OECD REVIEWS OF REGULATORY REFORM

REGULATORY REFORM IN POLAND

FROM TRANSITION TO NEW REGULATORY CHALLENGES

THE POSTAL AND ENERGY SECTORS

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION FOR ECONOMIC CO-OPERATION

AND DEVELOPMENT

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FOREWORD

Regulatory reform has emerged as an important policy area in OECD and non-OECD countries. For regulatory reforms to be beneficial, the regulatory regimes need to be transparent, coherent, and comprehensive, spanning from establishing the appropriate institutional framework to liberalising network industries, advocating and enforcing competition policy and law and opening external and internal markets to trade and investment.

This report on *The Postal and energy sectors* analyses the institutional set-up and use of policy instruments in Poland. It also includes the country-specific policy recommendations developed by the OECD during the review process.

The report was prepared for *The OECD Review of Regulatory Reform in Poland* published in July 2002. 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.

Since then, the OECD has assessed regulatory policies in 16 member countries as part of its Regulatory Reform programme. The Programme aims at assisting governments to improve regulatory quality — that is, to reform regulations to foster competition, innovation, economic growth and important social objectives. It assesses country's progresses relative to the principles endorsed by member countries in the 1997 *OECD Report on Regulatory Reform.*

The country reviews follow a multi-disciplinary approach and focus on the government's capacity to manage regulatory reform, on competition policy and enforcement, on market openness, specific sectors such as electricity and telecommunications, and on the domestic macroeconomic context.

This report was principally prepared by David Parker in the Division for Competition Law and Policy of the OECD. It benefited from extensive comments provided by colleagues throughout the OECD Secretariat, as well as close consultations with a wide range of government officials, parliamentarians, business and trade union representatives, consumer groups, and academic experts in Poland. The report was peer-reviewed by the 30 member countries of the OECD. It is published under the authority of the OECD Secretary General.

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TABLE OF CONTENTS

1. POSTAL SECTOR 7
   1.1. Introduction 7
   1.2. Polish Postal Sector Structure 9
   1.3. Postal sector reform 12
   1.4. Conclusions and recommendations 17
2. ENERGY SECTOR 18
   2.1. Sector overview 18
3. OIL SECTOR 21
   3.1. Introduction 21
   3.2. Structure 21
   3.3. Competition and Regulation Issues 24
   3.4. Conclusions and recommendations 28
4. COAL SECTOR 30
   4.1. Introduction 30
   4.2. Structure 30
   4.3. Competition issues 33
   4.4. Conclusions and recommendations 35
5. ELECTRICITY SECTOR 36
   5.1. Introduction 36
   5.2. Industry structure 37
   5.3. Regulation 43
   5.4. Competition issues 46
   5.5. Conclusions and recommendations 49
6. GAS SECTOR 51
   6.1. Introduction 51
   6.2. Structure 52
   6.3. Regulation 56
   6.4. Competition issues 57
   6.5. Conclusions and recommendations 59

APPENDIX 1: CURRENT AND PROSPECTIVE ELECTRICITY PRIVATISATION 61

Power plant sub-sector 61
Thermal electric power station sub-sector 62
Distribution sub-sector 63
NOTES 64

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Executive summary

Background Report on The Postal and Energy Sectors in Poland

The postal sector in most OECD countries remains dominated by a state-owned vertically integrated monopoly, still largely protected by law from competition over most of the product range. Poland is no exception, but has liberalised even less than most others and less than required by EU law (with which it must comply for EU accession). Polish Post had a complete monopoly of services before 1995. Some competition was allowed after this in courier services. A new draft law, if adopted, will promote modest liberalisation and bring Poland broadly into line with EU requirements. Further liberalisation would then be needed to follow the most recent EU developments. Some resistance to reform in the postal sector has been encountered in Poland. This is not unusual, and reflects the fact that the postal sector is a core infrastructure sector of economies and a universal service that must be widely available to citizens at affordable prices. Liberalisation is a delicate matter. However the experience of countries that have liberalised the most is positive: a better range and quality services and improved financial performance, as well as generally sustained employment levels. And the liberalisation mandated by the EU is modest. Poland should achieve at least this level of reform. The paper examines a number of measures that will be necessary to ensure the emergence of competition and improved economic performance of Polish Post as it is further corporatised.

The government has substantially withdrawn from direct involvement in the oil sector and privatisation is continuing. However, there is a high degree of concentration and integration between the wholesale and retail markets, which raise some potentially significant competition problems. Partly, this was inevitable as there are just two major refineries but the bundling of the major refiner with the major distribution network could have been avoided. It is very important that the remaining privatisation of the Gdansk refinery does not further entrench an anticompetitive structure. Fuel prices and imports were liberalised in 1997 and need to remain so to help maintain effective competition. If low quality fuel imports became a serious problem the regulation of quality should be tightened instead of imposing import restrictions. Transport and storage also play an important part in the functioning of an effective regional market, and should be monitored for possible anti-competitive practices. The OCCP also has an important role to play in monitoring possible barriers "behind the border" from anti-competitive practices. The OCCP also has a role to play in addressing problems from the market power of the refiners and the vertical integration of major refiners with the distribution infrastructure. Market power could be exerted on both distribution franchises and the non-branded distribution/retailing sector. If these competition issues become difficult it may be necessary to consider structural remedies.

The coal sector currently plays a key role in Poland's energy supply and is one of the largest in the OECD. At the end of the central planning period, 1 in 40 workers were employed in the coal sector but when demand collapsed and world prices faltered dramatic financial problems underpinned the need for many mines to close. A massive restructuring program was commenced in 1998 to deal with financial restructuring, the closure of unprofitable mines, employment restructuring (with a social package to mitigate unemployment problems), new industrial development in coal field areas, improving coal industry management, eventual privatisation of profitable mines and environmental rehabilitation. The reforms engaged so far have been successful with the major part of volume reduction and inevitable redundancies achieved and a small aggregate financial surplus achieved in 2000. The reforms must be followed through to achieve a structure that is feasible for privatisation which would reduce the Government's exposure to financial risk (should world coal prices fall) and the policy temptation to try to maintain high domestic prices. Ultimately privatisation is needed to promote an effective integration of the Polish hard coal sector with world markets with removal of import controls. A number of ways to increase the transparency of the financial restructuring program are explored.

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A number of reform steps have occurred in the electricity sector since 1989. Commercialisation began with the separation coal and electricity, and within electricity of generation, transmission and distribution networks. The Polish Power Grid Company (PSE) which became the "single buyer" for the sector, tariffs were partly re-balanced and long-term power purchase contracts were written between PSE and the generators to financially underpin needed investment to upgrade old, inefficient and highly polluting plant. The 1997 Energy Law was the next major step. It established the Energy Regulatory Authority (ERA), and provided the legal basis for liberalisation of the sector away from the "single buyer" model, to the third party access model with complete *de jure* liberalisation by 2005. Privatisation started in 1998, based on partial privatisation of assets. Around 70% of electricity supplied to final consumers is covered by exclusive long term PPAs between the generators and PSE, which run until 2010-2012. Prices under these PPAs are generally higher than market prices. This is a major issue blocking the evolution of the sector which remains locked in the "single buyer" model unless it can be resolved. Consequently, although a fairly comprehensive legal basis for a competitive market exists (including the establishment of an energy regulator) and a power exchange has started operation, there is very little *de facto* competition yet. The government's policy is for PSE to withdraw gradually from trading as resolution of the long-term contract lock in problem is resolved (which is proving difficult, and retrench to transmission ownership and operation, but without any specific plan or timetable. However, the lack of a clear and mandatory plan for PSE's withdrawal, which the government appears to be leaving to natural attrition, is likely to raise problems. The paper identifies a number of issues that need action for competition to take hold. Effective competition will bring one key advantage in the Polish context: it can be expected to mitigate the further price rises that are inevitable in the continuing adjustment to a market driven economy.

The Polish Oil and Gas Company (PGNiG) is the main market player. It is a vertically integrated monopoly in imports, transmission (including system balancing), storage and distribution. The majority of gas is sourced from Russia under long term take or pay contracts which are standard in this industry. The gas sector is at a very early and preparatory stage of reform. Some progress has been made in laying the groundwork for restructuring PGNiG. Internal restructuring started in 1996 the same year, involving commercialisation and a staged separation of the different activities: technical and non-core activities, exploration and extraction, transmission and storage, and (prospectively, the plans are still on paper) the horizontal separation of distribution (which will remain bundled with retail supply). All these activities remain for the present under the ownership of PGNiG. Key details such as whether distribution will be unbundled from transmission and the timing of privatisation are under review by the new government. A *de jure* opening of the market to competition commenced in 2000. If the programme – including further development of the regulatory framework, tariff rebalancing, restructuring of PGNiG, and privatisation – is completed effectively so as to make a clear separation between transmission and other functions, the new structure should be effective in encouraging competition. Care will be needed with a number of issues to ensure that a pro-competitive industry structure emerges. It also needs to be accompanied by measures to diversify supply sources, both for security and competition purposes, which requires significant infrastructure investment and an increase in storage capacity. Import liberalisation will greatly help market opening and this process should not be delayed.

1. POSTAL SECTOR

1.1. Introduction

Across the OECD, traditional state-owned and regulated public utility industries have been transformed by reforms that have fundamentally changed the way these industries are regulated. The former reliance on state control and regulation has given way to greater reliance on competition and market forces, which have lead to a greater focus on efficiency, innovation and meeting the needs of consumers. But to date, these reforms have substantially bypassed the postal sector. The postal sector in most OECD countries remains dominated by a state-owned vertically integrated monopoly, largely still protected by law from the forces of competition over most of the product range. However, electronic communication – fax, internet, e-mail and electronic bill payment – does pose a substantive challenge to postal systems, with estimates of the market loss resulting from electronic communication being in the range of 15-30%. Similarly, the liberalisation of higher value courier services also is introducing competition at the margin of traditional postal services.

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The experience in Poland is similar to that internationally. However, to date the liberalisation of the postal market has been less than the common international experience and, in particular, less than that mandated by the EU.[1] The previous government prepared legislation to liberalise the market to EU standards but passage of the legislation through Parliament was not effected. The present government is preparing new legislation, which generally accords with the assumption of the previous draft and will be compatible with the EU Postal Directive.

Resistance to reform reflects that fact that the postal sector is one of the core infrastructure sectors of the economy and its services are commonly mandated by governments as a "universal service" which must be widely available to citizens at affordable prices. Consequently, liberalisation of the postal sector is not simply a matter of removing existing regulatory controls. Reform of this sector needs to be handled thoughtfully and with attention to employment and universal service issues.

The experience in those countries that have liberalised the most is that concerns about the loss of market share by postal incumbents and consequential difficulties in delivering universal service obligations have not been realised. There is no reason to think that the experience in Poland would be otherwise, particularly in view of the fact that the liberalisation mandated by the EU Postal directive is very modest indeed.

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1.2. Polish postal sector structure

Box 1. **Basic facts on Polish postal sector**

Polish Post (Poczta Polska) is the universal service operator. It is a state owned public utility, subject to the standard governance and supervisory framework applicable to all state owned enterprises.

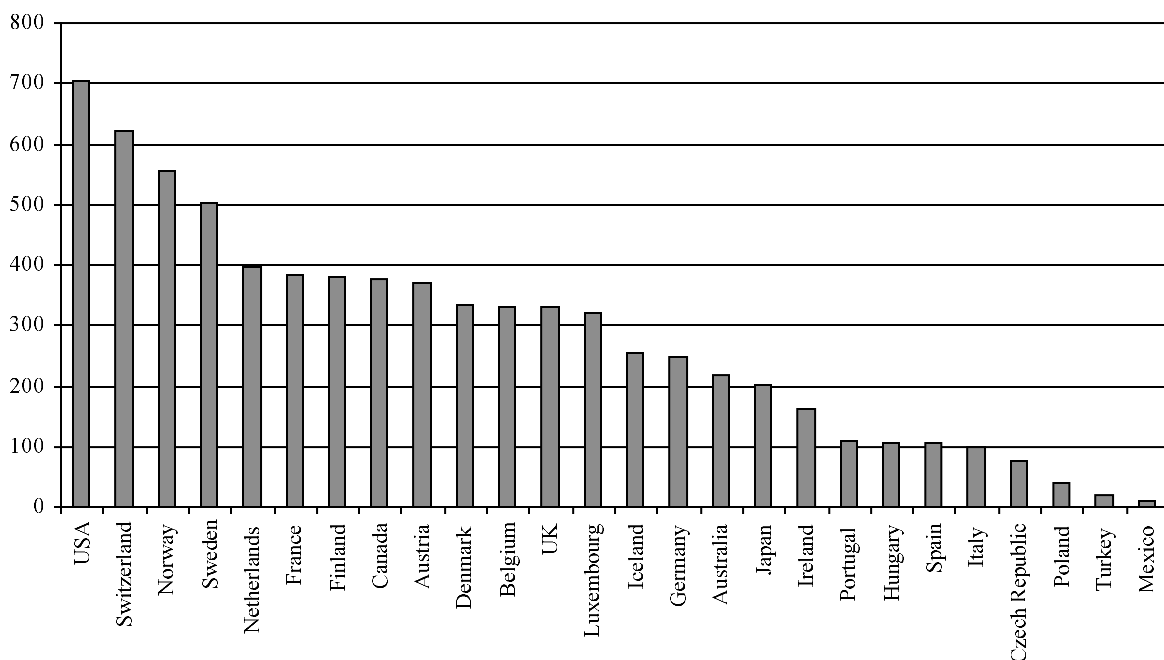
In 1997, Polish Post:

- Delivered 1 339 960 200 letters
- Delivered 23 370 600 parcels and 863 900 courier express items
- Employed 97 000 persons.

There are 37 other entities that operate as licensed couriers, including international courier firms. Around 60% of parcel services market is private. None of these firms, nor Polish Post are regarded as dominant in the courier market – maximum of 20-30% market share.

The use of the postal system in Poland is relatively low as illustrated by the following chart. However, it is expected that postal usage will rise, including with greater use for multi-item business to consumer correspondence (such as by banks and utilities).

Figure 1. **Average number of letter post items posted per inhabitant**



Source: UPU. All data is for fiscal 1997 except Switzerland (1993), Sweden (1996), Netherlands (1993), Finland (1996), Canada (1993), Denmark (1995), Iceland (1996)

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The Communications Act (1990) governs postal services, including the principles of postal services performance, the supervision exercised over the activity and the entities responsible for rendering the services. A 1996 ordinance by the Minister of Communications sets out the details of the principles for providing postal services which are defined by the Act as universal services as well as other principles related to the service such as complaints proceedings, letter size standards, exemptions form fees etc.

Prior to 1995 the Communications Act essentially provided for a monopoly in all postal services to Polish Post. Polish Post is subject to all taxes and common regulations applicable to the conduct of economic activity. The organisational structure, administration and incentives for management are similar to those of a public company – these transitions have been generally implemented in Poland under the Act on State Public Services Enterprises. After 1995, a measure of competition was allowed by prescribing a more limited reserved area that allowed for competition in courier services.

Polish Post is under an obligation to provide the universal postal service throughout Poland. The universal service is defined in the Act as being the receipt transport and delivery of letters in both domestic and foreign traffic up to 2 000 grams and postal parcels up to 20 kilograms.[2] The market for the universal services has been exclusively reserved for Polish Post. (Note this is different from the situation in EU countries where the maximum reserved area is smaller than the USO – which is defined similarly to the Polish USO). Polish Posts' revenue under the USO amounts to around 73.3% of all receipts.

The cost of providing the universal service is not known, due to the undeveloped state of Polish Post's accounting system. Consequently, while Polish Post is entitled to a subsidy from the State Budget in order to cover losses associated with the provision of universal services, it has not sought such a subsidy. In practice postal activities are revenue positive so that as a practical matter the cost of the USO is limited to the requirement to keep open unprofitable post offices in rural areas. The cost of the USO is presently covered through internal subsidisation from general receipts. The only limitation on this cross subsidies lies in the competition law. Polish Post became profitable overall in 1998.

Urban post offices serve on average around 8 000 persons while those in rural areas serve on average around 3 000 persons. Rural post offices are increasingly being converted into agencies offering a limited, basic scope of postal services. This flexibility in the manner of delivery of the USO permitted under the law to Polish Post reduces what might otherwise require a high cost network. Similarly, the geography of Poland means that costs of remoteness and difficult terrain are also relatively low.

Polish Post is also entitled to a budget subsidy earmarked for financing investments – the only subsidies received by Polish Post fall under this heading. State aid controls will apply to this subsidy – see chapter 3. Presently, Polish Post does not meet delivery quality standards established by the EU. Investment in improved technology may be needed to meet this objective. It will be important (particularly in an environment of considerable fiscal stringency) for such subsidies, if any, to be used effectively to improve the technological base of Polish Post.

The regulatory framework makes no distinction between unsorted letters and pre-sorted letters. Also the competitors of Polish post have no right of access to letter boxes, post office boxes or letter boxes in blocks of flats since these are the property of Polish Post. Polish Post is under no obligation to make its network accessible to entrants in the form of providing discounts for pre-sorted bulk receipt or bulk delivery. Consequently, any new entrant to the postal market that wished to offer a partial or unbundled service would need Polish Posts agreement to negotiate interconnection terms with Polish Posts. Further, there is no direct mechanism in the law to provide a means to resolve disputes if Polish Post and another operator cannot reach an agreement about such market access conditions. Conceptually, in such a case the competition law might be applicable if the conduct of Polish Post was to amount to a "monopolistic practice". In fact the OCCP has made a finding of abuse of dominance in relation to high prices for the use of post office boxes installed at postal premises (see below). Nevertheless, it could be concluded that the regulatory framework is not conducive to partial new entry.

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Prices for postal services by Polish Post are determined by the Director General of Polish Post, subject to an as yet unused right by the Council of Ministers to set maximum prices. In the case of international universal services these prices must be established in co-ordination with the responsible Minister. Prices are also in principle subject to the operation of the competition law (but this has not been applied so far in this sector). Prices for the standard letter service are uniform though out Poland, but can be differentiated according to weight and distance for non-standard letters.

Entrants which are providing courier express services and dealing in letter post items in excess of 2000 grams or parcels are required to be licensed.[3] Licenses have been granted to 37 private providers of courier services. The results of this liberalisation for courier services have been positive with a broader range of services, improved quality and better adjustment to market prices in the non-reserved area. Licences specify a geographic area (local, national, cross border) according to that specified by applicant. Licences may not be transferred to a third party. There are no foreign ownership restrictions. Similarly, the markets for delivery of unaddressed printed matter, questionnaires are unregulated. No licence is required for this type of activity and the authorities do not systematically collect data is on activities in this sector.

The Minister of Infrastructure is the Minister responsible for the Postal sector. The Minister plays the role of "founder" (under the Act on State Public Service Enterprises) of Polish Post – this involves supervision of asset management and financial statement audit and approval, within the context of the governance framework established in the State Owned Enterprises Act. The Minister appoints and dismisses the Director General of Polish Post and board members. The Director General is responsible for the day to day management and representation of Polish Post. The Board is appointed for 3 years and has standard governance function.

Under an amendment to the Telecommunications Law from 1 April 2002, the Office of Posts and Telecommunications Regulation (URTiP) is the independent sectoral regulatory authority headed by a President. This incorporates postal regulatory functions into the former Office for Telecommunications Regulation. For the postal sector URTiP is responsible for regulatory functions relating to prices and permits and for monitoring service provision by Polish Post and any incursions on the reserved area by other operators. URTiP advises the Minister on policy, while the Minister retains overall responsibility for policy and determining postal business terms and conditions, including universal service.

The Polish Competition law applies in the post sector – no group or individual exceptions have been made. The OCCP regards the territory of Poland as the relevant geographic market for competition analysis. The OCCP decided in 1998 that the imposition of a very high uniform fee for use of a post office box was an abuse of dominance, with the possibility of discounts in the absence of unambiguous criteria leading to possible discrimination. The OCCP required that prices be set at local level and be cost reflective, since costs of service would vary according to location. Exorbitant prices are considered to be a "monopolistic practice" under Polish law. There have been no actions taken against any collusive agreements in this sector. Another case of monopolistic practice in was found in 1994 when Polish Post awarded discounts on stamps supplied to one of its subsidiaries greater than to other consumers. Two mergers have been occurred – in each case a foreign operator took over a domestic operator. No competition concerns were raised.

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1.3. Postal sector reform

A draft Postal Law was considered by the previous Parliament. It was specific to the postal sector and appears in accordance with the EU postal directive – see Box 2 The Law has the following features:

- Specifies universal service as letters up to 2000 grams, including registered mail and insured mail and postal parcels up to 20 kg, and postal money orders, available over the whole country, continuously with specified quality and moderate prices. Postal prices are to be uniform for the whole country and all consumers and agreed with the postal regulator

- Phased market opening involving a progressive reduction in the reserved area, as set out below.

- Requires accounting separation to identify the costs of each postal service and to base prices on these costs.

- Does not limit the range of possible activities of Polish Post, so long as non-core activities do not limit its basic activities.

- Payment marks are to be deregulated. Postal operators will be obliged to submit marks used by them to a register run by the regulator. Polish post will have the sole right to issue stamps bearing the inscription "Poland" or "Republic of Poland".

The proposed market opening for both domestic and cross border mail which is envisaged under the new draft law current being prepared is as follows[*]:

- Up to 500 grams – from Jan 1 2003.

- Up to 350 grams – from the day of Poland's accession to the European Union.

The liberalisation appears consistent with the present EU Postal directive which permits a reserved area up to 350 grams. Further changes would need to be implemented under the new proposed Postal directive, which will reduce the reserved area to 100 grams from 2003.

The Polish authorities believe that the opening of the market to new postal operators, including to foreign operators with greater capital resources and more advanced technology may be a material threat to Polish Post – although views about the magnitude of this threat differ widely. Under the proposed liberalisation, some 3-5% of Polish Post's current revenue will become contestable. Polish Post is profitable, but to a relatively modest degree. Hence, a decline in Polish Post's revenue may hamper its ability to fulfil its statutory universal service obligation. In fact, loss of market share and revenue has not proved to be a significant problem in any other country that has liberalised to the extent presently planned in Poland. Indeed, to the contrary, liberalisation and corporatisation of postal operators has generally lead to significant improvements in performance. An additional factor exists in Poland that Polish Post will require service quality improvements and broadening of the range of services in the most dynamic elements to maintain its profitability. Such quality improvements and expansion into new business lines should not be beyond the scope of any competently managed organisation. However, if worst comes to

*. Note: Following the finalisation of this study, the Polish Government took a decision to accelerate the market opening to allow for competition in respect of letter post items weighing more than 350 grams from Jan 2003.

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worst, then the State may have to subsidise Polish Post – but if this were the outcome the Government would presumably also contemplate whether the management of Polish Post should continue in its responsibilities.

It is expected that this liberalisation will build on the results of the earlier 1995 liberalisation and result in increased availability of postal services, a broader service range and improved timeliness (hopefully up to the level of the EU requirements). Also it is expected that prices for certain services will decline and increase more slowly, in particular in respect of courier services.

The Polish authorities have not ruled out the possibility of further liberalisation beyond that scheduled in the proposed draft Act. This would require further legislative action, which may prove to be problematic given the resistance and delays that have been experienced with the previous draft Act. The authorities have identified further liberalisation at the EU level as being a fundamental driver of further liberalisation in Poland. In other words, the Polish authorities do not presently foresee going further/faster in postal liberalisation than whatever might be agreed in the EU context, which presumably will be the fastest liberalisation that the Member wishing to liberalising the slowest is prepared to tolerate.

Box 2. **EU postal sector framework**

The Postal Directive 79/67/EC of the European Parliament and Council has the effect of harmonising the maximum permissible scope of the state monopoly in postal services (the so called "reserved area".) It specifies:

- That there will a universal postal service in the long term, involving a minimum harmonised standard of universal service (countrywide, regular guaranteed delivery at prices everyone can afford.) Prices may be uniform nationally. Standards specify access point density, clearance and delivery frequency (at least once per working day/five times a week) and must be independently verified.

- Mandates separation of national regulatory authorities from any postal operator.

- Universal service is defined as collection, transport, sorting and delivery of letters, catalogues and parcels within weight limits – two kilograms for letters and ten kilograms for parcels. Universal service includes registered and insured items and domestic and cross border services.

- To guarantee funding of the universal service, certain services may be reserved. The maximum extent of reservation is specified as domestic correspondence of less than 350 grams/5 times the price of a standard letter. This excludes books, catalogues, newspapers and periodicals and self- provision, "new services" or document exchange, but includes cross border and direct mail.

- Licences for private operators for non-reserved services may be made subject to universal service obligations, either directly or financially by means of contribution to a "compensation fund" for the universal service provider.

- Separate accounts based on a fully distributed cost system must be kept for reserved and non-reserved activities (and accounts for non-reserved activities shall identify whether services are within the universal service definition or not). in order to ensure that cross-subsidies from the reserved sector to the non-reserved sector do not adversely affect competitive conditions in the later. Accounts must be audited and published.

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The Directive implements a very moderate liberalisation of the sector, with the non-reserved area (letters of more than 350 grams weight or at a price five times the standard letter) accounting for only around 3% of receipts of universal service providers. The European Lisbon Council provided a mandate for faster liberalisation of the postal services market as part of Europe's efforts to "develop the most competitive and dynamic knowledge based economy in the world in ten years time". Based on this mandate the European Commission made a proposal in 2000 for a further directive to open up a substantial share of the postal services market to competition by 2003, with a further liberalisation then to be decided up to 2007. Following further discussion among member States and consideration by the European Parliament it was agreed that a new directive would be formalised that provides for letters and direct mail weighing more than 100 grams would be liberalised from 2003 and more than 50 grams from 2006. All international outgoing mail would be liberalised (with the exception of some remaining restrictions in Greece, Ireland, Luxembourg, Portugal and Spain). This liberalisation would open some 50% of USO revenue to potential competition.

EU competition law applies in the sector, both within the reserved sector and in the unreserved area. The Commission has issued a notice[4] that it regards the postal operators within the reserved area to have a dominant position in the national market for the distribution of correspondence and hence the rules relating to abuse of dominance are relevant. Abuse of dominance in this context could include not providing a service within the reserved area or providing a seriously inefficient service and failing to take advantage of technical developments. The competition law applies clearly to any cross subsidisation from reserved to non-reserved activities that could distort competition if this involves predatory pricing. (Cross subsidisation within the reserved area would not be covered – indeed that is essentially the very reason for having the reserved area so as to finance the USO.) As a consequence the Commission has indicated that competitive services offered by the US operator should in principle be priced at least equal to the average costs of provision – including direct costs and an appropriate proportion of common costs.

Restrictions on state aid also apply. If aid to cover losses in the reserved area activities was excessive this could be used to cross subsidise operations in sectors open to competition.

Finally, there should be non-discriminatory access such that intermediaries can choose among access points at prices based on costs and which take into account the actual services provide.

The benefits of liberalisation in other countries

A few countries have completely liberalised their postal sector and other countries retain a relatively small reserved area broadly similar to that proposed for the next stage of EU liberalisation. The liberalising countries have reported quality of service improvements, increases in profitability, increases in employment and real reductions in prices. See OECD (2000)

As of mid-1999 three countries have completely liberalised the postal sector – Finland, Sweden and New Zealand. Of these Sweden and New Zealand have several operators competing in letter delivery. Despite being liberalised for several years, Finland has had no new entrants, possibly as a result of fears relating to the size of universal service charges on new entrants. Australia and the Netherlands have also made significant reductions in the size of the reserved area.

Although fears are often expressed that reform will lead to a loss of employment in this sector, both Australia and the Netherlands report that the level of employment in the postal sector has increased during the reform process, due to a diversification of the range of services offered by the incumbent. In general, the resulting increase in competition can be expected to significantly enhance efficiency, productivity and innovation in the postal sector of OECD countries, contributing to overall competitiveness and economic growth.

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In Australia and New Zealand the incumbent postal operator is profitable and has reduced real prices consistently over a number of years. New Zealand reported competitors offering significantly lower prices than the incumbent. Although neither New Zealand nor Sweden directly compensate the incumbent for non-commercial obligations, neither country reported problems in maintaining service quality. New Zealand reported that the postal incumbent was experimenting with an enhanced level of service quality in some parts of the country.

Market Power of Postal Incumbents

In the postal sector, incumbent operators may, through a variety of actions, such as selective discounting, tying or bundling, act anti-competitively in the competitive sections of the postal market. These practices are equivalent to discounting on the competitive market which may (if the discount is significant enough) amount to anti-competitive cross-subsidisation or predatory pricing. The likelihood of anti-competitive cross-subsidisation is higher in the case of state-owned firms (which may not have strict profit-maximisation objectives or hard budget constraints).

A firm is said to be engaging in anti-competitive cross-subsidisation if it is charging a price for the competitive service which is less than long-run average incremental cost. In some cases the floor under the prices charged by the incumbent may be set higher by the regulatory authorities, depending on the objectives for competition in the sector.

The European Commission recently decided that Deutsche Post had abused its dominant position by granting fidelity rebates and engaging in predatory pricing in the market for business postal services in Germany. It was found that Deutsche Post had been illegally cross subsidising from its profitable letter-mail monopoly to provide parcel services below *incremental* cost and that this had foreclosed competition in the market for mail order parcels. The remedy in this case is a structural one. Deutsche Post has agreed to separate its parcel activities into a separate subsidiary company. Any services provided by Deutsche Post to that company must be at market prices and these services must also be supplied at same price and conditions to any competitors of the new Deutsche Post subsidiary. The concept of incremental cost adopted by the Commission draws a distinction between network capacity and network usage costs. It was decided that the cost incurred to provide network capacity which gives everyone the option to ship parcels was part of Deutsche Posts universal service obligation as carrier of last resort. Consequently, Deutsche Post has to establish a network that has capacity to carry peak load and the costs of such spare capacity are regarded a common fixed costs that need not be recovered in standard unit prices. Cost for the use of the network – the long-term variable or incremental costs – must be recovered in pricing of competitive services. Such costs cannot be justified as necessary to fulfil the USO – indeed pricing below such costs requires subsidisation from the USO area.

Many countries (following the EC postal directive) require accounting separation of the competitive and non-competitive activities of the incumbent's postal business as a mechanism for detecting cross-subsidisation – this is the approach which is to be followed in Poland. Often this accounting separation relies on a form of "fully distributed cost" accounting (again, following the EC postal directive). The fully distributed cost approach does not yield economically meaningful results and will not yield a reliable price floor for detecting anti-competitive cross-subsidisation. In many cases the accounting and information gathering procedures of public postal operators are not sufficiently rigorous.

Given the difficulties in obtaining reliable cost information, anti-competitive cross-subsidisation may only reliably be prevented through structural or regulatory measures such as privatisation (as in the Netherlands), liberalisation (*i.e.*, elimination of the remaining reserved areas) or horizontal or vertical separation. Horizontal separation involves preventing the incumbent postal operator from providing competitive services such as express or parcel services. Several countries require such competitive services to be provided through an arms-length subsidiary – a further example being the forthcoming separation of this activity from Deutsche post as described in the above paragraph. Vertical separation would involve

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separating final delivery from the remaining segments of the postal business. Although the final delivery of mail in remote and rural areas is contracted out in some countries, to date no country has systematically sought to separate the delivery activity from the remainder of the postal business.

How should universal service obligations be handled?

The rational for legislating a monopoly reserved area is to realise a public interest objective, *i.e.* to fund the universal service obligation by means of cross subsidisation within the reserved areas from profitable services (*e.g.* mail within cities) to non-profitable services (*e.g.* rural area mail). A good policy principle, therefore, is to limit the monopoly to that which is necessary to realise the funding of the public service, but no more. This is indeed the principle that underlies the regulation of postal activities in the EU framework. However, as a practical matter where it is necessary to negotiate agreed maximum reserved areas, it is likely that the agreement will exceed what is believed or demonstrably shown to be necessary in some countries.

Most OECD countries – including Poland – impose requirements on the incumbent postal operator to provide certain services at a certain level of quality, at a price that would not normally be economically justifiable. Examples include requirements to provide a given frequency of deliveries or collections and to limit the maximum distance to the nearest post office outside of urban areas or geographically average prices.

At least some of these obligations are likely to be genuinely non-commercial. In most countries the costs of these obligations are financed through internal cross-subsidisation. Such cross-subsidies are likely to be threatened by competition and to distort the nature of that competition. The fear is that where there are cross-subsidies new entrants into the postal sector are likely to focus on the profitable low-cost markets, even when it is more efficient for these markets to be serviced by the incumbent. If the entrants are successful they will take business away from the incumbent in the profitable markets, leaving the incumbent in the unsustainable position of servicing only the unprofitable markets.

Where cross-subsidies may be threatened by competition there are at least two possible solutions. The first is to tolerate geographic differences in pricing. Allowing, for example, a lower price for deliveries in city centres. Spain has long practised a two-tier pricing system, with lower prices for intra-city mail than for mail to other places. In New Zealand, rural mail customers have, in the past, had to pay an extra fee for mail deliveries to the farm gate. The second possible solution is to fund the cross-subsidies through a mechanism that is neutral to competition. Several countries have or are considering setting up mechanisms for raising the funds for universal service through charges on all postal operators. Where such funds are put in place the subsidies should be made contestable so as to ensure that they are provided efficiently, to minimise the size of the subsidy and to ensure that the incumbent does not receive compensation in excess of the minimum required.

It is often difficult to determine, in advance of liberalisation, which of the imposed requirements are truly non-commercial. For example, private carriers often adopt a geographically averaged pricing structure. Based on the experience of those countries which have liberalised the most, it appears reasonable to conclude that the fear of loss of markets and an inability to cross subsidies USOs under liberalisation is much greater that the actuality. In the case of New Zealand, under the threat of competition, the incumbent operator is providing services in excess of the regulated minimum. In Sweden, the position was taken that the provision of a ubiquitous service was a competitive advantage for the incumbent operator, rather than a burden. In studies prepared for the European Commission, as part of the process of consideration of further reform to the Postal directive, it was estimated that USO costs varied within a range of EU countries from 0-14% (average 5%) of revenues. It was also noted that most post operators successfully absorb these costs and generate profits.

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1.4. Conclusions and recommendations

A first step necessary for liberalisation of the postal sector in Poland is to proceed with the passage of the new Postal Law, which has been significantly delayed. It is interesting to note that in the recent EU discussions concerning further possible EU wide liberalisation in the postal sector, broadly speaking those countries which have most liberalised their markets were most in favour of further liberalisation while those which have liberalised the least were most resistive of further liberalisation. Perhaps this reflects the generally positive effects from liberalisation compared with earlier fears of its consequences, particularly in terms of the greater commercial orientation and improved financial performance of postal incumbents in more liberalised markets. In particular, employment levels by incumbents in liberalised markets have in general not declined significantly and indeed have often increased. The sooner that Poland joins this virtuous circle of liberalisation and improved performance the better.

One of the features evident in other liberalising countries has been the clear benefits of greater use of network synergies that are possible with extensive branch networks which are expensive to establish but which Polish Post already has in place. There are likely to be extensive opportunities to increase the range of services provided at post offices including financial and logistic services. Polish Post has prepared a program/strategy for the further development and restructuring of the organisation.

Against this background the following recommendations are made:

- Ensure passage of the new Postal Law at the earliest available opportunity, but without compromising on the degree of liberalisation, which is the minimum consistent with the EU framework.

- Ensure that new accounting structures of Polish Post are robust and that the cost of the universal service obligation is appropriately calculated and that costs of non-reserved area activities can be reasonably measured.

- Following liberalisation, respond if necessary to ensure that universal service obligations can be delivered, including if necessary through direct funding mechanisms. (It is not, however, expected that this will be necessary.)

- If it does prove necessary to directly fund the universal service obligation contemplate the possibility of using tender processes to minimise the cost.

- Ensure that the OCCP remains vigilant to possible monopolistic practices by Polish Post in the area of activity which becomes unreserved which might otherwise stymie the emergence of competition. If accounting separation proves to be an inadequate basis for this surveillance of it monopolistic practices are detected, then consideration should be given to a structural solution along the lines of the remedy in the Deutsche Post case.

- Continue with the process of corporatisation of Polish Post and further explore the opportunities to expand in areas where network synergies might be realised.

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2. ENERGY SECTOR

2.1. Sector overview

Poland is approximately 90% energy self sufficient, but the degree of self-sufficiency varies widely for particular classes of fuel. Poland is a substantial exporter of hard coal, but it imports most gas (~65% in 1998) and almost all oil needs (~98%). Poland is a relatively energy intensive economy – this reflects a harsh winter climate which requires substantial fuel use for domestic heating, a relatively low energy efficiency by end-users and also an industrial structure which remains orientated to heavy industry as a historical legacy of the central planning period. The degree of energy intensity has fallen by around 40% since 1990 but it remains well above western European countries.

The core principles of Polish energy policy are framed around the EU principles of energy security, economic competitiveness and environmental objectives. Energy policy is explicitly directed to the objective of EU accession, with activities focused on full adjustment to the principles of the internal energy market.

The degree of energy intensiveness of the Polish economy places a premium on the need to achieve a competitive energy sector for the benefit of overall health of the general economy. A number of important future policy choices will have major implications for the competitiveness of the energy sector, particularly in the context of adopting the energy policy framework and market openness to EU norms in the process of EU accession.

Subject to security and environmental objectives, the Polish authorities should aim to achieve the most competitive sector that is feasible so as to make the best contribution to dynamic growth potential over the medium to longer terms. Short term policy temptations in privatisation decisions – *i.e.* trading off less competition for more privatisation revenues – will need to continue to be avoided as the privatisation program in this sector reaches it zenith over the next several years. The Polish authorities are to be congratulated for mostly avoiding this trap in this sector so far.

Government energy policy is based around energy use scenarios elaborated to 2005 under which final demand for energy will not increase over this timeframe. If recent trends in energy use efficiency are extended final demand would be significantly lower. Coal is expected to remain the principal fuel source but its relative importance declines and over the loner term, gas and electricity would become the major areas of growth. Consequently, the major shifts in fuel orientation that have been experienced in the past decade (see chart 5.2) are expected to continue. In addition, the role of energy policy is also changing substantially from an arm of social policy (where prices were substantially subsidised) to one where energy prices are more market determined. Accordingly, irrespective of the outlook there will be a number of common challenges, while the degree of those challenges may vary. These challenges – which form the focus of this chapter – are:

- The need in all areas to adjust the relevant law to EU norms in the process of EU accession.

- Restructuring of the hard coal sector, dealing with the social consequences and eventual transition to privatisation and a competitive market in coal supply.

- Structural reform and the implementation of competition in the electricity sector, particularly dealing with the lock-in effects of some of the structural features of the pre-liberalisation "single buyer" role of the dominant government transmission company.

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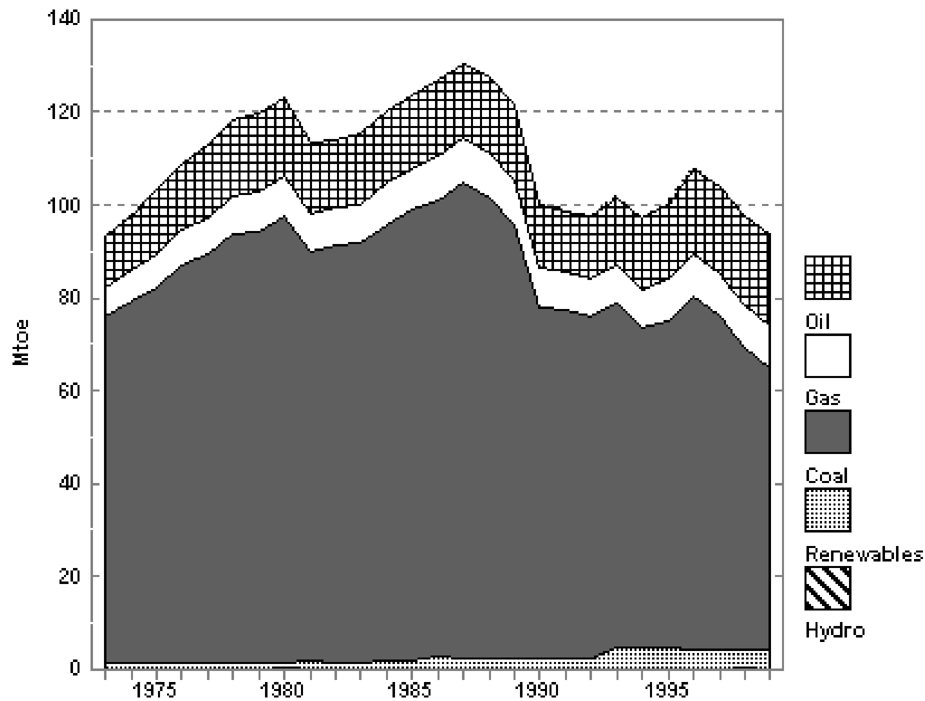
– Restructuring and privatisation of Polish Oil and Gas Company (PGNIG SA) from a monopoly to potentially competitive structures and the diversification of supply (with both security and competition consequences).

– Dealing with the inevitably high level of concentration and consequential market power in the oil refining and retailing sector.

Figure 2. **TPES: share of coal, oil and gas**

Total primary energy supply, 1973-1999



Source: *Energy Balances of OECD Countries*, IEA/OECD Paris, 2000.

Total Primary Energy Supply, 1999.

Total = 93.38 Mtoe.

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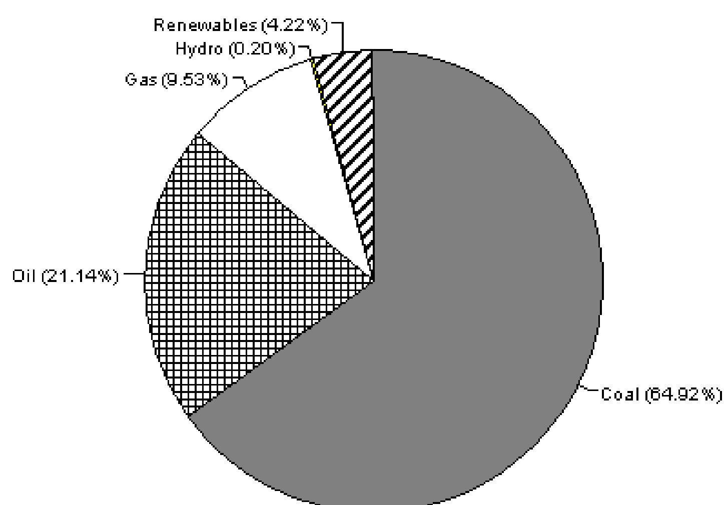

Source: *Energy Balances of OECD Countries*, IEA/OECD Paris, 2000.

Government policy is appropriately focussed on addressing these challenges. Indeed, in some respects the liberalisation of the Polish market which has already been implemented goes beyond the minimum requirements of the EU energy Directives. For example the *de jure* liberalisation of the electricity market, which provides for full market opening and a privatisation program that should result in a market structure that is conducive to competition goes well beyond EU minimums. This is to be welcomed. A number of challenges remain, however, not the least of which is to see market arrangements mature de facto so that actual competition takes hold in the electricity sector. This will require the resolution of a number of structural issues that presently act to effectively lock-in the old "single buyer" arrangements in the electricity sector to a substantial degree.

In the gas sector, reform is less well advanced with substantial steps still to be taken to restructure, privatise and implement market liberalisation.

The Government has plans to address most of these issues in both the gas and electricity sectors – an important challenge in this respect is effective implementation.

The oil processing industry could well present policy makers with ongoing challenges to prevent or address issues which are likely to arise because of a lack of competition at the refining stage – this is because of an inherently concentrated refining level where two players control effectively all of the economic refining capacity. Competition problems at the refining stage have the potential to increasingly play into the retail segment. The OCCP will need to continue to be active in this sector.

The hard coal sector has already been substantially restructured. The Government can count this as a major success but the challenges for this sector are not yet over. Output and employment have fallen from unsustainable levels and the sector is now in broad operating balance at present coal prices. Yet, there is a large debt overhang and the sector remains vulnerable to price falls that could see large losses materialise again. If that were to occur it would raise questions of whether the end point of the Government's present restructuring plan is sustainable or not. It will only be when the sector is substantially privatised that difficult policy trade-offs and large financial risks for the Government will be resolved.

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3. OIL SECTOR

3.1. Introduction

The oil sector accounts for around 20% of total primary energy supply.

In the central planning period this sector was made up of state enterprises which specialised in particular sectors, differentiated according to functional "engineering" concepts – import, refining, pipeline transport and a single entity covering road, rail transport and wholesale and retail distribution. Since 1990 the oil sector has undergone a fundamental process of transformation to establish a market based system – prices have been liberalised since 1997, restrictions on imports have been removed, state enterprises have been restructured, corporatised and either completely or partially privatised. Taxation has been made substantially equivalent to that applying in the EU – VAT applies at 22%. Excise rates are somewhat below the range applying in the EU**,** resulting in relatively low final product prices. However, it could be noted that final product prices are considerably higher measured in purchasing power parity terms, *i.e.* given relatively low wages in Poland oil products are not cheap for Polish employees. Import duties were abolished from September 2000 and import quotas were abolished from January 1997.

Consequently, the structure and overall regulatory framework now applying in the sector is similar to that in other market based economies.

Domestic oil production is small, with crude and refined product imports accounting for around 98% of oil energy usage. Moreover, demand is quite sensitive to economic conditions, implying the likelihood of ongoing increases in imports over the medium term as Poland converges with the rest of Europe.

The reform program has resulted in a substantial withdrawal of government from direct involvement in the sector. However, privatisation is not yet complete and, irrespective of the course of future privatisation decisions, the refining sector will be highly concentrated. Moreover, there are relatively strong vertical linkages between the dominant refiner and the distribution system, meaning that competition issues are likely to arise on an ongoing basis and require attention from the OCCP.

3.2. Structure

The Polish Oil Company (Nafta Polska SA) is 100% owned by State Treasury and has the basic task of realising the privatisation of the oil sector after which it will be wound up. Nafta Polska was created in 1996 by the amalgamation of most of the governments' interests in refining and distribution in the oil sector. Its objectives are set out in the "The Restructuring and Privatisation Program of the Oil Sector" which has been successively modified 4 times since 1995 reflecting developments in the privatisation program – in effect the program has been slower than initially envisaged.

The Ministry of the Economy has overall regulatory responsibility for the sector, while ownership functions in respect of remaining state owned assets falls to the Ministry of Treasury. Nafta Polska also performs some policy functions in the oil sector – monitoring oil market developments, preparation of oil related legislation concerned with the accession to the EU and participation in the creation of governmental strategy for the oil sector. After Nafta Polska is wound up these functions will pass fully to the Ministry of the Economy.

Oil Production: Polish Oil and Gas Company (PGNIG) extracts oil in the SE and NW parts of Poland and Petrobaltic has installations on the Baltic Sea shelf. Oil production in Poland is small scale and is not considered further in this report.

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Refining: There are two major (world scale) refineries: one at Plock with 75% of domestic capacity (17.8 mta capacity) and the other at Gdansk with 20% of domestic capacity (4.5 mta) and five other smaller refineries with a combined 5% of domestic capacity (1.5 mta). Domestic refineries supply around 82% (1998) of domestic demand for liquid fuels.

The Polish Oil Concern Orlen (PKN Orlen S.A.) owns the Plock refinery and two other smaller refineries (Trzebinia and Jedlicze). PKN Orlen was created in 1998 with the combination of the retail distribution business of CPN (Centrala Produktow Naftowych), which was the largest group of retail outlets, with the Plock refinery as part of a privatisation exercise by Nafta Polska. This created a vertically integrated dominant firm. PKN Orlen is a listed company, with disperse public ownership accounting for 71.56% of the shares, with 28.44% remaining in government ownership under the Treasury. Preparations are being made for the sale of 17.86% of the shares PKN Orlen held by the Treasury to strategic investors – while the remaining ~10% interest will remain in state ownership.

Nafta Polska currently owns the Gdansk refinery. After an aborted privatisation attempt in 1998, which was discontinued because of unacceptably low bids, Gdansk is again in the process of privatisation with negotiations being conducted with the British consortium consisting of Roth Energy Ltd and the Russian company Lukoil. The three other small refineries (Czechowice, Jaslo and Glimar) are planned to be privatised.

Plock and Gdansk are apparently able to produce refined product to EU quality standards, but presently do not as the Polish standards remain slightly below those of the EU. The smaller refineries are presently not able to meet EU quality standards. Imports of refined product are also often substandard.

Transport and Storage: Crude oil pipelines are operated and owned by Enterprise for Oil Pipelines Exploitation (Przedaiebiorstwo Eksploatacji Rurociagow Naftowych-PERN) which is owned by the State Treasury. This facility will remain in government ownership as it is regarded as a strategic asset. The Railway Tankers Exploitation Enterprise (Dyrekcja Eksploatacji Cystern Sp. Z o.o.-DEC) deals with rail transport of oil and oil products – it is foreign owned following a 100% sale in 2000 to GATX Rail Overseas Holding Corporation (a major US oil logistics company). Oil Bases Ltd (Naftobazy Sp z o.o.) owns oil storage facilities is owned by Nafta Polska and is scheduled for privatisation. (The railway transport and oil storage enterprises were separated from CPN that was responsible for much of the oil sector down stream from the refining sector.) However, PKN also holds significant storage capacities as well as refined product pipelines. Import facilities Northern Port and Naftoport are privately owned and independent from the domestic producers.

The following diagram indicates the current ownership structure of the refining and logistics sectors.

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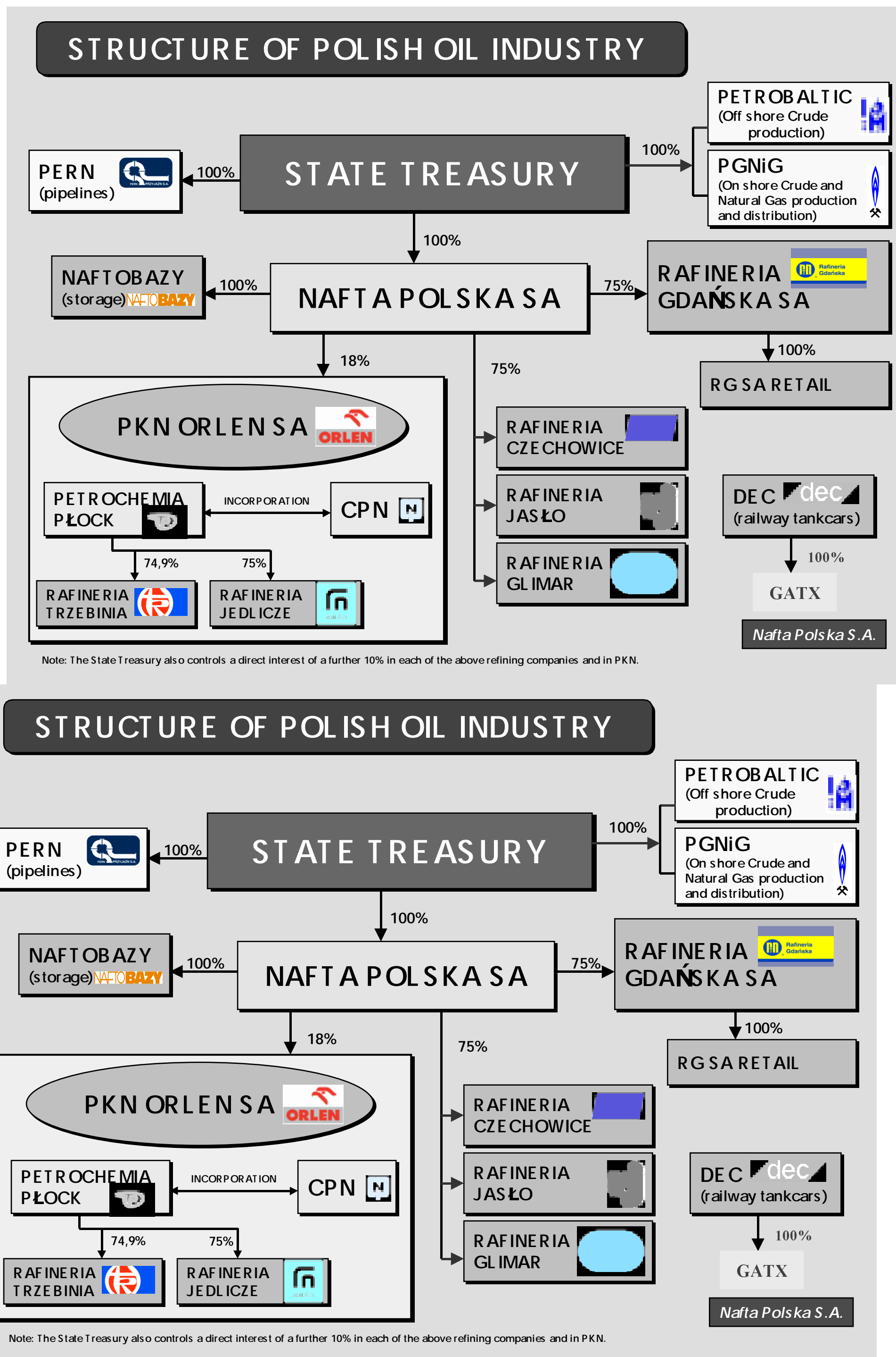
Figure 3. **Ownership structure of the Polish oils sector**



Source: Nafta Polska (as of mid 2001).

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Retail distribution: As of 2000 there were around 6 500 service stations in Poland – this reflects a substantial development of the sector since the commencement of liberalisation when there where only around 1 300 stations.

Owner/Franchise	Percentage of Stations	Approx. Market Share
Independents	56%	~35%
PKN Orlen	31%	~40%
Foreign Cos.	9%	~20%
Gdansk Refinery	4%	~5%

“Independents” in the above table are not branded or franchise operators. Foreign operators include: BP, Shell, Statoil, Preem, Aral, Jet, Esso, Dexpol, DEA.

3.3. Competition and Regulation Issues

Fuel prices were liberalised in Poland in February 1997. As a result domestic refineries have been pricing wholesale supplies according to import parity. The Council of Ministers and the Minister for Finance still have the power to regulate maximum prices or require notification of price increases so as “to counteract unfavourable social and economic phenomena”, but these powers now have a “reserve” status, having not been used since 1997.

The Energy Regulatory Authority does not have a substantive regulatory role in this sector other than licensing on production storage transmission and distribution and trading in liquid fuels.

The sector is subject to the anti-monopoly law enforced by OCCP to counteract monopolistic practices. An important presumption in the law is that dominance in a market is established above a threshold of 40% market share. PKN Orlen meets this criteria with 75% of refining capacity and around 40% of retail sales. It is not necessary for our purposes here to consider the precise definition of the "market" in question. For this reason the OCCP has recommended privatisation of the Gdansk refinery not be to PKN Orlen.

The high degree of concentration in the refining sector raises a number of competition concerns. Given the infrastructure base in Poland it is inevitable that there will be a high degree of concentration in this sector because there are only two substantial scale refineries (Plock and Gdansk) – the other refineries are substantially sub-minimum efficient scale plants and also have a number of technical/quality limitations.

It was unfortunate that the Government allowed the consolidation of the CPN network of retail/distribution outlets with the Plock refinery to create the PKN structure. This has substantially increased the degree of vertical integration in the sector and potentially allows (now) PKN Orlen to play its market power in the refinery market into the downstream distribution market. In fact, the company is able to gain both wholesale and retail margins and influence the wholesale prices of fuel sold to independent retailers. The need for ongoing close scrutiny of the sector by OCCP is consequently emphasised.

The full or partial privatisation of the 75% interest in the Gdansk refinery that is owned by Nafta Polska will be a *major* decision for the structure of the domestic refining industry. It is a wise approach *not* to sell Gdansk to PKN Orlen, as otherwise PKN Orlen would control effectively all of the economic refining capacity. Nevertheless, the sale has not been finalised and there is a strong lobby for PKN Orlen to buy the Gdansk refinery. Even with the most competitive possible outcome from this prospective privatisation a number of competition issues will remain:

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– Possible collusion/co-operation between the purchaser of Gdansk and PKN Orlen since the market will be highly concentrated and markets dealing with commodity type goods with high fixed production costs are more than usually prone to collusive practices. In considering this possibility, a relevant prior issue is the definition of the market(s) in question and the potential for imported refined products to discipline actions of the domestic refiners. The OCCP will have to be particularly vigilant for any cartel activity of a "hard core" type such as price fixing, including in regional markets at the retail level where the combined presence of Gdansk and PKN Orlen as wholesale suppliers and retail distributors could reinforce a situation of joint dominance.

It is beyond the scope of this paper to reach a conclusion as to the appropriate market definition in the above cases. Nevertheless it does underline the importance of have a liberal import regime. The more liberal this regime is the more likely it is that the relevant market at the refinery or wholesale level could be considered to be broader than Poland. This is because a liberal import (and export) regime that does not impose barriers to the importation of refined product would allow domestic independent retailers to respond to any price stimulus of domestic prices rising above international prices by increasing imports. It is by no means clear however that this would be sufficient to result in a market definition that is broader than Poland. Other relevant considerations in this respect are the capacity of import infrastructure and whether Polish independent retailers are, as a practical matter, of sufficient financial strength to make significant use of imports to discipline domestic prices.

De jure, the import regime is already liberal, with import quotas abolished as from January 1997 and import duties reduced to zero as of September 2000. This open market policy should be sustained. It has, however, been suggested that anti-dumping action against Russian imports was for protection of the domestic market. An import licensing and quota regime – over and above domestic trading licences – is still intact as part of the general legal framework applying to foreign trade but has been inoperative in so far as oil products are concerned since January 1997. The Minister for the Economy should avoid reimplementing this regime for protective purposes. If, for example, problems with low quality fuel imports becomes more serious, then an appropriate response would be to tighten the regulation of the quality of fuel imports but in such a way that it did not restrict the flow of imported fuel that meets quality standards.

There is also a question of the degree of actual integration of the refined fuels market into the broader European market. Before tax prices in Poland are comparable with those in geographically close countries – see Figure 4. However, there may be some seasonal variation in the margin between tax exclusive prices in Poland and in the rest of the EU, where it is claimed that a margin appears to open up with relatively higher fuel prices in Poland in winter. This is not evident in quarterly data but may be evident over shorter time periods. If this variation does occur it is presumably because demand for fuel rises in winter in Poland as elsewhere, but if the markets were fully integrated then international arbitrage/trade would be expected to eliminate any price differentials that were not due to some limitation on trade. One possible explanation for a seasonal variation in price differentials is that the price of transport rises on a seasonal basis, perhaps reflecting capacity constraints in that sector. The OCCP should, therefore, monitor for any evidence of monopolistic practices in the transport and storage sector.

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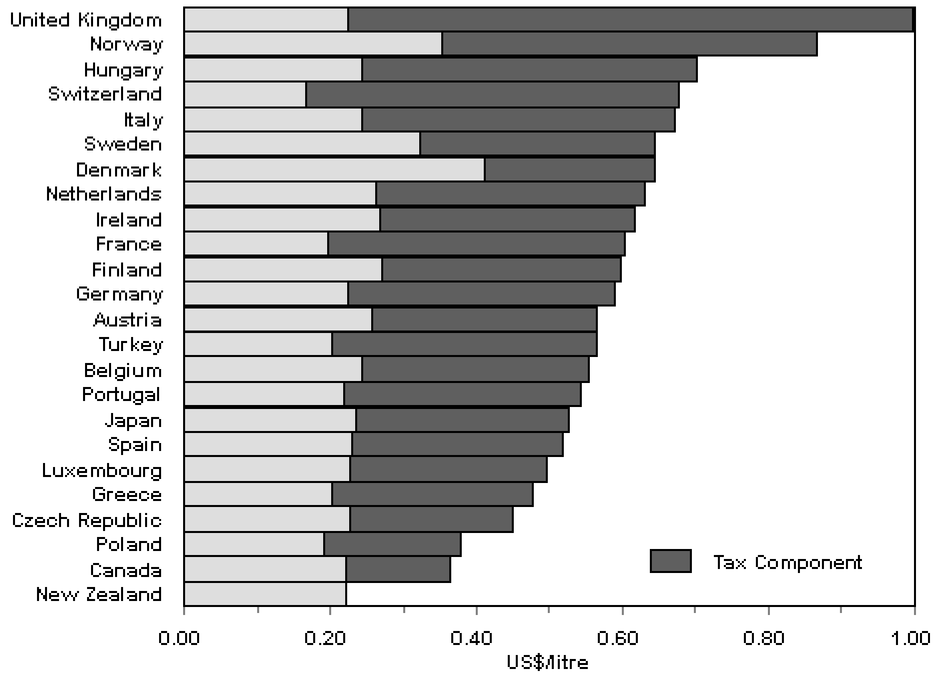
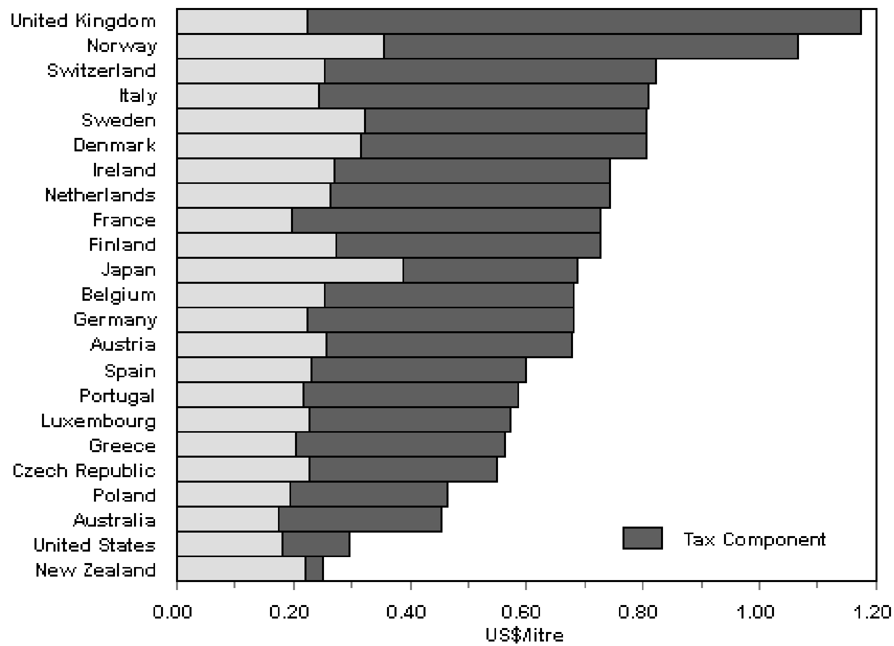
Figure 4. **Comparison of diesel prices**

Automotive diesel oil prices for commercial use, 1999



Note: Data not available for Australia and the United States.
Source: *Energy Prices and Taxes*, IEA/OECD Paris, 2000.

Automotive diesel oil prices for non-commercial use, 1999



Note: Data not available for Canada, Hungary and Turkey.
Source: *Energy Prices and Taxes*, IEA/OECD Paris, 2000.

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The authorities should also pay careful attention to the possibility of barriers "behind the border" due to anti-competitive practices by domestic incumbents. This could be a problem given the degree of vertical integration from major refiners and distribution infrastructure. The fact that major logistic infrastructure (storage, rail and crude and product pipeline transport and reloading ports) are independent of major domestic producers gives some grounds for comfort. Consequently, the OCCP should monitor closely for attempts by PKN Orlen or Gdansk to impose exclusive supply contracts outside of their own distribution channels. Similarly, it will be important in any further privatisation or on market sales of logistic infrastructure that these are kept separate from the majors – this follows from the view that structural conditions which are conducive to competition are more likely to lead to competitive outcomes than regulatory or *ex-post* competition law enforcement.

There is also a strong ongoing role for the OCCP to play in monitoring and responding to instances of vertical exercise of market power within the franchise sector of the branded distribution networks of PKN Orlen and Gdansk. The longer term contractual nature of franchisee arrangements offers the scope for PKN Orlen and Gdansk to extract goodwill values from franchisees – this is not so much a competition issue as a small business protection issue. This is an area that is commonly problematic in many countries – particularly in the case of commercial tensions between refiners and retailers on renewal or cessation of a franchise contract. According to the OCCP, this problem has not yet substantively emerged in Poland – with industry based representation forums apparently able to resolve issues. It might be expected however, that as the competitive structure of the industry matures and as more franchises reach the end of their terms that this problem would emerge to a greater degree in Poland. This is everywhere a difficult issue to resolve since the transaction has a business to business character, but there is nevertheless a substantial imbalance in bargaining power. Attempts to sift that balance of bargaining power so as to reach a “fair” outcome without ongoing regulatory intervention is a very difficult balancing task. Taken too far, it is likely that such regulatory intervention will hurt the very people it is designed to protect, as refining companies would, overtime, restructure their operations to avoid franchise relationships. On the other hand, if not taken far enough it would be ineffective in achieving its aims.

A related possible problem is the potential for monopolistic practices by the refiners in supply contracts with non-branded distributors/retailers. PKN already has a significant presence in the retail sector and, as a wholesale supplier to a further significant part of the retail sector, there is the potential for it to extend its market power into and reduce the degree of competition in the retail sector. Examples of this might include wholesale supply contracts that include “exclusivity clauses” or harsh termination terms. As examples of vertical ties, arrangements such as these can not be judged as inherently anti-competitive. The competition effect has to be assessed taking account of the degree of market power of the parties involved and the degree of the tie. If, for example, the terms of such exclusive contracts were relatively short and there were relatively few barriers to entry into retailing and readily available alternative sources of wholesale supply, such exclusive ties may not be problematic. On the other hand, if the tie was of a longer-term nature and alternative wholesale supplies were not readily available then competition concerns might arise. Given the degree of concentration in refining the OCCP will have to keep this issue under close attention in addition to the need to monitor the effect of dominance in PKN’s direct retailing activities. Box 3 explains a comparable situation in Spain and the remedies adopted in that country.

OCCP has already taken several actions, including two court actions, against Orlen for monopolistic practices. Court appeals in these two actions are pending.

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Box 3. **The Spanish oil market: structure, regulation and competition**

Spain has a similar population as Poland but holds a bigger refining capacity (63 MTA) for a consumption of oil products in the range of 60 MTA. The monopoly structure (CAMPSA) created in 1920's was restructured late from the 1970's to comply with EU accession conditions. Currently the three existing refining companies (Repsol, Cepsa/Elf and BP) which supply 86% gasoline and 77% diesel. The oil products transmission company (CLH) delivers 90% (by pipeline) of the products and most of the storage capacities is owned by the main oil companies. The retail market is dominated (over 70%) by the refining companies (Repsol 44%, Cepsa/Elf 21% and BP: 7%) and other networks hold the remaining share (Shell 13%, TotalFina 8%) mainly based on imports (25% of consumption).

The dominant position of the old market players as well as their control of CLH in transmission and storage have been detrimental to competition and new entrants.

The regulation is ensured by the energy regulator (National Energy Commission-CNE). The regulatory regime for using CLH facilities is negotiated access and thus still provides incentives to discriminate against new entrants. It is proposed to foster access to information within the negotiated access and to open the shareholding of CLH and to limit the shareholding of CLH at a maximum 25% per company.

On the retail market, CNE has taken the following measures to address competition issues in the market:

- Exclusive contracts with retailers can only last 5 years maximum and from 2000 such contracts can not be signed anymore.

- New filling stations can not be opened for a period of 5 years for companies holding a market share over 30% and 3 years for a market share over 15%.

- A minimum number of filling stations has to be operated by geographical zone.

3.4. Conclusions and recommendations

The major structural factors bearing on the oil sector are a high degree of concentration in the refining sector, the openness of the import regime for refined product and the degree of vertical integration between refining and retail distributions. Given the underlying infrastructure, the refining sector will inevitably be highly concentrated and the remaining issue in respect of privatisation in this sector is whether one or two firms will control substantially all of the economic refining capacity. On the basis of present privatisation plans there will be two firms. Also the import regime is very liberal but there is an issue of physical capacity constraints as well as quality issues with imported fuels. Finally, the degree of market power in refining and vertical integration to the retail sector means that competition problems can emerge at the retail level.

Against that background the following recommendations are made:

- **Privatisation**: The privatisation of the sector should be completed as soon as possible and particular attention should be paid to the structural competition consequences as follows:

  - **Privatisation of Gdansk**: Gdansk refinery should not be privatised to PKN Orlen or to a company linked financially or by agreement with PKN Orlen.

  - **Privatisation of other companies**: Logistics infrastructure that is privatised should not be privatised to either PKN Orlen or the purchaser of Gdansk.

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- **Access to Logistics Infrastructure**: If the logistics infrastructure is privatised to either PKN Orlen or the purchaser of Gdansk, then the authorities will have to consider implementing some regulatory solution to ensure that these facilities remain available for all operators, for the use of independent imports and domestic supply of refined products.

- **Product Supply**: The import regime should remain liberal as an important way of ensuring competitive wholesale supply, given the degree of concentration in refining. Quotas or special licensing should not be reintroduced for protective purposes. If the problem of low quality refined product imports becomes sufficiently serious then quality controls may have to be tightened but this should be not be done by blanket restrictions on imports. Rather measures where are directed specifically at quality issues would be preferred as these would not have unwarranted anticompetitive effects.

- **Vertical links between refining and retailing**: The OCCP will have to remain vigilant in this sector to address competition issues that are likely to arise given the degree of concentration in refining and vertical integration with the retail sector. Over time the OCCP may have to devote additional involvement to issues that arise due to vertical integration in the sector, including small business protection matters. If competition issues from vertical arrangements or concentration at the retail level become problematic structural remedies may need to be considered. These could include:

  - Specific controls on the exclusivity and/or duration of supply contracts between the refiners and non-branded retailers.

  - Dominant operators in the retail market may have to be banned from extending their networks for a period of time sufficient for other competitors to develop their networks. In the case of excessive domination in certain geographical areas, the situation should be adjusted by appropriate means (sales, supply contract).

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4. COAL SECTOR

4.1. Introduction

Around 65% of Poland's Total Primary Energy Supply is sourced from hard and brown coal. Lignite accounts for around 15% of TPES and is used almost exclusively in electricity with mines dedicated to particular power stations. Hard coal accounts for around 50% of TPES – its main uses are in electricity (55%), heat production (8%) and in industry (15%) and coke production (14%). There still remains some household use (8%). In total, Poland is the third largest coal consuming country within the OECD. The focus of this chapter is on the hard coal sector.

The Polish hard coal sector is relatively large in the EU context – its output is larger than the whole of the EU. However, there is a significant downtrend in domestic production and demand for hard coal as a result of restructuring of the economy so that heavy industry is relatively less important and a shift away from coal towards gas as a primary energy source. Poland remains the largest coal exporter in Europe, but in tonnage terms exports declined significantly over the period 1995 to 2000 (from 32 million tonnes to 23 million tonnes) and are expected to decline towards zero in around 2020. Consequently, the industry is undergoing a massive restructuring in the face of high excess capacity, high costs, large debts and significant over manning as a historical legacy of the central planning period. The sector is almost all government owned, but privatisation plans have been developed, initially based upon the grouping of the mines into 3 or 4 companies (2 or 3 energy coal and one coking coal company).

The government reform program for the sector has been successfully implemented to date – it has more than achieved its planned objectives for capacity reduction and labour shedding and has returned the industry to broad operating balance in 2000. Importantly, there has been very little social disruption associated with the restructuring, with most redundancies being voluntary and broad acceptance from the union movement.

A number of important challenges remain, including to complete the restructuring program over the period to 2002, to privatise restructured mines and mining companies once they have become profitable and to fully integrate the Polish industry into the international market.

4.2. Structure

At the end of the central planning period, the hard coal sector comprised 70 mines with a capacity of 180 million tonnes per annum and employed around 430,000 people (equivalent to more than 2 ½% of total employment or 1 in 40 of all workers). Over the next several years, demand collapsed to around 100 mta and world prices coal prices were unfavourable. Management and ownership structures that operated under central planning proved incapable of adjusting to a market orientation, resulting in sever financial problems for the whole sector by 1992, despite some initial restructuring.

Further restructuring at that stage grouped mines into a number of joint stock coal "holding" companies which took over responsibility for strategic planning, financial management, accounting, investment, and coal sales from the individual mines in their group. Further restructuring grouped mines in the process of liquidation into separate companies so that operational companies/mines could focus on ongoing business activities. The process of restructuring was brought to a culmination in the government program first accepted in 1998: "Hard Coal Mining Reform in Poland in the Period 1998-2002" directed at financial restructuring, the closure of unprofitable mines, employment restructuring (with a social package to mitigate unemployment problems), new industrial development in coal field areas, improving coal industry management, privatisation of profitable mines and improved environmental outcomes. Under this

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program, supported by the World Bank, there are, presently, 41 productive mines and 25 mines in the process of full liquidation. A further consolidation of the present seven holding companies into three regional consortiums has been temporarily postponed due to lack of acceptance from the trade unions.

Financial Restructuring under the program involved a first intermediate target that each mine will yield a financial surplus by end of 2000. Surpluses are to be used to pay arrears to national insurance fund and supplier liabilities. This plan was revised in 1999 to delay the target dates by one year – hence, no losses by all coal companies by end of 2001 and profits by 2002 to repay liabilities. Employment restructuring is designed to increased unemployment, which is the greatest hindrance to restructuring. A Mining Social Package includes early retirement benefits, lump sum redundancy payments, re-qualification training and professional advice. Early retirement within 5 years of normal retirement age gives access to a retirement pension at 75% of monthly wage. Lump sum benefits are equivalent to two year's wages.

The program was amended in 1999 when as result of a shortfall of demand and lower prices than expected the financial performance of the industry had deteriorated further. Since that time however there has been steady improvement with and increase in price and fall in costs, such that the sector achieved a small financial surplus in 2000. There remains, however, widely varying results for individual mines with approximately half of the operational mines achieving positive results.

The following table sets out the broad results of the present restructuring program which can be regarded as a substantive success – employment has been reduced from unsustainable levels and for the most part without significant social unrest, output has fallen towards demand levels, average production costs have fallen and productivity has significantly improved. However, one area which has not been especially successful is the creation of new employment opportunities. Since 1993, 13 new economic units have been formed to mop up unemployment in coal field areas but these have created only around 900 jobs Also relatively few miners are taking the retaining option in the social package – most are electing to take early retirement or lump sum redundancy.

Table 1. **Hard coal sector: restructuring performance**

	1990	**1998**	**2000**
Employment	391 000	208 000	155 000
Output	147 MT	116 MT	102 MT
Productivity (t/man-year)	390	504	627 (e)*
Exports	28 MT	28 MT	23 MT
Domestic Demand	120 MT	90 MT	80 MT
Prices (Avg per tonne)		121 PLN	132 PLN
Costs Avg per tonne)		144 PLN	130 PLN
Losses		4 248 million PLN	1 737 million PLN
Liabilities		16 500 million PLN	22 100 million PLN
Restructuring Expenditure		1 008 million PLN	1 650 million PLN

*. Germany: 590, UK: 3 200, USA: 11 900, South Africa: 3 900.

The fall in employment was in fact higher than expected. Between 1998-2000 some 88,300 miners left the sector – this is 16,300 more than planned. Of these, some 61,000 have been voluntary separations with financial support provided by the Social Mining Package, so that there have been no mass layoffs in the sector. A further 27,000 redundancies are planned to the end of 2002 – this will reduce total employment to around 1/3 of its 1991 level. Coal capacity was reduced by closing high cost mines, either fully of partly, by a total of 26.2MT up till the end of 2000. A further 10MT of capacity is due for closure by the end of 2002.

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Since the sector is almost entirely state owned it is the government budget that ultimately bears the cost of this restructuring. The cost of the restructuring program over period 1998-2002 was estimated at the start of the program to be 7.2 billion PLN, with 1.5 billion PLN dedicated to mine closure expenses and the rest for mitigation of social effects (of which redundancy costs are the main element) and for environmental protection. Dealing with the debt overhand of the sector through financial restructuring is a further element of the program. Once the sector has returned to profitability, the profits will be dedicated to repayment of arrears. However, it will still be necessary to forgive and restructure substantial debt, much of which is due to unpaid social insurance contributions accrued before the commencement of the present reform program. Some 11 billion PLN in debt will need to be restructured of which around 9 billion PLN will be written off and 2 billion PLN deferred. Up till the end of 2000, 375 million PLN had been written off and 1.7 billion PLN deferred – consequently a substantial effort is still required to resolve this issue. Of the debts to be written off around 10% are owning directly to the budget in the form of back taxes, 50% are due to non-payment of various social insurance contributions and 40% due to local authorities for environmental and resource exploitation charges.

The State Agency for Hard Coal Mining Restructuring (Panstwowa Agencja Restrukturyzacji Gornictwa Wegla Kamiennego – PARG) is responsible for day to day oversight and management of the restructuring program. This is a joint stock company answerable to the Minister of the Economy which has overall responsibility for reform in this sector. PARG's role includes analysis of trends and outlook in the sector, advising the government and mining companies on closure plans and analysing the correctness of the use of budget subsidies allocated to mines. Budgetary allocations are also subject to all the normal control procedure of the government's budget and accounting processes. There have been press reports of some misallocation of funds but these can be regarded as minor and not systematic. Given the scale of the undertaking, as illustrated in the above paragraph, it can be regarded as highly successful. A further indication of relatively tight control in the sector is that relative wages have been declining from a high starting point compared with average wages. Wages in the sector used to be twice the national average – this premium has been reduced to 1.5 times the national average reflecting a considerable degree of wage restraint through the restructuring. The industrial relations environment through this period has not been without fights or problems, but they have been broadly contained. This is a substantial achievement and although the financial cost has been high, it would be difficult to regard it as being excessive in an international context – to the end of 2000, direct subsidies to restructure the entire sector have amounted to around US$ 1.1 billion. In 1999, the World Bank provided a sector adjustment loan of US$ 300 million. However, there does remain a substantial overhand of liabilities which remains to be dealt with as explained in the previous paragraph.

The long term expectation for coal demand is around 100-105 MTA which is in the range of present output. However, the declining trends may be reinforced by the restructuring of the remaining heavy industries and the switch to natural gas of district heating and directs users mainly for environmental reasons. It could thus be said that the "gross" restructuring phase for the sector is substantially complete. In essence around 80% of the redundancies which were planned under the 1998-2002 program have already occurred.

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4.3. Competition issues

The competition issues that arise in the coal sector are different from the type of issues that are common in other energy sectors, such as gas and electricity, where there are significant natural monopoly segments and consequential regulator issues. Competition issues tend to arise in domestic and international coal markets as a result of several factors. These include the degree of government intervention (government ownership, subsidies, import quotas to protect local industry) which significantly distort markets. Also a number of technical constraints exist as users have to use specific type of coal and purchase their requirements under multi-year contracts, meaning that some degree of market power can exist even though coal broadly has a commodity status. A number of these issues arise in Poland.

Before 1990, hard coal prices were directly controlled. Until 1992 prices were partly liberalised, but negotiations took place within a legal framework that established a basic formula for prices based on coal quality parameters. After 1992 prices were liberalised but from 1995 there was an obligation that price increased be notified to the fiscal authorities – this notification requirement was abolished from the end of 1996. Presently, prices are liberalised completely and negotiated between buyer and seller. It should be noted however, that for the electricity sector most coal is sold under multi-year contracts, which establish a framework/formula basis for annual price revisions. Figure 5 illustrates prices in Poland and a range of other countries for both the industry and household sectors. Coal prices are low compared with most of western Europe, particularly for households, but industrial prices are comparable with those in more liberalised markets.

A minor controversy arose in late 2000 surrounding press allegations that the government had directed state owned coal mines to increase prices and that the mines had acted in consort as a cartel to offer coal to customers at common higher prices. The Government has flatly denied this allegation. It is specifically not the role of this survey to reach some "finding" on this point but from a broad competition policy perspective it is possible to make a number of comments:

- Firstly, from a technical and legal perspective, it is an open question whether or not the allegations – even if completely true – would amount to cartel behaviour. Since the companies in question are 100% owned by the government as shareholder the companies could be regarded as acting within a corporate group and any agreement between them is of an "internal" nature. Moreover, most (but not all) of their major customers in the form of electricity generators are also state owned.

- Secondly, and more substantively, it needs to be borne in mind that through the adjustment phase the Government has had to provide very substantial financial assistance as described above. From an economic perspective, if the mines are raising prices in a co-ordinated fashion it has the effect of increasing the revenue of the sector and consequently reducing the degree of government subsidy necessary to fund the restructuring. In other words it is just a question of where the burden of adjustment falls – on tax payers generally or ultimately on energy consumers as increases in coal prices will feed through into electricity tariffs and other final good prices. Moreover, if more of the burden of the adjustment is borne by energy users rather than taxpayers generally that is not necessarily a bad thing. At worst, therefore, it could be said that raising prices in this way – if that were true – provides a non-transparent means of subsidising the coal sector through it adjustment phase.

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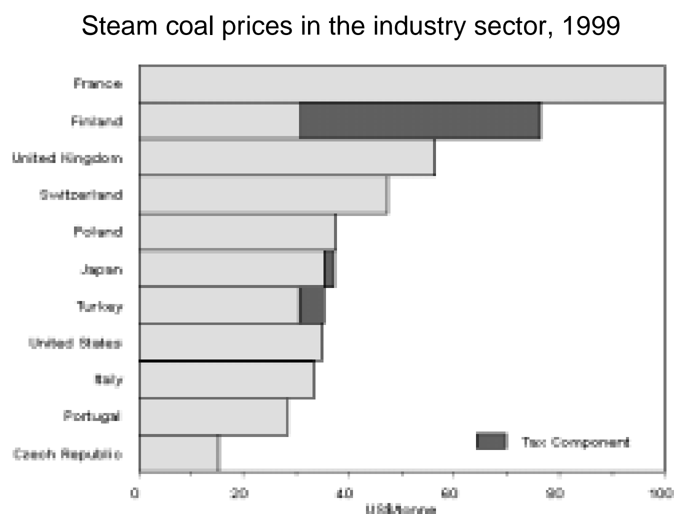
– Clearly the present government owned structure does provide the potential for assistance of the above kind to be delivered in a non-transparent way. Irrespective of whether that has in fact occurred or not, it could be said that it would be ultimately preferable if the temptation and means to do so where removed by privatisation. The privatisation of the power generation, district heating and heavy industry will diminish the power of the authorities to intervene indirectly on price conditions. Consequently, it would be preferable if any transfer mechanism designed to subsidies domestic coal was transparent, using a tax based mechanism. For instance, Spain has put in place a system of taxation of the electricity consumption paid to electricity generators in exchange for the purchase of domestic coal.

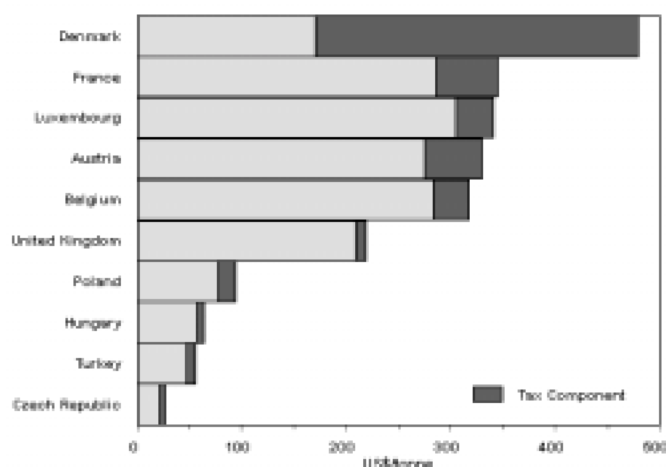
Figure 5. **Comparison of world and Polish domestic prices**

Steam coal prices in the industry sector, 1999



Note: Brown coal price for the Czech Republic and Turkey. Data not available for Australia, Austria, Belgium, Canada, Denmark, Germany, Greece, Hungary, Ireland, Luxembourg, Netherlands, New Zealand, Norway, Spain and Sweden.
Source: *Energy Prices and Taxes*, IEA/OECD Paris, 2000.

Steam coal prices in the household sector, 1999



Note: Brown coal price for the Czech Republic and Turkey. Data not available for Australia, Canada, Finland, Germany, Greece, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland and the United States.
Source: *Energy Prices and Taxes*, IEA/OECD Paris, 2000.

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Exports are used to balance the excessive output compared with domestic demand. Export prices depend exclusively on the international market. The table below indicates the share of exports between the main export zones, indicating that EU absorbs nearly 70% of Polish exports. During the period 1998-1999, export prices were below domestic prices and indeed below average total costs. Nevertheless, export prices are above variable cost and hence make a positive contribution to meeting overall fixed costs. In 1998, a complaint for dumping behaviour was issued by British coal companies. It is of course a central objective of the restructuring program to reduce both fixed and variable costs and the program has been very successful in this respect. Even so, the long-term outlook for the sector is for exports to continue to decline over the longer term and effectively phase out by 2020.

Table 2. **Hard coal (steam and coking coal)**

Exports by main region (1999, estimate)

	MT
EU	16.6*
Central Europe	3.8
Other	3.7
Total	24.1

*. Including Germany (6.4 MT).

Currently world prices are relatively high viewed in a historical perspective. Should the present global economic slowdown depress world prices this could in turn put downward pressure on domestic Polish prices. Since the industry has just returned to operational balance at present prices, it could be vulnerable to the re-emergence of significant losses should prices decline substantially. This underlines the need for the restructuring program to be completed – for further planned capacity reduction and labour shedding to occur. It would be extremely unfortunate if the success of the restructuring program in returning the sector to operational balance were to weaken the resolve to press on to completion. It is beyond the scope of this study to determine whether the present 1998-2002 restructuring program is "sufficient" in a longer-term context. However, some analysts have suggested the need for a further 4-10 mines to close and output to reduce to 80-90 mta. Over the longer term, privatisation of the sector will need to be addressed and as the Polish market becomes more fully integrated into world markets one would expect a broader correspondence between Polish and world market prices.

Coal imports from Russia have been severely limited through quotas, essentially as a device to protect the domestic industry. This can be regarded as unfortunate, but it is not especially uncommon in the European context where high-cost domestic coal industries are sheltered behind tariff barriers and subsidies (albeit reducing). It is appropriate to assess the Polish situation in the context of overall global market distortions. However, it would be advisable to gradually increase the quota of imports, in effect phasing out import controls as the industry continues to gain further competitiveness. Imports can contribute to foster competition in the market and provide incentives to reduce production costs in the industry.

4.4. Conclusions and recommendations

The Government's program to restructure the hard coal sector is an ambitious undertaking and to date it has been largely successful in meeting its broad objectives. There is still some way to go to complete the program and a number of challenges remain, especially given very high rates of unemployment in some mining regions.

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Against the background of the above discussion the following recommendations are made:

- Complete the "Hard Coal Mining Industry Reform Program in Poland 1998-2002"as presently planned.

- Prior to the completion of the program, make an assessment of whether the resulting industry structure is sustainable in the longer term given prospects for the global coal industry.

- Once mines have become profitable pursue privatisation options that will reduce the risk exposure of the government to cycles in the industry.

- Ensure that the economic transfers from the consumers to the coal industry are based on a tax mechanism and that state subsidies are used for restructuring the industry not for subsidising the sales

- Ensure that exports are cost effective and transparently managed.

- Allow the domestic coal market to become progressively more integrated with global markets by gradually phasing out the import quota system

5. ELECTRICITY SECTOR

5.1. Introduction

Until 1990, the whole electricity sector in Poland was owned by the State Treasury and managed by the Energy and Brown Coal Authority (Wspolnota Energetyki i Wegla Brunatnego). International transmission interconnections were orientated to the East. In 1989 and 1990, the reform of this structure and commercialisation began. Regulatory functions were shifted from the industry bodies to the Ministry of Finance and Ministry of Industry and Trade (and later to the Ministry of the Economy). Around 40 generation enterprises (including CHP) were created as joint stock companies and 33 distribution enterprises were created. Operational functions relating to the grid and generation dispatch were vested in the Polish Power Grid Company (Polskie Sieci Elektoenergetyczne SA or PSE)[5] which became the "single buyer" for the system. Coal operations were separated from electricity generation (except with respect to certain dedicated lignite mines-power stations) – it was and remains the case that virtually all electricity (and heat) generation is coal fired. There is no nuclear capacity.

Prices under the central planning regime bore no relation to actual costs but rather were a social planning tool. The first reform step in this area also occurred in 1990 with industrial and household prices increasing by a factor of 3 ½ and 4 times respectively. Until recently, there were no further major tariff realignments, with prices largely tracking inflation.

There is significant over capacity in the generation sector but the "quality" of that capacity was generally low. Much of this plant was constructed in the 1970s and there was also some plant of much older vintage. A second stage of reform commenced in the mid-1990s with a substantial investment program to update old, inefficient and heavily polluting generation plant. The availability of state finance was limited and this investment was largely financed with commercial, long-term bank finance, secured on the revenue stream provided under long term power purchase contracts written between PSE and the generation companies. Despite this investment program it remains the case that some of the plants require further modernisation and almost 10% of plant is obsolete and needs to be retired. Consequently there is still a need for substantial investment in the sector – estimates of the needed investment cover a substantial range up to USD 50 billion – including to meet expected demand growth.

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The next major reform step occurred in 1997 with the passage of the Energy Law which established the Energy Regulatory Authority (Urzad Regulacji Energetyki or ERA) and provided the legal basis for liberalisation of the sector away from the "single buyer" model to the third party access model which provides for competition in generation and final supply to customers. ERA has the responsibility, inter alia, of licensing and pricing of monopolistic energy related practices and promotion of competition.

Finally, privatisation of the sector commenced in 1998 with the first sale of 55% of the shares in CHP Krakow. Since then a number of further generation or CHP plants have been privatised and most recently one distribution company has been sold. The Government has followed a plan of partial privatisation of assets (somewhat less than 50% sale) with the purchaser to be subsequently allowed to acquire majority ownership consequent on the performance of investment and social commitments made in the initial privatisation contract. On 26th April 2001, the revised "Integrated Schedule of the Electric Sector's Privatisation" was adopted by the Council of Ministers' Economic Committee. This involves a revision of the privatisation strategy that envisages the acceleration of the privatisation process. To date, there has been no bundling of generation assets with distribution companies. If any such bundling were to be contemplated for future privatisation the authorities would need to carefully consider the consequences for competition in the sector. A revision of this privatisation plan in April 2002 contemplates separate privatisation of generation, distribution and, ultimately, the transmission system. The Government intends to continue to hold a number of key generation plants, subject to limited privatisation – this is motivated by concerns to guarantee energy security.

Although the legal basis for market opening exists, and a power exchange began operating in July 2000, little trading has in fact yet emerged. While the electricity exchange itself could be described as a competitive market, it is as yet a small *adjunct* to the whole power market where competition is yet to effectively take hold. This is due to a number of structural issues which are historical legacies from the pre-liberalisation period, including the lock in effect of the long term contracts used to secure the modernisation of the sector in the mid-1990s. The government has plans to address some of these issues. These issues – which form the substance of the analysis bellow – will need to be addressed if a truly liberal and competitive market is to emerge.

One of the lessons of regulatory failures in this sector elsewhere in the world is that partial or inconsistent liberalisation will lead to distortions that eventually can threaten system stability. It will be very important in that context for the Polish authorities to get the structural conditions "right" for competition (including the rebalancing of prices) – otherwise the eventual adjustment to competition could be disruptive or otherwise not conducive to the investment that is needed in this sector. Equally, maintenance of the status quo is not an option and the EU accession imposes a time limit on addressing these issues. In particular, it will be important that domestic liberalisation and competition takes hold prior to the EU accession and opening internationally – with international generation prices and market prices likely to be lower than under PPAs a disruptive adjustment could occur in the absence of the long term PPA issue being resolved. It is ultimately in the interest of all parties in the sector for this to occur.

5.2. Industry structure

Generation

Almost all generation capacity, including that in CHP plants is coal fired – 61.2% hard coal and 37.6% lignite. There is little use as yet of *hydro (2%) and* gas (0.5%) but gas firing is expected to increase, particularly for new distributed and peak load generation. In addition, it is expected that the local heat sector and CHP plants may progressively shift to gas firing as upgrade investment is undertaken, including for environmental reasons.

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There is a shortage of peak load generation capacity, due to the dominance of coal in the fuel mix. Pumped storage can cover 30-40% of additional peak demand, but the remainder must be met through variation in load on base load capacity and the balance of exports/imports. This points to the importance of the future optimisation of the generation mix, which will depend in part on the degree of actual gas market liberalisation.

All generation capacity is owned by the government except that which has been previously privatised. There are 17 large thermal power stations and 19 CHP plants. Table 3 sets out the ownership structure of those firms in the sector that have been privatised. Up to March 2002 privatisation included 2 CHP plant groups and 5 CHP pants, 1 generation plant group (PAK), 3 generation plants and one distribution company have been mostly partially privatised. To date privatisation has not included vertical integration of generation and transmission/distribution and has led to a pro-competitive structure in generation through the creation of multiple competing firms. On the whole, the Polish authorities are starting with an industry structure where vertical ownership separation of generation/transmission/distribution is pro-competitive and there is potential for significant horizontal competition in sectors. Hence, structurally competition is favoured and regulation task is somewhat simplified in terms of meeting various trade-offs in regulatory objectives.

Table 3. **Power generation sector: ownership and privatisation plan**

Firm	**Date of privatisation**	**Method**	**Strategic investor**	**Ownership structure after privatisation in per cent**				
				State	**Employees**	**Strategic investor**	**Individual investors**	**Institutional investor**
Elektrociep•ownia Kraków S.A.	October 1997[6]	Block sale	Finelex BV	28.1 8.1 63.8				
Elektrociep•ownie Warszawskie S.A.	January 2000	Block sale	Vattenfall	45.0 55.0				
Zespo• Elektorciep•owni Wroc•aw Kogeneracja S.A.	June 2000	Public offering		36.01 10.72 5.03 48.24				
Zespó• Elektrociep•owni Wybrze•e S.A. w Gda•sku	June 2000[7]	Block sale	EdF and Gas de France	55.0 45.0				
Elektrociep•ownia B•dzin S.A.	July 2000[8]	Block sale	MEAG and LG Petro Bank	14.88 62.5 and 7.2 15.42				
Elektrociep•ownia Bia•ystok S.A.	February 2001	Block sale	SNET	55.0 45.0				
Zespó• Elektrociep•owni PAK	March 1999	Block sale	Elektrim (Poland)	50.0 11.5 38.5				
Elektrownia T. Ko•ciuszki w Po•a•cu S.A.	April 2000	Block sale	Tractabel	60.0 15.0 25.0				
Elektrownia Rybnik S.A.	March 2001	Block sale	EdF and EnBW	65.0 23.0 and 12.0				

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The "Integrated Schedule of Power Sector Privatisation and of Electric Energy Market Introduction" presents a schedule of privatisation up to 2002. The most recently announced revision to the privatisation plan would allow investors to acquire up to 45% of power plants and CHP plants and 25% of distribution companies, but with options to increase the privately held share contingent upon performance of the privatisation agreement, including fulfilment of social obligations. The state will continue to hold a 25% interest, which will allow it to retain control over key decisions. Also the management and employees are to be granted shares of the privatised companies. It is proposed to generally accelerate the privatisation of generators ahead of distribution companies. Appendix 1 sets out details on previous and prospective privatisation. Electricity demand is trending up and this is expected to continue in the government's energy policy planning scenarios. While there is presently a considerable degree of spare capacity (23.3GW maximum load in 1998 compared with 33 GW capacity with exports/import of 2 GW) significant new investment will be required in additional and upgraded generating capacity in the medium term. Also Demand Side Management may be developed more effectively in a context of higher energy prices and be able to partly mitigate the growth of consumption. It is, therefore, important that the regulatory framework provides right investment incentives as well as promoting efficient use and competition.

Around 70% of electricity supplied to final consumers is covered by long-term exclusive power purchase agreements (PPAs) between the generator companies and the transmission company, PSE that run until 2010-2012. These contracts provide for the sale/purchase of electricity at non-market prices. (In most cases the prices set in the PPA are above market prices but in the case of the largest lignite fired plant, Belchatow, the price is below likely free market prices reflecting the low cost structure of that plant.) The PPAs were a specific policy choice designed to provide government owned generators with a means of security to raise funds on private capital markets to undertake investments for modernisation and environmental improvement. The exclusive nature of these contracts now has the effect of perpetuating the single buyer characteristic of the pre-liberalisation system. Moreover, the above market margin can be regarded as giving rise to stranded costs.

The average price under long term PPA is a little under 20% more expensive that power purchased by PSE not under long term PPA and almost double the marginal price. The transmission system operator and distribution system operators are also required to purchase electricity generated by CHP plants connected to their respective grids. These compulsory purchases are regulated at prices above (likely) market prices and a system exists to compensate the TS/DSO for this extra cost, which ultimately results in an additional amount being included in transmission and distribution tariffs.

Transmission

The Polish Power Grid Company (PSE SA) is owner and operator of the transmission system and also the dominant energy intermediary and operator of the balancing market. PSE is 100% government owned. The Minister of State Treasury chooses at least half of the Supervisory Board and the employees of PSE appoint two members. The mission of PSE is to "create, organise and service a liberal, non-discriminatory wholesale market in electric energy in Poland, including international exchange, and especially to ensure a necessary infrastructure for the realisation of transactions made on this market." It is expected that in conformity with this mission PSE will remain as the sole provider of transmission services (which is a natural monopoly) but gradually withdraw from energy trading where it purchases electricity from generators and sells to distributors and final customers. Consequently, generators will trade directly with distributors or large end consumers and PSE would provide transmission services to underpin such transactions – customers would contract for access to the transmission system, but PSE would not take a direct interest in the energy transaction itself.

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PSE is responsible for all dispatch functions. This raises a competitive tension because PSE is presently the dominant electricity trader.

In 1992, the Polish grid was disconnected from the Ukrainian system due to lack of stability in the Ukrainian system. In 1992 the CENTREL system (Czech Republic, Slovakia, Hungary and Poland) was created. In 1995, CENTREL started synchronous operation with the UCPTE system (Western Europe). Other transmission system interconnections are with Slovakia (1999) and Sweden (2000).

Between 70 and 80% of electricity is transferred through the transmission system, compared with 20-30% purchased directly by distribution companies from local generators and CHP plants. The transmission system contains some transmission capacity constraints and presently the cost of these constraints (including in respect of "must run" generation) is not reflected in transmission tariffs. However, it is planned to implement locational pricing which would better reflect transmission constraints.

The balancing market is the mechanism operated by PSE to ensure energy balance (Demand = Supply – transmission loss) in real time.

It has been suggested that a target date for eventual privatisation of PSE could be considered once the current set of reforms has been carried through. Consequently, the privatisation of PSE will take into account the effects of earlier privatisations, the development of the Power Exchange, resolution of the long term PPA issues and general development in the energy market.

Power Exchange

The Polish Power Exchange (Gielda Energii or PPX) commenced operation on 1 July 2000 as a *voluntary* pool market following the Nordpool model. The potential participants on the market include the 36 generators, the 33 distribution companies, and eligible customers under the liberalisation schedule and 41 licensed energy traders (as of 15 May 2001). The PPX has been deemed competitive by the President of the ERA and is thus not subject to tariff approval by the ERA. PPX is owned by the State Treasury and a number of other electricity-sector interests, including PSE.[9]

Presently, the main business of the market is on a next day basis. There are 24 markets each day corresponding to each hour time slice for the next day. A futures market commenced in 2001, dealing with monthly contracts, "green energy" and peak hour electricity, but so far only a relatively small amount of trading has occurred. A "current day" market for within day trading remains at a planning stage.

So far the size of trading on the exchange is relatively minimal – at around 1.5% of electricity by volume although variable from period to period. As Table 4 illustrates, with present contractual arrangements and a "must buy" obligation imposed on distributors in respect of CHP"/renewable generation, perhaps only around 5% of electricity capacity is presently able to bid into the power exchange. Presently, the balancing market, which is effectively controlled by PSE, is handling larger volumes than the Power Exchange. Clearly, for the Power Exchange to become a larger market it will be necessary for the long-term contract problem to be resolved. Some market participants also suggest that PSE is able to influence the relative size of on-market transactions and those transactions passing through the balancing market, by means of balancing market price offers and rules of operation. It is suggested that this introduced a conflict of interest that reduces PSEs incentives to withdraw over time from energy trading.

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Table 4. **Competitive market potential scope**

Long Term Contracts	**61%**
Must Run	**10%**
Including:	
System power plants	–2.5%
Pumped storage PP	–1.5%
CHP	–6%
Direct contracts between PP and DC	**25%**
Total committed generation	**~95%**
Leaving balancing market potential	**~4%**

Distribution

There are 33 regional distribution companies which own and operate the distribution infrastructure and provide sales service to final customers. Distribution companies are obliged to purchase from the transmission company a proportionate amount of electricity that the transmission company is obliged to purchase from generators under PPAs. All the distribution companies are state owned with the exception of the southern distributor, Gornoslaski Zaklad Energetyczny SA (GZE), the largest distribution company with 10-12% of sales which was privatised to Vattenfall in 2000.

The G8 group of eight northern distributors (16% of total sales) and Stoen SA is scheduled for privatisation in 2002. This timing has been slightly delayed. Privatisation activities also cover Grupa Po•udniowo-Wschodnia Zak•adów Energetycznych, consisting of energy distribution companies based in Lublin, Zamo••, Rzeszów and Skar•ysko Kamienna.

Privatisation of distribution companies in conjunction with generation entities should be avoided. Such vertical integration, however, is not always problematic – it depends importantly on the degree of concentration horizontally in either the generation or distribution sector. If both the generation and distribution sector are structurally competitive, considered on their own, then vertical linkages between the sectors are less likely to be problematic. The conditions for a competitive environment includes the ability of distribution companies to choose their supplier domestically and abroad as well as to operate outside their geographical areas. To the extent that privatisation policy is prepared to contemplate vertical integration considerable care will need to be given to the competition consequences. Indeed, it is perhaps best to leave such integration to on-market transactions rather than administrative decision, but subject to the application of competition law.

Most individual distribution companies are probably too small. Efficiencies could be realised by their combination to some degree without giving rise to competition concerns of excess market power. This type of consolidation is more *amenable* to administrative decision and a first step in this direction has been taken in the government's plan to privatise the G8 group of northern distributors. The government could either pursue this approach for other regional consolidations or it could allow the market to "sort things out" by on market transactions after privatisation. In the latter case there would clearly be a role for the OCCP to consider whether such combinations created competition concerns

The government plans to retain a strategic holding in distribution companies given their natural monopoly characteristics so as to be able to influence their decisions in order to protect consumers. It is not immediately clear that this is a desirable approach to address this problem. In general it would be preferable to deal with competition issues through transparent regulatory arrangements.

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Retail

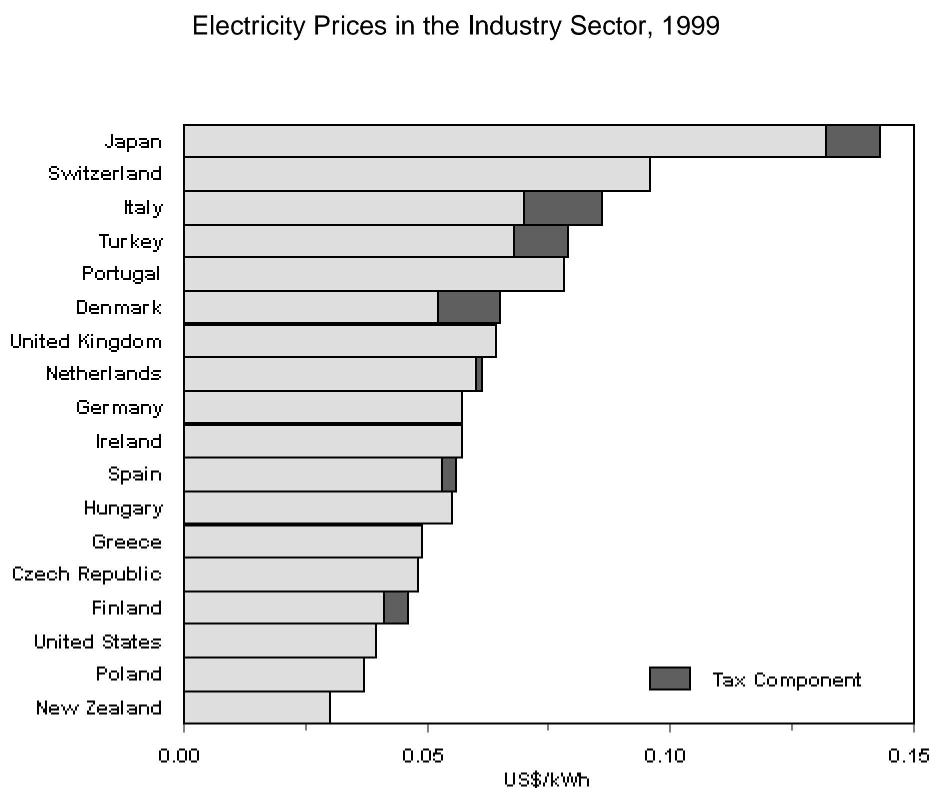
A distribution business is required to supply customers in its region if the customer does not have an energy supply agreement with another supplier. Consequently, at present the retail sector and the distribution sector are essentially co-extensive. It is possible for distribution companies to sell in other distribution companies' geographic areas, using the liberalisation/TPA framework but, as explained below, this is as yet relatively infrequent. Similarly, some 200 trading licences have been issued on the Polish market but activity is not yet substantial.

Performance

Electricity prices in Poland are relatively low by international standards – see Figure 6. However, two important points need to be noted. Firstly, electricity prices have increased significantly in nominal terms since 1990, but less so in real terms, reflecting the point that after the initial rebalancing of electricity prices in the early 1990s final prices has largely tracked inflation. Consequently, there still remains some rebalancing to achieve – the government has not pre-announced a specific time limited rebalancing objective. Secondly, while prices are cheap measured in market exchange rates they are not cheap measured in PPP terms. As an illustration of this point, the average household budget commits around 10% of consumption expenditure to energy costs.

Figure 6. **Household and industrial electricity prices in Poland and selected OECD countries**

Electricity Prices in the Industry Sector, 1999



Note: Price excluding tax for the United States. Data not available for Australia, Austria, Belgium Canada, France, Luxembourg, Norway and Sweden.Source: *Energy Prices and Taxes*, IEA/OECD Paris, 2000.

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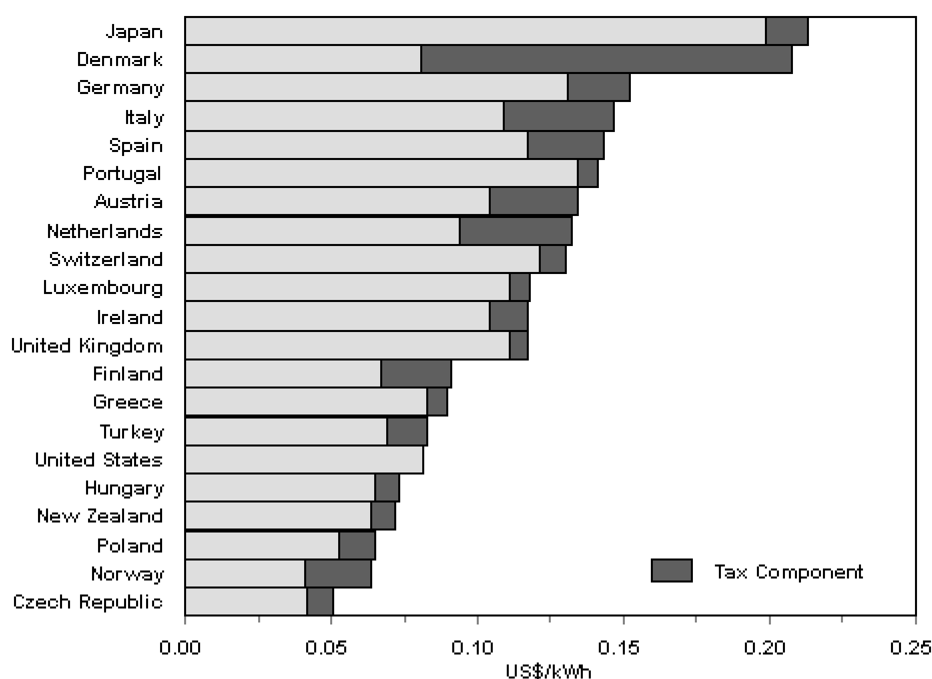
Electricity prices in the household sector, 1999



Note: Price excluding tax for the United States. Data not available for Australia, Belgium, Canada, France and Sweden.
Source: *Energy Prices and Taxes*, IEA/OECD Paris, 2000.

5.3. Regulation

The Ministry of the Economy has primary responsibility for energy policy formulation and implementation, defining detailed conditions of planning and functioning of energy systems and supervision of local government functions relating to planning and realisation of energy infrastructure. The Ministry of the Economy is the main entity responsible for subordinate legislation, although some ordinances are issued by the Council of Ministers and in co-operation with the Minister of Finance. The general analysis about the regulation making process and consultation as covered in Chapter 2 applies to the particular case of the energy sector. There is indeed substantial consultation, which occurs within government and selected industry participants in the preparation of policy and legislation. However, this process could be improved and opportunities for consultation within a broader range of stake-holders could be usefully implemented. The Minister of the State Treasury is responsible for the government privatisation program and ownership functions of state entities. The Minister for the Environment is responsible for environmental aspects of the sector (ie coal extraction and pollutant emissions).

The President of the Energy Regulatory Authority (ERA) is the main regulatory body – it has a duty to promote competition. The ERA was created in 1997 and was the first industry specific regulator in Poland. The President is appointed by the Prime Minister for a period of 5 years – the President may only be removed in specified cases of incapacity or misbehaviour. The ERA has the following functions:

- Issuing and withdrawal of licences for energy related activities. This is substantively a technical function. The ERA can impose licence conditions but importantly there is no power to limit number of licences and entry requirements are relatively liberal.

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- Approval and control of tariffs for electricity, gas and heat, to end users as well as approval and control of lignite prices.

- Agreement of draft development plans prepared by transmission and distribution companies. Costs associated with implementing these plans are allowable costs that can be recovered under approved tariffs.

- Enforcement of quality and safety standards and personnel qualifications in electricity and gas, as set by ordinance of the Minister of the Economy.

- Resolving disputes under the Energy Law, which might arise, *inter alia*, in the context of negotiations for infrastructure access.

- Co-operation with OCCP to counteract monopolistic practices – see Chapter 3.

The ERA is financed from the Budget – energy sector licence fees are not paid to the ERA but to the Budget. Total employment of the ERA is 285 persons, with nine regional offices. This size appears broadly appropriate.

All energy enterprises that are licensed to provide gaseous fuels, electric energy or heat are required to formulate tariffs for approval by the President of the ERA. Approval of tariffs takes place within the framework set out in a tariff ordinance issued by the Minister of the Economy. The President of the ERA can release an enterprise from the obligation to submit a tariff if the enterprise operates on a competitive market – this is a means to roll back tariff activity as competition takes hold. Tariff activities apply to transmission and distribution access prices and final sales of electricity. The requirement to submit tariffs has been removed in respect of bilateral contracts between generators and PSE or other wholesale customers, including trading on the Power Exchange. The finding that a market is competitive can also be withdrawn, and tariffs reapplied, if competitive circumstances change.

It is notable that the President of the ERA is not required to formally consult with the OCCP in making decisions about finding that a market is competitive and releasing its participants from the requirement to have tariffs approved. In more recent legislation establishing the Telecommunications Regulatory Authority, the president of that authority is required to consult the OCCP in like circumstances.

The Tariff Ordinance requires that the need to rebalance tariffs is one factor that is to be taken into account when companies calculate tariffs for approval by the ERA. Another factor is the "justified costs" of the companies that must be verified by the ERA. Justified costs include annual planned costs, including financial costs, of delivering electricity and annual planned costs of modernisation, development and environmental protection – these costs will arise under development plans approved by the ERA. There is a debate that this framework does not provide for the companies to earn a reasonable return on capital. Companies are permitted to include an element of profit in their tariffs but at the same time are required to protect customers from unjustified increases in cost – this limits the extent of profits that may be earned by generators and the rate at which tariffs may be rebalanced.

Transmission tariffs are adjusted from period to period by a CPI-X adjustment, with X set by the ERA every 2-5 years. Decisions of the ERA are subject to appeal to the Anti-monopoly Court, of which there have been some examples.[10]

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The Energy Law requires accounting separation for different licensed activities. This is consistent with the EU framework. More important however, in terms of the likely competitive conditions in the market, is the degree of actual ownership separation that will result from privatisation policy as described above. It has been decided that privatisation of sector assets will not be allowed to entities with more than 15% market share.

The competition law applies without exception to the sector. The OCCP is responsible for implementation of the law to counter monopolistic practices and consumer protection function. Around 20% of issues dealt with by the OCCP concern the energy sector, mostly outside of the direct authority of the ERA.

The Energy Law and a subsequent 1998 Ordinance sets out a legal framework and timetable for infrastructure access to open the electricity market to progressively smaller customers who will become eligible to contract for access (see Table 5).

Table 5. **Electricity access liberalisation timetable**

Date	Annual purchase level (GWh)	Number of eligible customers	Volume (TWh)	% of market open
4 September 1998	>500	21	21.5	21%
1 January 1999	>100	83	37	37%
1 January 2000	>40	180	44	43%
1 January 2002	>10	610	52	51%
1 January 2004	>1	3300	60	59%
5 December 2005	All	15 million	102	100%

These access arrangements presently only apply in respect of domestically generated electricity. This distinction between the Polish domestic market and broader international markets will be changed as a result of the EU accession. After EU accession, access will be available as of the date of accession to for trade in electricity generated within EU member states. This is in excess of the minimum required under the present EU Electricity directive.

The opening to the EU will also be governed by “negative reciprocity, such that the Polish authorities may prevent power imports from less open markets. And other countries may apply similar laws. In the case of some countries, environmental considerations are also potentially applicable, with the effect of giving the authorities the potential to restrict imports of “dirty” electricity from other markets.

Eligible customers or energy traders on behalf of eligible customers can apply to PSE or distribution companies to conclude a transmission service agreement, including a negotiated transmission fee that is subject to approval by the ERA under its tariff powers. Critical in this respect is the meeting of technical conditions for access, including metering and data interchange. If all technical requirements are met including in relation to metering and absence on an unfavourable effect on the price and scope of supply to other connected customers, PSE cannot refuse to conclude the agreement for domestically generated electricity.

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The access framework chosen by Poland is "regulated access", meaning that the transmission and distribution companies are legally obliged to provide transmission/distribution services for eligible customers under condition that such services do not worsen the supply terms to other customers connected to the grid. Potential disputes on that matter are to be resolved by the ERA. The ERA must approve a tariff for the transmission/distribution services.

Where there are vertically related activities a firm involved in a natural monopoly segment (such as transmission) has the incentive and means to discriminate against its competitors in the vertically related activity (such as energy trading). The incentive arises because of the potential to extract profits from the potentially competitive activity if its market power can be extended into that sector and the ability to discriminate comes from its market power in the monopoly sector – specifically by denying or delaying access by one means or another. In these cases it is commonly considered desirable to have a heavier form of regulatory intervention in the form of regulated access. It is therefore appropriate that the ERA significant regulatory powers in this area.

The actual extent of third party access under the liberalised market arrangements in Poland is very limited. As of mid 2001, while there were 180 potentially eligible customers and fifty access agreements, only 13 eligible customers had switched suppliers under the third party access arrangements. In part this reflects natural conservatism in customers not seeking access. However, a number of distribution companies proposing to supply eligible customers outside of their geographic area have initiated negotiations to seek access but have not been able to successfully conclude an access contract. None of these potential access seekers have as yet sought the use of dispute resolution by the ERA. The small degree of de facto liberalisation accords with the small volumes traded on the Power Exchange.

The major reason for these unsuccessful access attempts have been apparently been "technical difficulties" or "legal" constraints. Real technical problems could include deficiencies in metering or other physical shortcomings in the transmission or distribution systems that make it impossible for the effective separation of transmission services and energy supply. It is also possible that some of the difficulties represent strategic behaviour by PSE and/or distribution companies to frustrate access. While this is claimed by some market participants it is not possible at this stage to make a firm assessment of the matter. Certainly, since PSE is a major supplier of energy as well as the transmission services supplier it would have an interest to frustrate access so as to maintain the bundling of transmission and energy supply in order to keep its market share in energy supply.

So, despite the significant *de jure* opening of the domestic market, relatively little competition has yet emerged. There are several issues to resolve before competition can take hold in this sector:

5.4. Competition issues

There are a number of blockages to competition taking hold in this sector. These include the vertically integrated nature of PSE, being involved in energy trading activities as well as transmission system operation. One element which has locked in this role has been the presence of long term contracts. Similarly, there are issues of tariff rebalancing, with present distortions making entry more or less attractive than appropriate. These issues must be addressed if competition is to take hold. Beyond this there is a fundamental policy issues to be decided – should the government simply provide a framework which *allows* competition to develop or should it adopt policies measures which *foster* competition. The government is taking a mixed approach to this question.

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All together, PPAs, must run generation and CHP accounts for around 95% of electricity supplied to final consumers, so it is not surprising that as yet little trading on the Power Exchange compared with the degree of legal market openness – which presently amounts to 51% of the market. The primary blockage is the long-term contract problem. The power generators cannot otherwise sell power contracted under the PPAs, hence this limits the scope of their potential participation in bidding power into the competitive market or entering into new bilateral contracts. The stranded costs associated with these long-term contracts have been estimated at around PLN20 billion.[11]

The government has developed a *novel* policy approach to dealing with the lock-in problem of the long-term exclusive power purchase agreements. This is the so-called "Compensation Payments System" (SOK). In brief, the SOK provides a mechanism to permit generators to participate in a competitive market with electricity covered by the PPAs and receive compensation payments for any shortfall in revenues compared with what the generator would have been entitled to under their PPA.[12] The system is necessarily complex and it remains to be seen whether the incentives embedded in it will be sufficient for generators to opt into the system (and for their creditors to approve of that). Brief details of the SOK system are set out in Box 4.

Box 4. **Long term contracts and the proposed compensation payments system (SOK)**

The SOK is a system that has been approved by the Government as the means of resolving the lock-in problem of the exclusive long-term power purchase agreements that will otherwise prevent the emergence of competition in the electricity sector.

The main objective of the SOK is to provide a system whereby generators will still receive the payments that they were guaranteed under the PPA while having to bid competitively to sell electricity into the market, thus unlocking the potential for competition. The main features of the SOK are as follows:

- The SOK will be administered by a new company, owned and guaranteed by PSE, called SOK S.A.
- Generators will be able to opt into the SOK on a voluntary basis – the PPA will in effect be preserved but will be converted into a financial contract between the generator and SOK SA.
- Generators will sell electricity into the competitive market (bilateral sales to customers, through the Power exchange or on the balancing market).
- SOK SA will compensate the generator for any shortfall in revenue due to a lower average market price than the PPA contract price (and vice versa).

The compensation amounts is made up of several components:

i) 100% compensation for the difference between the PPA price and average market prices on actual sales.

ii) Partial compensation for the difference between the average market price and the generators actual price on actual sales. (Compensation starts at 97% reducing by 2% per annum for power plants, and 99% reducing 1% per annum for CHP plants).

iii) Partial compensation for shortfalls in actual sales from PPA sales at the fixed costs of generation under the PPA. (This has the effect of offsetting changes in average fixed costs due to differences in the amount of electricity produced in the PPA compared with the competitive market.

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If any of the above amounts are negative it reduces compensation. For example, suppose a generator under a PPA would have sold 1 000 units of electricity at a price of PLN 120 per unit, with fixed costs of PLN 50 000 and variable costs of PLN 40 per unit. But in the competitive market the generator sells 1 100 units achieving PLN 100 per unit against an average market price of PLN 90 per unit.[13] Compensation would be as follows:

	Profits	Compensation Type i	Compensation Type ii	Compensation Type iii	Total
PPA	30 000				30 000
Competition	16 000	33 000	–10 670	–4 500	33 830

In this example the generator is better off under competition. Compared with this example it can be observed that if the generator sells the same volume on the market as would have been under the PPA and at the average market price, the compensation will exactly match the shortfall in profit. The generator benefits from any increased volumes and for sales above market prices and vice versa. The partial compensation in these cases means that the generator partly benefits from improved performance and is not fully compensated for below market average performance – full compensation in these cases would introduce market distortions.

There do not appear to be any perverse incentives in this scheme. It would be possible for a generator to be worse off under the SOK if a generator achieved lower volumes or if their sales were below the market average price. Similarly, it would be possible for a generator to be better off even if the compensation payments were in sum negative.[14]

The cost of the SOK payments will be incorporated by the ERA into transmission charges. This will be done on an estimated basis from year to year, with adjustments in the subsequent year to account for estimation errors in the previous year. This introduces some credit risk if the additional transmission charge is insufficient to cover the SOK payments (for example if the market price is under estimated). PSE has a guarantee for SOK SA.

It is estimated that the average end user compensation fee will be in the range of PLN 10-15 per MWh until the end of 2005 and then fall to around PLN 5 per MWH. The average price is expected to drop by 7%.

It remains to be seen how the CPS system is implemented in fact – no generators have as yet opted into the system although there has been some generators expressing specific interest. In a pilot phase, three long-term contracts were prepared to be included in the SOK, but the implementation was suspended because of legal and tax problems. Revisions to the SOK to allow its implementation are being considered. One important point is the optional character of the system; this is necessary given the need to respect the *privity* of contracts which were used to secure funding for necessary upgrading of the generation sector. The optional character raises the issue of the incentives for generators to opt into the system. One incentive for generators to opt into the scheme is that the release of the long-term contract would involve the release of exclusivity terms as well, that is, generators would be free to generate and sell more electricity than they are presently contracted to do. Of course the degree to which they are successful in that depends up the outcome of a competitive process in the market – which cannot be necessarily predicted a priori – but since electricity demand overall is expected to rise there seems reasonable prospects for additional volumes over time.

One possible means to accelerate the acceptance of SOK is for the government, specifically the Minister for State Treasury, to use its role as shareholder in the companies to persuade them to enter in prior to privatisation – subject of course to creditor approval.[15] If a generator does opt into the SOK system, it is not necessarily the case that there would be lower privatisation proceeds – the SOK appears a well balanced system. Moreover, from a system wide perspective if the SOK is not a success there may be a systemic risk from the liberalisation of the market. This is because it is not clear that the viability of PSE could be guaranteed if it has to continue to pay higher than market prices for electricity in a market that is actually liberalised. Under a truly liberalised market PSE and its contracted generators would be at risk of losing market share. It is thus in the interests of all market participants that the SOK succeeds or some

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other means of resolving the long-term contract lock-in problem is found. In fact given that the SOK has not been implemented other methods are being considered. One possibility would include renegotiation of the contracts, possibly financed by charges imposed on end-users – this approach has been used to recover stranded costs in other jurisdictions embarking on reform.

Also, the regulator should pay attention to the level and structure of tariffs for transmission and ancillary services charged by PSE to prevent any discrimination against generators, distribution companies, eligible customers and traders. A related issue are the possible technical constraints of the transmission grid to be able to operate a multiplicity of supply contracts between numerous operators.

It is government policy that PSE gradually withdraw from energy trading. This could either happen "naturally" as PSE loses market share in the competitive market that could take hold once the SOK system is in place and functional. Or the State could take a more active role and restructuring PSE prior to privatisation. There are two possible approaches. One approach would be to separate the role of Transmission System Operator from ownership, with enhanced regulatory functions in the ERA to mandate augmentation of the transmission system to avoid "technical" access problems – this approach would facilitate access to the grid by new entrants. Another approach would be to leave PSE as the operator of the transmission system but separate off its vertically related functions and energy trading in particular. Either of these structural solutions could address the present problems arising from the vertical integration of PSE.

A further issue is the need for tariff rebalancing. There apparently remains some rebalancing to be done between the cost of energy and transmission/distribution charges, which vary widely according to regions. Also there remains rebalancing to complete between household and industrial customers. In sum transmission charges are too high and energy charges for small consumers too low. This needs to be addressed before real competition can develop – otherwise it will promote inefficient entry and "cherry picking" in the profitable sectors. This raises some difficulties, with average Polish households presently paying around 10% of incomes on energy costs which is two to three times the comparable figure in EU countries.[16] It is appropriate that this rebalancing be done over a period of time so as to avoid price shocks. Government has not announced a forward plan of rebalancing but has a general plan of allowing prices to rise by "a few percentage points" above the inflation rate. Such a path could involve a prolonged adjustment and adjustment is essentially time limited by the expected date of accession to the EU, when international competition will become an additional force. One way to deal with this issue should it become necessary is to have some form of more directed and transparent subsidy arrangement for poor consumers.

5.5. Conclusions and recommendations

The electricity market in Poland has the potential to become competitive, which will act as a restraining force on the degree of price rises that inevitably will accompany the ongoing adjustment to a market orientated system. While the new law has been put in place and regulatory institutions established to allow and support competition as yet relatively little actual competition has emerged and few eligible customers have switched suppliers. A number of further structural matters need to be addressed if competition is to take hold and the eventual adjustment to an open market is not to be disruptive. A number of these structural elements are in the process of being addressed by present policy plans. Some others may require further policy steps.

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Against that background the following policy recommendations are made:

- Continue with the present privatisation plan, taking care to avoid a degree of integration of generation and distribution which might limit the possibility of choice of suppliers and forestall the market from competition.

- Push for successful implementation of the SOK system in coherence with the calendar of the market opening, including as necessary through the use of the government's powers as shareholder in directing the privatisation process. Alternatively, pursue other means to address the long-term contract lock in problem, including possibly renegotiation of the contracts funded by an end user charge.

- With the reduction in long-term generation contract lock-in, decrease the obligation of purchase made to distribution companies to PSE and ensure that distribution companies can supply clients outside their geographical area

- Address the constraints on competition taking hold that arise from the vertically integrated status of PSE. This could include:

  - Establishing an independent system operator <u>or</u> vertically separate the present energy trading activities of PSE and privatise these separately.

  - Enhance the regulatory powers of the ERA to require augmentation of the transmission system so as to address "technical" barriers to access.

  - Examine the regulatory framework applying to the balancing market so as to limit the ability of PSE to manipulate this market to the detriment of the development trading on the Power Exchange (this could also be addressed by the above structural measures).

- Rebalance tariffs with an objective to have this completed prior to the EU accession.

- Have the ERA take an early opportunity to test its powers to resolve access disputes when "technical" limitations are raised as a barrier to access.

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6. GAS SECTOR

6.1. Introduction

Gas accounts for around 10% of Total Primary Energy Supply. This compares with some 20% in the Czech Republic, which suggest considerable scope for the intensity of gas use to rise in Poland. Such a rise would be consistent with the energy outlook scenarios that underpin energy policy – see Appendix 1. Around one half of the population are connected to gas – some 6.7 million households in 1998, using 3.9 bcm. Industrial use is more significant, even following a substantial reduction in industrial use in the early 1990s. In 1998, 3486 industrial customers used 5.5 bcm, of which the largest five customers use 40% of all gas. The biggest user is the fertiliser industry. As yet there is very little use of gas to generate electricity. One of the main demand growth areas is expected to be conversion of local heat and power systems to gas firing and also medium scale CHP pants.

Poland has some domestic production – around 35% of present use – and prospects for further domestic production are relatively modest. Consequently, Poland is mostly dependent on imports of Russian gas. A key government energy policy objective is diversification of supply sources for security reasons and, in recent years pipeline, interconnections have been opened allowing contracted deliveries also through Germany and Ukraine.

The Polish Oil and Gas Company (Polskie Gornictwo Naftowe i Gazownictwo SA – PGNiG) is the main player in the gas market. It is a vertically integrated monopoly in import, transmission and distribution. A restructuring of PGNIG commenced in 1996, involving commercialisation and a subsequent staged separation of technical and non-core activities. Further major restructuring is envisaged to separate exploration and extraction activities, transmission and storage, regional distribution and trading activities. The Government's privatisation program of PGNiG is still to be finalised, but envisages early privatisation of trading activities.

A gas market liberalisation schedule is set out in the Energy Law and subordinate legislation. This opening commenced in July 2000 but is limited to domestic gas and has not yet resulted in de facto competition. The main issues relating to gas regulation and potential competition, which are examined in this chapter, are:

- The market structure that will result from the privatisation of the component parts of PGNIG.
- The opening of the market to competition for imported gas by an extension of the access arrangements to imported gas.
- The need for tariff rebalancing to ensure that the pricing structure will be broadly sustainable in a potentially competitive state; and
- Consequential regulatory issues.

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6.2. Structure

The gas industry can be typically classified into a number of distinct segments – production, transmission, storage, distribution and retail. These segments have different economic characteristics – some sectors are of a natural monopoly character while others are more inherently competitive – and this has implications for the desirable structure of the sectors and the necessary degree of regulation. Further details are set out in Box 5.

Box 5. **The structure of the natural gas sector**

The functional classification of the gas sector is as follows:

(a) Production – which can be further broken down into the exploration, drilling, extraction and processing of gas. For this paper, re-gassification facilities for gas in its liquid form (known as LNG) are included in this stage of production.

(b) Transmission – the high-pressure transportation of gas to high-volume customers such as distribution companies, large industrial customers and power stations.

(c) Distribution – the low-pressure distribution of gas to small and medium-volume gas customers.

(d) Storage – the smoothing of the flow of gas through the transportation network by pumping gas into holding facilities at off-peak times, and withdrawing the gas at peak times.

(e) Retailing and Marketing – the provision of services of contracting with production, transmission and distribution companies on behalf of gas customers and associated billing and metering services.

In most cases, competition between gas producers is feasible. Competition may not be effective in practice, as one or a few producers may own all viable independent sources of gas. This is especially of concern for energy security when the independent sources of gas are under the jurisdiction of a foreign country.

While gas transmission pipelines exhibit sizeable economies of scale, competition between pipelines may be feasible in some cases, according to the magnitude and geography of demand for gas flows. It seems likely that for the foreseeable future effective inter-pipeline competition even in fully liberalised markets will be limited to a few geographic locations.

While some gas customers, particularly very large ones, are supplied directly off the high-pressure transmission network, smaller customers are usually supplied through local gas distribution companies, known as "LDCs". Like many other network industries, local gas distribution exhibits economies of density – once the costs of installing a gas main on a street have been "sunk", the marginal cost of connecting another house or building to the gas main is very low. Because of these economies of density, local gas distribution is, generally speaking, a natural monopoly, and infrastructure competition would not normally be expected to be feasible.

LDCs are often also involved in retailing and marketing. Where markets are not liberalised, they commonly have a regional monopoly in marketing that is co-extensive with their physical distribution pipe network. However, in liberalised markets, new entrants can provide gas sales to customers connected to a LDC network by means of access arrangements to the LDC's pipes.

Demand for gas is highly variable. Demand at peak times can be several times higher than at off-peak times. Gas storage facilities smooth the flow of gas through the network, which are filled at off-peak times and drawn down at peak times. Gas is stored in different types of facilities, such as depleted gas reservoirs and disused mines. Although access to certain key facilities (such as depleted gas reservoirs) can be limited, the economies of scale in gas storage are small. As a result, there remains scope for effective competition in gas storage services, with the possible exception of regions with low population density.

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Production

In Poland there is some domestic production at around 35% of present use, but in its raw state it is generally not high "quality" having a relatively low methane content.. Moreover, the prospects for significant further domestic exploitation, including through new discoveries, are thought to be relatively modest. With domestic demand trending up, the domestic production sector is likely to decline in relative importance and the main regulatory issues and indeed prospects for competition are dependent on the chain running from imports through transmission, distribution, and retail supply.

Gas imports

A key objective of government energy policy is supply diversification. Presently there is a large dependency on Russian gas (about 70% of imports) but a law which limits the proportion of gas which can be imported from one source will spur supply diversification. Options include further use of Norwegian sources and possibly also Danish sources.

The Government has specific objectives for diversification which are set out in the "Guidelines for Energy Policy of Poland until 2020" which if realised will in effect require further supply diversification away from Russia. Specifically, gas imported from one country is to be limited to specified percentages that will decline over time – see Table 6.

Table 6. **Schedule of maximum imports from any single country**

Year	***Percentage***
2001-02	88%
2003-04	78%
2005-09	72%
2010-14	70%
2015-18	59%
2019-2020	49%

Transmission

The Polish Oil and Gas Company (PGNiG) was formed in 1996 as a joint stock company wholly owned by State Treasury – prior to this it operated as a state enterprise. It was originally conceived as a vertically integrated monopolist in the gas and oil production industry, responsible for exploration and exploitation of gas and oil sources, supply and imports of natural gas and the development of the nation-wide natural gas network. A number of technical and non-core activities have already been separated from PGNiG under a restructuring program commenced in 1996. Further restructuring is envisaged to gradually modify the role of PGNiG in the gas sector. This will involve the creation of functional subsidiaries with PGNiG remaining initially as owner. The following subsidiaries are envisaged:

- A subsidiary responsible for oil and gas search and exploration.
- A number of subsidiaries responsible for gas trading, which will be the first entities privatised.

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– A number of regional distribution subsidiaries responsible for low and medium pressure gas pipelines, which would be subsequently partly privatised.

– A transmission company, which would be responsible for ownership and operation of the transmission system and storage assets, and would hold long-term gas supply contracts.

The transmission-storage part of PGNIG is expected not to be privatised over the next 5 years. Previously, it was conceived that all other elements, including the distribution companies would be privatised by 2004 but the new Government is reconsidering this plan. If the earlier privatisation plan is carried through, PGNIG would operate only as the transmission, storage and import company.

Around 40% of total gas demand is supplied directly by the transmission company to large customers (around 200 such recipients) while the remaining 60% flows through the distribution system. As the transmission company, PGNIG operates the dispatch functions and system balancing.

There are five border connection points to the Polish transmission system. Additional transit infrastructure in the Yamal-Western European pipeline is being constructed by a subsidiary jointly owned by PGNIG and Gazprom. Consideration is being given to a pipeline to link to North Sea sources. There are also small supplies from Germany (around 0.5 bcm).

Storage

Storage is a major element of the gas supply chain that has significant positive effects on energy security and the balancing of seasonal variation in demand which changes by a factor of more than 2 from summer to winter. The use of storage, or more particularly lack of access to storage services, also has significant implications for ease of entry by new entrants. Present gas storage capacity operated by PGNIG amounts to 1.2bcm – around 20 days supply at peak winter usage – which is quite limited. Presently, most storage capacity is used during the seasonal cycle. These narrow margins raise certain risks to security of supply and also might be used as a technical basis to restrict access to pipelines where a prospective new entrant might need ancillary storage services. PGNIG plans to commission a further 0.4 bcm of new storage capacity by 2005.

Poland may need to augment its storage capacity by a factor of several multiples and there is reasonable prospect to achieve this using depleted natural gas fields. The shortcoming of such storage however is its relatively poor performance in rapid off take of stored gas. This could be particularly important as new large volume industrial customers, such as electricity generators emerge. Such customers can place significant demands on the capacity of gas systems to deliver variable volumes.

Distribution

Four distribution companies are to be established as subsidiaries of PGNIG. At this stage these companies exist formally or “on paper” awaiting for transfer of assets and personnel form the parent. Nevertheless, preparatory work on the necessary re-contracting between PGNIG and the distribution company has begun “as if” the distribution companies were substantively operational.

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An important consideration in the restructuring of the gas industry is the desirable number and size of the distribution companies. There were 23 regional distribution divisions within PGNIG and clearly the envisaged consolidation into the four new distribution companies will assist these companies to attain “commercial” size and thus ultimately will be more attractive privatisation prospects. Such consolidation nevertheless does limit the potential for competition in the sector since it will limit the potential use of benchmark competition measures by the regulator and will reduce the number of players that might spur retail competition by supplying customers outside of their geographic area.

Retail

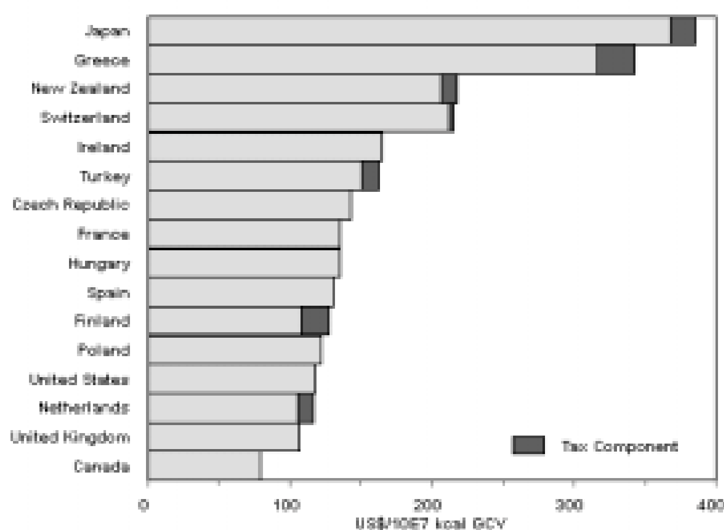
Retail activities are essentially co-extensive with the distribution sector, with no retail supply being provided other than by PGNIG and (notionally) its distribution subsidiaries.

Performance

Until the end of 1999 gas prices were set officially by the Ministry of Finance. Since March 2000, prices have been subject to the standard tariff regime under the Energy Law, which requires approval of proposed tariffs by the ERA. Further details of this structure are set out in the electricity section. An important element of this structure is the avoidance of price shocks as tariffs adjust to reflect costs. The tariff ordinances provide for a CPI-X framework of price control, which has been used to control the rate of convergence to market prices. To avoid rapid growth if gas prices the growth of transmission charges for the subsided groups of consumers cannot exceed the inflation index by *more* that 5 percentage points. More recently, to speed au the process of approaching to market prices the limit of price growth has been increased to 15 percentage points above the inflation rate. The limitation on tariff increases also causes PGNIG to realise losses and limits the ability of the company to undertake the necessary investment to expand the transmission and distribution networks. It is envisaged that the gradual rebalancing of tariffs will take several years to complete. An effective time constraint on completion of the rebalancing is imposed by the prospective liberalisation of the market, which will make cross subsidies unsustainable.

Figure 7. **Household and industrial gas prices in Poland and selected OECD countries**

Natural gas prices in the industry sector in OECD countries, 1999



Note: data not available for Australia, Austria, Belgium, Denmark, Germany, Italy, Luxembourg, Norway, Portugal and Sweden.

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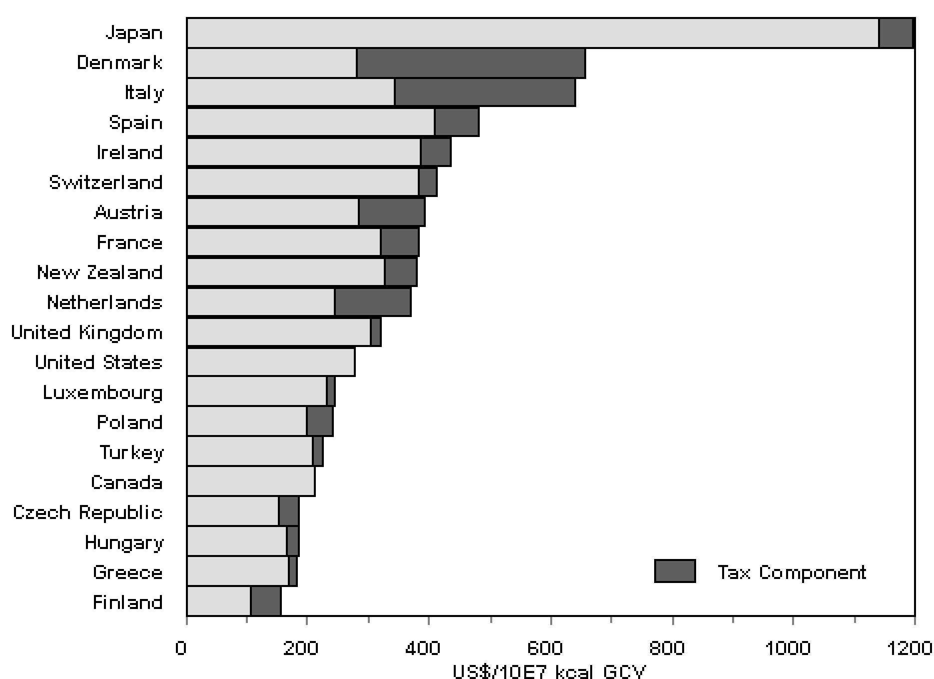
Natural gas prices in the household sector in OECD countries, 1999



Note: Data not available for Australia, Belgium, Germany, Norway, Portugal and Sweden.
Source: *Energy Prices and Taxes*, IEA/OECD Paris, 2000.

6.3. Regulation

The Energy Law is the basic legal text regulating the sector. Since 1998, the ERA has been acting as regulator with regard to natural gas distribution and trading. The ERA's regulatory functions and powers are as set out for the electricity sector. The function of regulator in the areas of exploration, exploitation and storage has been performed by the Minister for the Environment since 1994. Subordinate regulation deals with the details of: grid interconnection and costs; trade; provision of transmission services; grid management and operation; quality standards; and tariffs (as described above). ERA has granted several dozen licences for gas traders.

An Ordinance of 1998 sets out the liberalisation schedule for eligible customers to achieve access to the grid that commenced *de jure* in July 2000. Access applies only in respect of gas extracted in the country and applies in respect of customers that take more than a specified volume of gas per year. See Table 7. The legal framework for access to gas transmission and distribution remains to be completed, including a decision on whether the basic framework will be negotiated or regulated access. From a policy perspective the preference would be for regulated access, essentially following the structure for electricity.

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Table 7. **Gas access liberalisation timetable**

Date	Annual purchase level (million m^3)	Number of eligible customers	Volume (billion m^3)	% of market open
1 July 2000	>25	25	3.7	35
1 January 2004	>15	58	12.3	90
5 December 2005	<15	all	14.1	100

The market opening is importantly limited to domestically extracted gas for the time being and the timing of market opening may be modified by a new ordinance. The process and schedule for *import* liberalisation is a matter subject to the EU accession process and such liberalisation will occur be available from the accession date.

To date no actual access arrangements have yet been implemented under the liberalisation arrangements although one agreement has been concluded. This will require ERA approval of the transmission tariff. The net effect of the domestic demand side liberalisation and the limited domestic supply of gas – most of which is under control of PGNIG in any event – has been limited so far in terms of actual competition and access. It will not be until access in granted to imported supplies and there is the possibility of some upstream competition in supply that substantive competition effects could be expected. Of course, the fact that this regime is in place, and will increase in potential scope on accession to the EU has been a major driver for the restructuring, separation and prospective privatisation of PGNIG.

6.4. Competition issues

A number of developments are necessary before competition can emerge in the gas sector. Two clear prior conditions are the effective restructuring (and privatisation) of the PGNIG subsidiaries and import liberalisation consequent upon EU accession. Particularly in the latter respect, therefore, it will be a number of years before effective competition can emerge. Nevertheless, a number of other competition related issues arise from the present context.

Structure of the Distribution Sector: The number of distribution companies and their eventual ownership are very important for the prospects of competition emerging quickly in retail sector once it becomes a real possibility. It would be unfortunate in that respect if, at the initial stages of the emergence of competition there were to be any fewer than four distribution companies. This is because it could be expected that the distribution companies could be one of the more effective new entrants into supplying customers outside of their own regions. Consequently, the expectation that privatisation of each distribution company will be to a separate investor is to be welcomed. It will also be necessary for the OCCP to be concerned if there is any subsequent on market consolidation. Such issues can only be judged at the time they arise and importantly will depend on the degree of competition that has emerged. In turn that will depend on the extent and ease with which gas traders have entered into the retail supply sector.

The ease of retail entry will be affected significantly by the quality of the regulatory task performed by the ERA in regulating access and tariffs to distribution company wires. The difficulty of the regulatory task must not be underestimated. In this respect, the use of regulatory methods that draw on yardstick competition (the comparison of the performance of one distribution company with another) could assist the regulator to get better information on appropriate cost levels in this sector.

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Tariff rebalancing. As in the case of electricity there is a need for rebalancing of tariffs. In the case of gas this rebalancing will cause a substantial rise in gas prices for consumers. The Government does not have a pre-announced time frame for this rebalancing, but it is reasonable to expect that it would be appropriate to conclude rebalancing over several years. Ultimately, there is no option, in the context of the EU accession, but to do this rebalancing as the emergence of competition will make large cross subsidies unsustainable. What can be said is that competition will drive efficiencies that will minimise the rise in prices that is necessary to put the industry onto a sustainable path. If necessary, it is technically possible for the government to pursue any social policy objectives, and the protection of poor consumers in particular, through more direct support mechanisms.

Long term contracts: Long term take-or-pay contracts which were entered into by a government monopoly have often been based upon an implicit assumption that the monopoly status of the incumbent would continue. As a result, these contracts often act as a barrier to competition taking hold because the financial solvency of the incumbent is put at risk by competition and governments act to prevent such insolvency by limiting competition. In the case of Poland existing long term take-or-pay contracts cover almost all imports – as is the standard case in Europe. However, there is nevertheless some scope for competition to emerge based on domestic production (around 35% of present demand) and the fact that new import contracts will need to be written to cover the expected significant increase in demand. Moreover, it is Government policy to seek to diversify import sources as explained previously. Accordingly, there may be some scope to explore new more flexible supply contracts to meet additional demand, particularly liberalisation of transmission access for imported gas proceeds as planned. It is nevertheless difficult to make a firm assessment of this point because much of the details of the existing take or pay contracts is confidential. These contracts could prove to be problematic because it is understood that they have a 25 year term and involve significant contracted volume increases. PGNIG contracts with major customers, which take directly from the transmission system, contain partial pass through of take or pay obligations. Similarly, as part of the liberalisation process, the new distribution companies may take on obligations form the import contracts.

Regulatory Functions: The ongoing involvement of the transmission company in dealing in energy (as an intermediary between supplier and large customers and distribution companies) means that it will have an incentive to attempt to frustrate pipeline access so as to prevent loss of market share in its gas trading activities. This highlights the importance and the difficulty of the regulatory task faced by ERA. Similarly, distribution companies will have an incentive to discriminate, since they will be involved in the retail market. So there will be a need for careful regulation of access to the transmission and distribution system for the standard reasons. It will be important that the regulatory framework for access is completed and desirably a choice made to use a regulated access system rather than negotiated access.

The difficulty of the regulatory tasks of the ERA could be reduced to some extent and competition potentially enhanced, if within PGNIG the authorities mandated accounting and operational separation of pure transmission activities from import and sale activities. The objectives of operational separation is to help ensure that the transmission part of PGNIG focuses on the provision of transmission services rather than being concerned with the consequences of access by new entrants for energy sales by PGNIG. The importance of this point can be illustrated by the experience of the UK where notwithstanding substantial reform efforts, including privatisation, substantial competition did not emerge in the gas sector until the incumbent monopolist was required to divest itself of gas supply contracts. Following this lesson, proposed reforms in Turkey require the government gas transmission and supply company to progressively divest itself of gas supply contracts by means of a tender to new entrants.

A similar point applies to storage services. It is not envisaged that the transmission and storage company will be privatised within the next five years. It is assumed that this means that storage services will remain a monopoly within that period. Given this, regulatory arrangements will need to be put in place that permit new entrants to gain access to storage. In particular, third party access to storage is often an ancillary but necessary element of new entry by gas retailers who may need to balance between their

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contracted supply from imports and variations in demand from customers. That said, the authorities could consider a more pro-competitive approach, which would involve the creation of competition in storage, since the economics of storage activities generally mean that it is not a natural monopoly activity. This could be achieved by divestiture of some storage assets by PGNIG, with due attention being paid to national energy security needs through regulatory arrangements.

As a general point once the structural conditions become more conducive for access, the ERA may need to play an active role in fostering competition through active use of dispute resolution to achieve additional access arrangements.

6.5. Conclusions and recommendations

Competition reform of the gas sector in Poland is at a very early, preparatory stage. Plans for restructuring of the formerly vertically integrated government owned monopoly is relatively well advanced. Completion of this restructuring though privatisation of separate distribution and retail businesses has the potential to create a classically pro-competitive structure where transmission is separated from distribution and supply. It is not possible at this stage to make a definite assessment of the prospects for competition to emerge as there remain substantial steps to be taken by way of policy development and implementation before the overall framework could be regarded as complete. However, there are reasonable prospects of competition emerging if a number of structural issues are addressed.

It will be important that supply sources are further diversified, both for security and competition purposes and this will most likely require significant infrastructure development. Accession to the EU and consequential opening of the market to third party access for gas imports will be a watershed – it will be important in that context that the Polish authorities do not implement extensive transitional arrangements that might delay market opening. Similarly it will be important that the market not be further artificially locked up with take or pay contracts.

Against that background the following recommendations are made:

- Proceed with the privatisation of the sector, with the initial sale of each of the distribution companies over the next four years to separate investors and also proceed with the privatisation of the transmission and storage assets at the earliest opportunity. Care should be exercised in the privatisation process to consider the competition consequences of upstream vertical integration.

- As part of the restructuring of PGNIG into a transmission company and distribution company subsidiaries, transmission activities should be operationally separated from energy import and supply activities.

- Consideration should be given to sufficient divestiture of storage assets so as to create a competitive market in storage services that will assist new entry in gas trading and retailing.

- Progress tariff rebalancing. Consideration should be given to announcing a multi-year schedule of adjustment, notwithstanding the political sensitivities as this will provide greater certainty for market participants and will provide a better information base for important investment decisions that need to be made by prospective participants in the privatisation process.

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- PGNIG should avoid entering into further long term contacts that are not seen as essential for security purposes in order to provide scope for market trading to develop with the fewest possible constraints on supply.

- The regulatory framework for access to transmission, distribution and storage services should be completed, opting for regulated access under the authority of the ERA.

- Liberalisation of third party access to transmission in respect of imported gas should occur as quickly as possible within the context of the EU accession. It would be desirable to remove any actual import restrictions from the time of accession and treat domestic and imported gas equally from that time.

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APPENDIX 1: CURRENT AND PROSPECTIVE ELECTRICITY PRIVATISATION

Power plant sub-sector

In March 1999, the first stage of privatisation of Zespó• Elektrowni P•tnów-Adamow-Konin ended: 20% of the company's shares were sold to Elektrim. As the agreed conditions stated, the consortium obliged itself to raise capital by the amount being an equivalent of USD 100 million to be used for investments. Total 10-year investment program in ZE PAK amounts to the sum being equivalent of USD 1 billion.

In April 2000, the Ministry of the Treasury and the Belgian concern Tractebel signed a contract for sale 25% of a block of shares in Elektrownia T. Ko•ciuszko S.A. in Po•aniec.

A privatisation agreement on the sale of 35% of shares in Elektrownia Rybnik S.A. to the consortium consisting of NRG, Marubeni corporation and GE Capital was to be signed in June 2000. As the privatisation agreement has not come into effect, Ministry of the Treasury decided that a new privatisation procedure would be started. In January 2001, Ministry of the Treasury chose consortium Electricite de France (EDF) and German company EnBW for exclusive negotiations concerning the sale of the Elektrownia Rybnik shares. The privatisation agreement was signed in March 2001.

Moreover, the Ministry of the Treasury has been implementing the following privatization projects in the sub-sector of power plants and brown coal mines:

A privatization advisor to the companies: Kopalnia W•gla Brunatnego S.A. and Elektrownia Be•chatów S.A. was selected in April in conformity with draft amendments to a privatization schedule. It is envisaged that these entities will be privatised simultaneously. The acceptance of pre-privatization analyses and the determination of a privatization strategy are underway.

A public invitation to negotiations on acquisition of shares in Elektrownia Skawina S.A. was announced in February 2001. A short list containing 5 investors admitted to the Company's limited survey has been approved. The Company was privatized in January 2002 (conditional agreement – awaiting approval of the Ministry of Internal Affairs and Adminsitraiton).

In July 2000 the Ministry of the Treasury decided to increase the share capital of the Po•udniowy Koncern Energetyczny (PKE) by over PLN 735m. The Koncern includes the following seven power plants from •l•skie, opolskie and ma•opolskie provinces: Elektrownia Blachownia S.A., Elektrownia Halemba S.A., Elektrownia Jaworzno III S.A., Elektrociep•ownia Katowice S.A., Elektrownia •agisza S.A., Elektrownia •aziska S.A. and Elektrownia Siersza S.A. In 1999 the participation of the above mentioned power plants in the total production of energy of domestic system power plants was approx. at the level of 16.29%, with Elektrownia Jaworzno III and Elektrownia •aziska responsible for the major part of it. The privatisation of PKE shares on the Warsaw Stock Exchange is not excluded.

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Privatization undertakings began in Elektrownia Kozienice S.A., Elektrownia Stalowa Wola S.A. (An announcement on a tender for a privatization advisor was made public in March 2001), Elektrownia Ostro••ka and Zespó• Elektrowni Dolna Odra S.A. (An announcement on a tender for an advisor has been made public). The privatization of these power plants will be accelerated that the participation of a privatized power plants' market exceed the market potential of privatized firms involved in energy distribution. For this reason, the Ministry of the Treasury plans to select one privatization advisor to Elektrownia Kozienice, Elektrownia Ostro••ka and Elektrownia Dolna Odra. It should facilitate the elaboration of the optimal privatization strategy.

Thermal electric power station sub-sector

A sales contract for 55% of shares in Elektrociep•ownie Warszawskie S.A. to the Swedish concern Vattenfall was signed in January 2000. This transaction is valued at USD 230 million and the investment obligations reach the amount of USD 800 million.

In June 2000 privatisation of Zespó• Elektrociep•owni Wroc•awskich KOGENERACJA S.A. was floated through public offering on the Warsaw Stock Exchange where 36% of the company shares were sold.

In the same month the sales agreement was signed for 45% of shares of Elektrociep•ownie Wybrze•e S.A. w Gda•sku with Electricite de France and Gaz de France.

In July 2000 the sales agreement was signed for 52.5% of shares of Elektrociep•ownia B•dzin S.A. with MEAG of Germany – this was the second stage of privatisation of this company.

A tender was announced for privatisation advisor for Elektrociep•ownia Pozna• S.A. The advisor was selected in the 4th quarter of 2000. The elaboration of pre-privatization analyses is underway.

As regards Elektrocieplownia Bialystok S.A., in April 2000, the Minister of the Treasury published the second invitation to negotiations on the sale of this company's shares. In February 2001, 45% of shares was sold to French company – SNET. This transaction is valued USD 44 million and the investment obligations reach the amount of USD 49,5 million. Moreover, a privatization process continued in Elektrociep•ownia Zielona Góra S.A. In January 2001, two binding offers were submitted by the Swedish firm Sydkraft, the consortium consisting of the firms: Dalkia, Polish Energy partners and by Kogeneracja S.A. The privatization agreement was signed in September 2001 with KogeneracjaSA and Dalkia Termika SA. Elektrociep•ownia Tychy S.A. was to be privatized in the first half of 2001. Binding offers have been submitted by SNET, Consortium EC Kraków S.A. and ZEW Kogeneracja S.A. The Ministry of the Treasury decided to conduct the parallel privatization of Elektrociep•ownia Toru• and ENERGOTOR S.A. and to offer shares of these two companies to one investor. An invitation to negotiations was published in April 2001. Work on this privatization is underway.

An announcement on a tender for one advisor for the privatization of Elektrociep•ownia Zabrze S.A. and Elektrociep•ownia Bytom S.A. was published in March 2001 and an announcement on a tender for a privatization advisor for Elektrociep•ownia •ód• was published in April 2001.

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Distribution sub-sector

Privatisation of 1 out of 33 distribution companies had been completed. A 25% block of shares in Gornoslaski Zaklad Energetyczny (11% of the Polish electricity market) was sold to Vattenfal. Preparatory work aimed at privatisation of the G-8 energy distributors (16% of the Polish electricity market) is continuing. (G-8 comprises: ZE Koszalin, ZE Slupsk, ZE Energa Gdansk, ZE Elblag, ZE Olsztyn, ZE Torun, ZE Plock and Energetyka Kaliska). At the end of March 2002 the Minister of Treasury decided to conduct simultaneous negotiations with two potential investors. Advanced privatisation activities have also been conducted in the Warsaw-area company STOEN SA (5.5% of the Polish electricity market). In march 2002, investors for a short list were selected. It is expected that completion of this privatisation will take place by the end of Q3 2002.

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NOTES

1. It is also probably the case that the competitive challenge from electronic communication is so far less in Poland than in other countries given the very high costs of data transmission and internet access. This is a discussed in Chapter 6.

2. Special free postal services are provided for the blind consistent with EU requirements.

3. From January 2001 the licence procedure has been replaced by a less restrictive permit process that effectively removes any quantitative limits on entry.

4. Notice on Application of Competition Rules and Assessment of Certain State Measures 1998.

5. The high tension transmission grid was owned by the distribution companies until 1993 but it was operated by PSE. PSE also owns 99.6% of the shares of the Pumped Storage Power Plants (Elektrownie Szczytowo-Pompowe SA (1500MW) which are used for peak load supply.

6. The contract came into force in 1998.

7. The contract came into force in February 2001.

8. The second stage of privatisation. The first stage through IPO took place in 1998.

9. PPX is owned by the State Treasury (27%), Elektrim SA (10% + 1 akcja), Endesa SA (10%), Gie•da Papierów Warto•ciowych SA (10%), Polskie Sieci Elektroenergetyczne SA (10%), Elektrownia Opole SA (7%), Obrót Gliwice – GZE Sp. z o.o. (6%), Zespó• Elektrowni P•tnów-Adamów-Konin SA (5%), Energa Gda•ska Kompania Energetyczna SA (5%), STOEN SA (2%), Bergen Energi AS (1%), Dom Maklerski Penetrator SA (1%), Elektrim Volt SA (1%), Polskie Koleje Pa•stwowe (1%), Vattenfall Poland Sp. z o.o. 1%), Elektrownia Be•chatów SA (1%) Elektrownia im. Tadeusza Ko•ciuszki S.A. w Po•a•cu (1%), Energetyka Pozna•ska SA (1%).

10. In November 1999, the Antimonopoly court found that the existence of two heat energy production entities in a local market did not mean that there was sufficient competition to release those companies from the obligation to have tariffs accepted by the ERA.

11. There are also around ZL10 billion in stranded costs in the transmission system, including as a result of the now not utilised high capacity interconnection with the Ukraine system.

12. A related system of compensation payments is to be made to distribution companies that are required to purchase power generated by CHP plants in their regions at a price above the market price.

13. It is assumed that prices in new bilateral contracts entered into by generators opting into the SOK system would not be subject to tariff approval by the ERA – in effect this would be deemed a competitive market in addition to the Polish Power Exchange.

14. This might occur for low cost lignite plants. Opting into the SOK may mean getting a higher market price than currently received under the PPA, and they would then be required to contribute to the SOK – ie the system is symmetric. This does not necessarily mean that they would be worse off since they would earn additional profits on the on market sales at higher prices. Again if they were able to realise higher sales than contracted under the PPA they would be better off.

15. It seems somewhat less likely that privately owned generators will opt in unless the CPS were to deliver "excess" compensation – which it does not – since there is inevitably some regulatory risk.

16. But note that Polish households pay a lower proportion of household budgets on rent. However, rising energy prices will not be compensated by lower rents.

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