall below half, assuming a total demand growth rate of 4% per annum.
3. Council Regulation No. 3577 of 7 December 1992 applying the principle of freedom to provide services to maritime transport within Member States (maritime cabotage) OJ L 364 of 12.12.92, p. 7.
4. The composition of the Coastal Transport Advisory Committee is: the Secretary General of the Ministry of Merchant Marine (Chairman), the Director of the Domestic Sea Transport Directorate of the MMM, the General Director of Merchant Ships Control General Directorate of MMM, a shipping expert appointed by the Minister, and one representative each from the following organisations: Ministry of the Aegean Sea, Ministry of Transport and Communications, Greek National Tourist Organisation, Hellenic Chamber of Shipping, Piraeus Chamber of Commerce and Industry, and three shipowners (one from short coastal shipping, one from Mediterranean cargo shipping, and one from passenger coastal shipping).
5. Cabotage means transport between two points within the same country.
6. If a commissioned ferry is to be sold, then it must be decommissioned by exiting the route it serves. Exiting a route requires the permission of the Minister. Nevertheless, in practice a company can buy a ferry along with the expectation that it will be licensed to continue to operate on the same route (Source: *Kathimerini*, 12 November 1999 and 8 March 2000).
7. The Greek government’s primary concern, in 1995, with respect to the Italian-Greek routes was the viability of the route and the avoidance of any possible “price war” which could possibly hinder the smooth promotion of export and import trade or the transport of vehicles and passengers (EC para. 103)
8. “Indeed, destructive competition would be inconceivable except for the presence of market imperfections. In particular, it is the inability of capital readily (that is, in the short run) to move out of a situation of excess capacity once it has become embodied in that capacity, that creates the possibility of gross returns on investment remaining for extended periods of time below the minimum required in the long run to maintain it.” Kahn, pp. 175-176.

## BIBLIOGRAPHY

Athens News Agency, 1998. *Hermes Magazine*, "Shipping: A sea of profit amid highly competitive waters", <http://www.ana.gr/hermes/1998/dec/shipping.htm>, December 1998, No. 29.

ANEK Lines (1999), *Ellada-Italia* [Greece-Italy] (brochure).

ANEK (2000a), Available at <http://www.anek.gr> on 27 April 2000.

Attica Enterprises, S.A. (1999), Press release 12 October at <http://www.superfast.com/english/attica/1210.html> on 4 April 2000.

Attica Enterprises, S.A. (1999b), *Annual Report and Accounts* 1998.

Attica Enterprises, S.A. (1998), *Annual Report and Accounts* 1997.

CNN (1999a), "Italian energy IPO on track," 11 October 1999, at <http://www.cnnfn.com/199/10/11/europe/enel> on 23 October 1999.

Copelouzos, Dimitrios (2000), Speech before the 4th Economist Government Roundtable discussion in Athens, 18 April 2000 available at [http://www.invgr.com/members/copelouzos\\_speech.htm](http://www.invgr.com/members/copelouzos_speech.htm).

European Commission Decision of 9 December 1998 relating to a proceeding pursuant to Article 85 of the EC Treaty (IV/34466 – Greek Ferries), OJ L 109 27.4.1999, pp. 24-50.

European Commission (1999), *Guide to the Transport Acquis*, October. <http://europa.eu.int/en/comm/dg07/enlargement/guide2acquis/en.pdf> on 27 April 2000.

European Commission (2000), *Third Report on the Implementation of Council Regulation 3577/92 Applying the principle of freedom to provide services to maritime cabotage (1997-1998)*, COM(2000)99, 24 February, at [http://europa.eu.int/eur-lex/en/com/pdf/2000/com2000\\_0099en01.pdf](http://europa.eu.int/eur-lex/en/com/pdf/2000/com2000_0099en01.pdf) on 3 April 2000.

*Forbes Global* (2000), "Athens at the Crossroads," pp. 42-45, 17 April. Also available at <http://www.forbes.com/forbes/00/0417/6509088a3.htm> on 26 April 2000.

Greek Ministry of Foreign Affairs, [http://www.mfa.gr/aboutgr/brief\\_on\\_greece.htm](http://www.mfa.gr/aboutgr/brief_on_greece.htm) on 1 April 2000.

Greek National Tourism Organisation <http://www.vacation.net.gr/p/crete.html> on 1 April 2000.

*Hermes Magazine* (1998a), "A sea of profit amid highly competitive waters", December, at <http://www.ana.gr/hermes/1998/dec/shipping.htm> on 23 January 2000.

International Energy Agency (2000), *Competition in Electricity Markets*, Paris.

Invest in Greece (2000b), "Attica Enterprises Holdings SA agreed to acquire an approximate 38% equity stake in Strintzis Lines Shipping SA," August 31st, 1999, at [http://www.invgr.com/members/attica\\_strintzis.htm](http://www.invgr.com/members/attica_strintzis.htm) on 27 April 2000.

Kahn, Alfred, *Economics of Regulation*, Vol. 2, "Destructive Competition and the Quality of Service," Ch. 5, pp. 172-250.

*Kathimerini* (1999), "Record-breaking profits for shippers," 13 December 1999 at <http://www.k-english.com/news.asp> on 9 March 2000.

*Kathimerini* (1999), "Aegean Airlines completes its acquisition of Air Greece" 30 December 1999 at <http://www.k-english.com/news.asp> on 1 April 2000.

*Kathimerini* (2000), "MFD makes a tactical retreat from partnership with Lesvos," 8 March 2000 at <http://www.k-english.com/news.asp> on 1 April 2000.

Littlechild, S.C. (1998), "*Contribution to the European Electricity Regulation Forum*," 6 February, Florence, Italy.

Lloyd's List (1999), "Ferry license system in firing line," 5 February 1999.

Minoan Lines (1999), *Greece-Italy* (brochure).

Minoan Lines (2000a), <http://minoanl.minoan.gr/corporat.html> on 27 April 2000.

OECD (2001), *Roundtable 115: Road Transport for Own Account in Europe*, Paris, May.

Office of Electricity Regulation (1998), *Annual Report 1998*, at <http://www.ofgem.gov.uk/elarch/index.htm> on 10 May 2000.

Psarafitis, Harilaos N. (1996), "Changing Tides: Countdown to 2004: Greek coastal shipping prepares for deregulation and colossal changes," *ORMS Today*, Vol. 23, No. 3, June at <http://lionhrtpub.com/orms/orms-6-96/greece.html> on 14 February 2000.

Public Power Corporation (PPC) (1998), *Annual Report 1998*.

Public Power Corporation (PPC) (2000a), "Management and Organization" at <http://www.dei.gr/company/managem.htm> on 15 February 2000.

Strintzis Lines Shipping S.A. (1999), Press Release, "Strintzis Lines Shipping S.A. announces that it has obtained two licenses from the Ministry of Merchant Marine for 2 New Buildings for the Chios - Mytilini & Andros - Tinos - Myconos - Ikaria - Samos routes," Piraeus, 13 May. at <http://www.strintzis.gr/> on 4 April 2000.

Superfast Ferries Maritime S.A. (2000), "Superfast Ferries Maritime S.A. Files Application for Listing at the Main Market of the Athens Stock Exchange," 15 February at <http://www.superfast.com/english/deltia.html> on 4 April.