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ROUNDTABLE ON ENERGY SECURITY AND COMPETITION POLICY

-- Note by Portugal --

This note is submitted by the Portuguese Delegation to the Competition Committee FOR DISCUSSION at its forthcoming meeting to be held on 21-22 February 2007.

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ENERGY SECURITY AND COMPETITION POLICY

1. Introduction

1. This note sets out the joint contribution of the Portuguese Competition Authority (Autoridade da Concorrência, AdC) and the Portuguese Energy Regulator (Entidade Reguladora dos Serviços Energéticos, ERSE) to the roundtable discussion on Energy Security and Competition Policy, to be held on the occasion of the February 2007 OECD Competition Committee Meeting. The main topics will, no doubt, be amply covered in the Secretariat background paper, so the discussion here is limited to listing what are, in our perspective, the main outstanding issues and giving in more detail what we consider to be relevant information on Portugal's experience in these matters. Given the roundtable's focus on gas, this note ends with a brief overview of the Portuguese gas market, which may serve as an interesting example of a recent introduction of natural gas to a national energy market.

2. Supply security from a European perspective

2. In its recent Communication paper to the European Council and the European Parliament, the Commission defines three main challenges: Sustainability, Security of Supply and Competitiveness.

3. The building of a real Internal Energy Market is considered the key to meet these challenges. The major actions that have already been clearly identified as urgent measures for the establishment of the Internal Energy Market, contributing to the security of supply at a European level, can be described as:

- Creating appropriate incentives for investing in generation, to ensure that future consumption needs are adequately met.
- Putting in place adequate incentives for infrastructure investment, especially in interconnection capacity, since infrastructure is a key element not only for long term security of supply but also from a short term operational point of view.
- Establishing the appropriate regulatory framework for promoting competition, such as the unbundling of the transmission operators and adequate transparency (information disposal) from the TSO.
- Defining the appropriate rules for market operation, such as reliability, service quality and security standards.
- Ensuring effective regulation, through the harmonization of the powers and independence of the energy regulators, based on the highest common denominator.
- Promoting diversification of primary sources and avoiding dependence on few suppliers.
- Establishing ambitious targets for renewables and for energy efficiency.
- Managing an appropriate oil stock mechanism.
- Advancing with technological developments such as carbon capture and nuclear power safety.
- Adequately monitoring and reporting the demand/supply balance.
- Establishing a common Strategy in Europe, so as to speak with one voice.

4. In its recently-completed energy sector competition inquiry, the European Commission also underlines the burden put on consumers and businesses as result of inefficient and expensive gas and

electricity markets. It further identifies, as the main structural and behavioural issues, high levels of market concentration; vertical integration of supply, generation, and infrastructure; and possible collusion between incumbent operators to share markets. These issues are to be tackled through competition policy instruments, e.g. anti-trust, merger control and state aid, as well as through regulatory reforms to foster energy liberalization.

5. We support the findings and actions of this survey. Portugal has pioneered a vertical unbundling in electricity, and has recently completed an asset spin-off which has entrusted the TSO with the ownership of high-pressure natural gas transmission and storage facilities, as well as with LNG import infrastructure. Our experience, as detailed below, suggests that vertical unbundling is a key first step to reduce market power in national markets.

3. Outstanding issues for discussion

6. The traditional model of vertically-integrated state energy monopolies took care of supply security by in-house long range planning and infrastructure investment combined with long term power purchase agreements and other supply contracts. Market liberalization (where it has been implemented) unbundled these monopolies into separate entities, creating the challenge of how to assure supply security while permitting competitive markets to operate. Supply security usually entails having some excess capacity, especially in the case of electricity, where storage is not possible. The creation of production, transport and distribution infrastructure implies long planning and implementation lags and market players are naturally reluctant to invest in idle assets unless an adequate return on such investments can be assured. The challenge here is to ensure a regulatory framework that combines incentives for investment in adequate excess capacity with incentives for competition in production and supply while, at the same time, ensuring efficient and sufficient investment in the regulated transport and distribution networks.

7. The development of the single energy market requires increased interconnectivity to permit better balancing between supply and demand in the various markets. In practical terms, however, a single Europe-wide grid with sufficient round-the-clock capacity would require investments of a dimension well beyond what is financially justifiable. In any case, increased interconnectivity should never be considered as a substitute for competitive local markets. Progress towards the single energy market requires that each national market be competitive before joining with neighbouring markets in the creation of efficient regional markets. Interconnections between regional markets will then ensure an efficient single European energy market. This point lays great importance on close collaboration between national regulators and national competition authorities as well as between these entities and their counterparts at regional and at European levels. Also of prime importance is the effective harmonisation of rules, especially considering that regulators are dealing with increasingly global energy firms.

8. On this issue, further work is necessary to ensure cross-border regulation and to define more clearly the division of responsibilities between national and EU-wide regulation. The EU competition framework, especially post-Regulation 1/2003, could provide a useful model, with national authorities having primary responsibility, but keeping the Commission informed of all matters with a transborder impact, even if only potential. If the Commission decides that an infringement or a merger procedure has an EU dimension, it assumes responsibility for the case. Close collaboration between NCAs and between these and the Commission is assured via ECN (the European Competition Network). Also useful is the example of regulation in the electronic communications (telecoms) sector, in which NRAs work closely with the Commission and with the NCAs in defining relevant markets, establishing whether firms have a dominant position and laying down pro-competition obligations.

9. Another problem relates to the concentrated nature of the principal primary suppliers of energy inputs, namely oil and natural gas. This situation can place European consumers in a vulnerable position

vis-à-vis the producers and pipeline transporters of oil and natural gas. The fact that the producers and transporters often are state entities adds a political risk to the already serious commercial risk. This problem calls for two types of response: i) increased efforts to promote energy efficiency, diversify energy sources and increase European self-reliance and ii) a united approach by European consumers, to exercise some form of countervailing power to the concentrated primary energy sources; such a united approach requires effective cooperation between Member States in the negotiation of long-term contracts and passage rights.

10. Considering the above challenges, it is important to define clearly the functions of the five principle players at the national level:

- Government defines energy policy, including objectives and instruments relating to diversity of supply for primary energy, while shaping market structure through licensing of new capacity.
- Energy Sector Regulators create the appropriated mechanisms to ensure adequate and timely investment in infrastructure, set prices for the use of monopolistic infrastructure, and promote efficiency in energy use.
- Competition Authorities oversee market functioning, and intervene through anti-trust instruments and merger control decisions as the case may be, as well as through recommendations to Government towards improved consumer selection and the removal of structural barriers to competition.
- Transport and distribution network operators ensure the technical security of the system, so as to prevent supply interruption due to technical reasons.
- Energy producers and suppliers, operating in competitive markets, are the final link in the chain to satisfy market demand at the lowest efficient price.

11. These responsibilities at national level can be facilitated by close cooperation and information-sharing in international fora, namely OECD and the IEA. Such cooperation is particularly relevant in working towards global objectives such as controlling carbon emissions and promoting nuclear safety. But regulation of inter-connection and other cross-border issues may well call for enhancing the role of the Commission.

4. Energy security and competition – positive and negative experience in Portugal

12. Portugal's experience with the liberalization of electricity and the introduction of natural gas provides both positive and negative examples of how to proceed with market opening in energy.

13. Among the positive aspects, in our opinion, are the following:

- the creation of an independent Sector Regulator in 1997 and of an independent Competition Authority in 2003;
- structural unbundling of electricity transmission, and high-pressure gas networks, as well as LNG storage and underground gas facilities with separate ownership and a 5% limit on participation by each producer or distributor;

- active promotion of renewable energy sources (currently representing 42% of total electricity production under normal climatic conditions; for 2010 the target is 45%);
- active promotion of energy efficiency at the consumer level (€10 million per annum in ERSE promotion projects);
- liberalization of electricity production (incumbent now accounts for about 50%);
- full retail liberalization of electricity supply and gradual liberalization of natural gas;
- unbundling of activities and regulated tariffs constructed by the addition of tariff components for each segment of the supply chain;
- requirement of efficiency gains in regulated network monopolies, translated in reduction of energy losses and improved quality of supply;
- commitment to investment in interconnectivity (currently 1200 MW is the interconnection capacity between Portugal and Spain, representing 12% of Portugal peak demand; for 2010 a 3000 MW capacity value is expected between Portugal and Spain, representing 27% of projected Portugal peak demand; Also for 2010 a 4000 MW capacity value is expected between Spain and France representing 8% of Spain peak demand) and gradual creation of the Iberian regional market (MIBEL), including the setting up of trading platforms.

14. The Portuguese experience has not always been positive, however. Among the less positive aspects, we would highlight the following:

- the legal framework and, in consequence, the regulatory framework has been less stable than desirable;
- delays in the renegotiation of power purchase agreements continue to impede the introduction of competition in electricity supply;
- competition in production and supply, though legally ensured, is still very limited in the electricity sector and practically non-existent in the gas sector;
- regulated tariffs, at less than full cost in many cases, constitute an entry barrier to new market operators in both the national and the regional (MIBEL) markets;
- tariffs with interruptability exist but supply is never interrupted. In practice, the mechanism provides an extra discount to some consumers, cross-subsidised by others.

5. A brief overview of the Portuguese natural gas market¹

5.1 *The Natural Gas Project*

15. The supply of natural gas to Portugal through pipeline only started in 1997/1998. The upstream pipeline comes from Algeria, crossing Morocco, the strait of Gibraltar and Spain. The pipeline was built under a joint venture between the Portuguese and Spanish gas incumbents. Under this joint venture an agreement was established on the use of pipeline capacity at the entry and exit points throughout the Portuguese territory. Under this agreement, the Spanish gas Transportation System Operator (TSO) has

¹ This section reproduces, with updates, the text of Portugal's submission to the OECD Roundtable on Ensuring Access to Key Capacity for New Entrants, published as DAF/COMP/WP2/WD(2006)15 of 26-Jan-2006

booked capacity in the Portuguese section of the pipeline in order to allow for the transit flows of natural gas to the northern Spanish region of Galicia.

16. At the time of project implementation, there was only one gas distribution network in Portugal – an urban system in Lisbon serving a population of about 550,000 inhabitants. In order to ensure investment break-even, a key component of the Natural Gas Project was the commissioning of a new power plant, using Combined Cycle Gas Turbine (CCGT). The operation of that CCGT was set under three different agreements: a gas supply contract with the incumbent; a Power Purchase Agreement (PPA) with the electricity TSO, the single buyer of power for the public electric system; and the Consumption Management Agreement between the gas incumbent and the electricity TSO. Under this last agreement, the TSO is committed to purchase a minimum amount of electricity from that CCGT, hence setting a minimum annual amount of gas to be consumed by the power plant

17. In 2003, and in response to increased demand, a new LNG terminal, located at Sines, on the Atlantic seashore of Portugal, became operational.

18. From 2000 to 2005, demand grew at an average annual rate of 14%. This rapid growth is mainly due to consumption by power plants. Indeed, in 2003 another CCGT was commissioned by the electricity incumbent. The rapid conversion from other energy primary sources undertaken by industrial activities has also contributed to the sharp rise in natural gas consumption. Finally, domestic demand of gas has also been rising in line with the expansion of local gas distribution networks. As a result, in 2005 consumption by power plants represented 49% of the final gas consumption in Portugal², whereas domestic consumption accounted for less than 6%.

19. In 2005 the final consumption of natural gas in Portugal accounted for 4.3 bcm, up from 3.5 bcm in 2004. The industrial market and the distribution operators' market are responsible for respectively 35% and 16% of total consumption of natural gas, having grown by respectively 12% and 5.5% versus 2004. Potential for future growth remains high, with a consumption of 6-7 bcm per year projected for 2010³. Power plants will remain dominant in the estimated future consumption of natural gas.

5.2 *The supply contracts*

20. The original supply contract for natural gas, signed in the early-1990s, was entered into between the incumbent (*Transgas*) and the Algerian firm *Sonatrach* for a period of 23 years. From 2001 onwards, the average contracted gas is 2.5 bcm⁴ per year, subject to Take-Or-Pay (TOP) commitments.

21. With the prospect of the new LNG terminal becoming operational, the incumbent entered into LNG supply agreements. One was a short-term supply agreement with Shell España. The remaining are supply agreements (3 contracts) with Nigeria for periods of 20 years, with TOP commitments. The average quantity of contracted gas from Nigeria will rise to 3.4 bcm p.a., during the life of the contract. The third LNG supply contract signed with Nigeria entered into force in 2005/6 for a period of 20 years, involving a contracted amount of 2.0 bcm p.a. Also, a new long-term agreement has been signed with ENI, to last between 2006 and 2016, involving the sale of 0.25 bcm of LNG.

² Relatório Anual para a Comissão da União Europeia, 2005, Entidade Reguladora dos Serviços Energéticos

³ Portugal 2004 Review, International Energy Agency

⁴ Billion cubic meters

22. As a result, the total gas contracted by the incumbent on a long term basis is 5.92 bcm p.a. These quantities cover most of the demand forecast for years ahead, including the foreseen new CCGT plants to be commissioned before the end of the decade.

5.3 *The infra-structure*

23. Portugal has a total import capacity of gas of some 8,935 bcm p.a., of which 3,769 from the upstream pipeline from Algeria and the remaining from the Sines LNG terminal. The LNG terminal has also a workable storage capacity of 240.000 m³. A new storage facility, corresponding to some 20 days of average consumption, is expected to become operational soon.

24. At present, the import pipeline capacity is almost fully allocated to the incumbent. The same happens with the full LNG regasification capacity. With the opening of the Portuguese gas market, the incumbent is expected to release the capacity not used to meet the quantities under the long term contracts it has entered into. Indeed, long term gas contracts (pipeline and LNG) would amount to some 66% of the total import capacity, on average.

25. Two units of underground NG Storage have been built with a total capacity storage of 950 000 m³. Globally speaking 175 Mm³(n) of natural gas were injected into the underground storage facilities in 2005, of which 95 Mm³(n) can be used as from January 2006. These represent a 17-day strategic reserve, in terms of last year's average consumption, excluding power generation plant consumption. Completion of the leaching process of another cave and start-up of the respective fill-up process is scheduled for 2006, as well as the completion of the leaching process of a further cave at the end of 2007.

26. This project also foresees that at least two more caves will begin operations in 2007, bringing total storage capacity to 1.72 million cubic metres of gas.

5.4 *The opening up of the Portuguese gas market*

27. The implementation of the EU Internal Gas Market Directives, in what concerns market opening, was derogated until 2007. However, in view of the successful introduction of natural gas supply in Portugal and of the foreseen creation of Iberian Electricity Market, the Government decided to anticipate the possibility for power producers to become eligible to choose their gas suppliers.

28. Moreover, in late-2005, a Resolution from the Council of Ministers⁵ decreed the structural separation of the gas incumbent. Following this Resolution, all natural gas infra-structure was to be transferred to the electricity TSO, with proper legal unbundling between gas and electricity infrastructure. In addition, only minority stockholdings of gas and electricity undertakings would be allowed in the company that will operate both networks.

29. Soon thereafter, on 15 February 2006, Decree-Law no. 30/2006 was approved, establishing general principles concerning the organization and functioning of the National Natural Gas System (SNGN) and of related natural gas markets as well as the development of the following activities: reception, storage and re-gasification of natural gas; underground storage of natural gas; distribution; and supply. This Decree-Law transposed to Portuguese domestic law EU Directive no. 2003/55/CE, which established common rules for the single natural gas market. SNGN's organization relies on the operation of the natural gas public system, consisting of: a National Grid of Natural Gas Transmission; Storage Facilities and Terminals; and a National Grid of Natural Gas Distribution.

⁵ Resolução do Conselho de Ministros n.º 169/2005, de 24 de Outubro

30. This infra-structure is operated by means of public-service concessions – or by means of public-service licenses, in the case of local autonomous distribution grids. Natural gas transmission is ensured by a single public-service concession for the operation of the Natural Gas Transmission System. This activity is legally unbundled from other activities - in the framework of the SNGN – and so are its assets.

31. Distribution is ensured by means of: (i) Concessions, based on exclusive dedicated operation and under a public-service regime; (ii) Distribution licenses in local autonomous grids, based on exclusive dedicated operation and under a public-service regime; and (iii) Distribution licenses for the private use of natural gas (off-grid).

32. Distribution is legally unbundled both from the transmission activity and other activities not related with distribution. Unbundling however is not mandatory when the number of customers supplied by distribution operators is lower than 100 thousand.

33. Natural gas supply is liberalised, although subject to licensing. Suppliers will have the right to access the following infra-structures, against payment of a regulated tariff: Storage facilities and LNG terminals; Transmission grids; and Distribution grids. Natural gas supply will none the less be governed by the provisional legal regime established for the gradual opening of the market, taking stock of the emerging market statute and the derogation associated with it. Thus consumers may freely select their supplier gradually, according to an eligibility schedule. Furthermore, supplier switching may not be encumbered in any way whatsoever in contract terms. In order to simplify and operationalize supplier switching, a supplier-switching logistic operator is created.

34. Last resort suppliers have also been established by law, for consumer protection. Their purpose is to supply natural gas, in conditions of quality and continuity-of-supply, to those consumers who do not choose to switch suppliers. Last resort suppliers are meant to intervene when the liberalized market is not operating with full effectiveness and efficiency. This function has therefore been awarded, on provisional terms, to the existing concession-holders, for the duration of their concession.

35. ERSE is responsible for regulating all activities included in the natural gas public system, the activity of last resort suppliers and the activity of supplier-switching logistic operators, while respecting the competences of other administrative bodies. Accordingly ERSE must periodically draft a report on the sector's performance, to be submitted to the Government – who in turn will present it to the National Parliament and the European Commission.

36. Government is in charge of monitoring the security of supply. This power has been delegated to the Directorate-General for Geology and Energy, in co-operation with the national system of natural gas transmission.

37. The Council of Ministers, in its meeting of the 22 June 2006, addressing the execution of the National Strategy on Energy, approved a legal bill applicable to the natural gas sector, which governs all its activities (from transmission to supply) and its market, also establishing its liberalization schedule timeframe (from January 2007, for standard electricity generators, to January 2010, for all customers).

38. Council of Ministers' Resolution no. 85/2006, also approved on 22 June 2006, authorizes REN – Rede Eléctrica Nacional, S. A. to modify its articles of association so as to alter its name to REN - Redes Energéticas Nacionais, SGPS, S. A. and to become a concession-holder of the national electricity transmission system, incorporating new companies. The business purpose of such companies will be to operate public service concessions, respectively of high-pressure natural gas transmission, underground storage of natural gas and LNG reception, storage and re-gasification.