

SYNERGY CONFERENCE "ENERGY POLICIES FOR A COMMON FUTURE"
Wien/Baden, 29/30 June 1995
Session : Restructuring, Privatisation and Energy Prices in CEE Countries

THE CURRENT SITUATION IN THE ENERGY SECTOR IN CEE COUNTRIES
AN OVERVIEW

Discussion Paper prepared by Wolfgang Mostert Ass.

1. Introduction - what transformation is about

The topic of this session concerns the present status of the transformation of the energy sector in CEE countries to more market based structures. The needed **transformation** can be expressed in terms of four "r"s:

- *"*reframing*" of the vision for the energy sector and the energy supply companies - their objectives and performance goals;
- *"*restructuring*" of sector structure, sector organisation and sector management comprising (i) corporatisation, commercialisation, divestment of activities which are not related to core activities in the energy supply companies, (ii) reorganisation of the energy policy formulating framework, (iii) adoption of new legal and regulatory frameworks;
- *"*revitalisation*" - adopt customer orientation (e.g. DSM) and make use of core skills to enter into new businesses (e.g. billing services, telecommunications, infrastructure servicing and maintenance, mapping of pipes, gas & power, etc.);
- *"*renewal*" - of the realm of the spirit; on the management side shown in the introduction of new payment and reward systems which cross the normal boundaries within the individual companies; on the employee side shown in the invention of new ways of doing things

The second "r" encompasses the formal structural changes, the other three "r" the soul of the transformation process. Logically, the transformation sequence should flow from reframing to restructuring to revitalisation to renewal. But it need not be so. Most of the EU power industry outside the UK (and their ministers of energy), still resists formally the EU directives for the restructuring of the power industry (TPA, etc.). But individual companies are busily positioning themselves for a changed business environment driven by defensive cautiousness (to make sure that they are ready if anything resembling the Commission's directives is adopted) but even more so by new business opportunities that open up in related utility sectors - in particular telecommunications and water supply - as a result of technological innovations and regulatory changes. By becoming multipurpose industries in competitive areas, the power companies undermine the social acceptability of their monopoly positions in power production, distribution and supply.

Ideally, a proper strategy for sector transformation should encompass all four "r". In practice, this is too ambitious. Any attempts at defining and implementing such an all-encompassing strategy would block progress for years. Yet, the list is useful as a yardstick to check how far the real transformation process in CEE countries has proceeded. I kindly invite our Eastern European colleagues to reflect upon where the four "r" stand in their home countries and to comment on it in the question/answer/comments session.

The moderator, Mr. Peter Faross, asked me to look at how far the CEE countries have come towards the fulfilment of "internal market" conditions as outlined in the Commission's "white book"¹. There are at least

¹ The energy chapter in the "EU white paper" is divided into nine chapters: hydrocarbons; security of supply/stocks; price transparency; transit of electricity and of gas through transmission grids; nuclear sector; liberalisation of the electricity and gas markets; hot water boilers; sulphur content of certain liquid fuels; crude oil savings through the use of substitute fuel components in petrol.

two different approaches to do this:

- (a) the *formalistic approach* of looking at how far the existing legal framework fulfils the formal requirements of relevant EU directives (the White Book distinguishes between stage 1 and stage 2 measures);
- (b) the *fundamental preconditions approach* of looking at how far the countries have come in the process of getting the energy supply companies to operate on a commercial basis;

I prefer to look at the fundamentals first, and then in the end to comment briefly on the formal EU requirements for membership qualification ². The reason is that increased market orientation of the energy sector is an efficiency goal in its own right for CEE countries within the overall economic transformation process. Once a "full" commercialisation of the energy sector is achieved, it is easy to fulfil the formal/legal EU requirements. Therefore, we should first take a look at what obstacles the Eastern European countries are facing in the commercialisation of their energy industries. Then we can discuss which measures countries have taken to overcome these obstacles. Since I did not have the time to acquire a sufficiently qualified overview of the whole transformation process I will raise more questions than I will answer. It is my hope that my Eastern European colleagues will use the question/answers/comments time to fill out some of the gaps. In this way the tremendous collective know-how that is available at the conference can be used productively.

As regards restructuring, the most interesting aspects of the EU white paper relate to the "transit directives for gas and electricity", to the "exploration and production of hydrocarbons directive" and to the "TPA directive" in whatever watered down version it will be adopted. However, many of these topics are also covered by the European Energy Charter Treaty. In terms of accompanying measures one should also not underestimate the sections aiming at achieving environmental objectives - "environmental dumping" will be an issue for intensive and difficult debates between the EU countries and the newcomers.

² In order to avoid misunderstandings: the "white paper" is not a list of conditions that have to be fulfilled before the Eastern European countries are allowed to enter.

2. The five major obstacles to the transformation of the energy industry

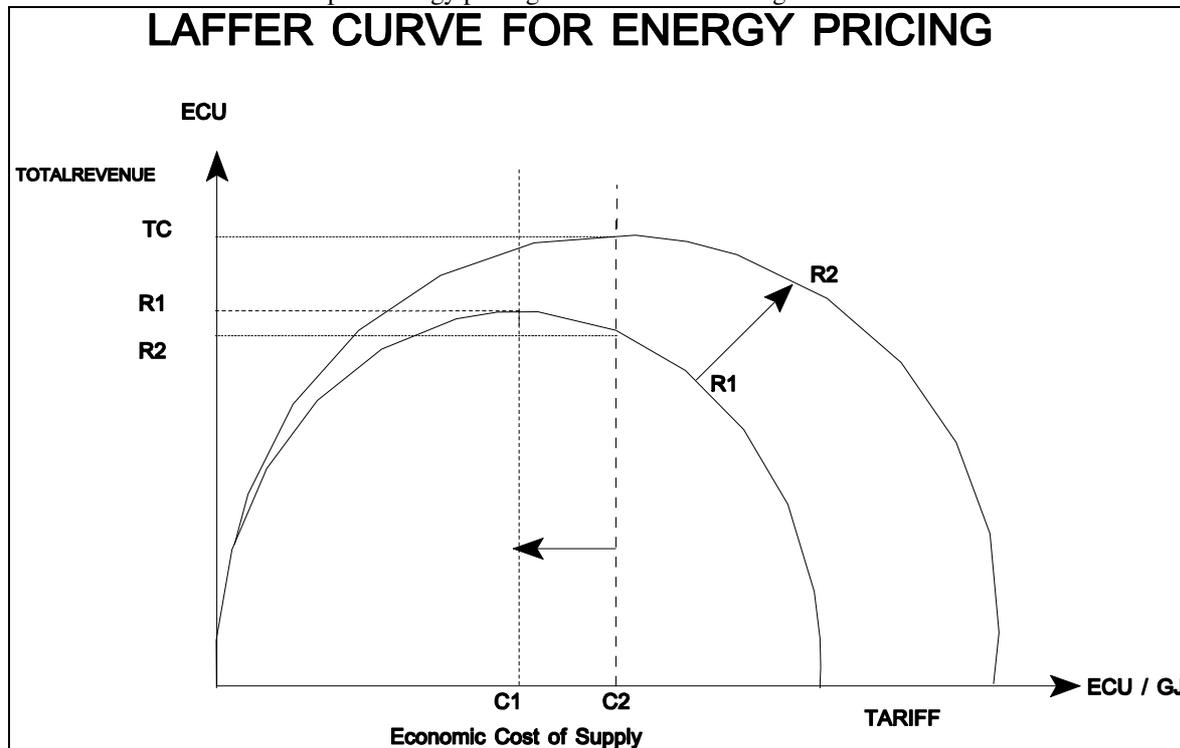
There are five major obstacles to energy sector reforms in Eastern Europe:

1. The sheer *magnitude of the legal and organisational changes* in the economies is the most important obstacle to energy sector reform. In any country, the adoption of a new energy law, labour market reforms, reforms of the social welfare system would take years of discussion, in the CEE countries all of these reforms have to be pushed at the same time. Due to the economies of scale and “natural monopoly” elements of the energy industry, reforms of the energy supply industry are not an immediate priority for lawmakers compared to the rationalisation of manufacturing industry which is faced by a “life or death” situation.
2. The composition of the national parliaments is a second major obstacle. Many of the *lawmakers are inexperienced*, recently elected politicians. They frequently adopt mutually contradicting laws.
3. A third obstacle to company restructuring is the “hen-and-egg” interrelationship between divestment and company break-up to provide a non-monopolistic market for the services of the activity which is to be divested.
4. A fourth obstacle (related to the next) is the need to find solutions for inter-company debts between final consumers and energy suppliers and between primary fuel suppliers and secondary energy suppliers.
5. The fifth obstacle is that energy prices in many countries and energy sub-sector do not cover the full cost of supply including capital expenditure and a normal rate of return on invested capital.

The first three obstacles are outside the control of energy policy makers. They can do at least something about the other two. Since company debt can only be solved once a proper pricing regime is put in place, the key obstacle to organisational as well as “revitalisation/renewal” transformation is the continued pricing of energy below full economic cost. Underpricing prevents the energy utilities (i) from acting commercially, (ii) from planning and financing their investments rationally, and (iii) from being able to compete with EU energy utilities on equal terms. The extent to which energy prices reflect the long run marginal cost of supply (LRMC) of supply is the essential yardstick for the status of the transformation process in Eastern Europe. Thus, we must first see what is preventing full cost coverage from being more widely introduced.

3. The “Laffer curve” of energy pricing in Eastern Europe³

The achievement of full cost pricing is complicated by the fact that the willingness-to-pay of consumers seems to be below the level needed to cover the full economic cost of supply. This gives rise to the “Laffer curve of Eastern European energy pricing” which is shown in figure 1 below.



The present situation in most Eastern European countries is shown by the “total revenue curve” / “energy Laffer curve” (an expression of the “consumer willingness to pay curve”) **R1** and the average cost per GJ of **C1**. The existing tariff of **C2** is lower than cost **C1** and the enterprises are producing at a loss equal to an annual shortage of revenue equal to **TC-R1**. From the point of view of the energy company (and of the ministry of energy) the pricing policy is rational as it maximises total revenue for the company. If the higher full cost price of **C1** was charged, total revenues would go down to **R2** as an increasing number of consumers would refuse to pay at all. The situation is particularly severe in the district heating sector which due to its locally based nature is of less interest to the EU commission than the power, gas and oil industries with their potential for cross boundary international trading. In the oil industry, pricing does not pose a problem since supplies are discontinuous and non-paying consumers are “interrupted” automatically.

In order to get out of their loss-making situation, the energy utilities can attempt

- (i) to shift the “average cost curve” inwards from **C1** to **C2** or
- (ii) to push the “Laffer-curve for energy company revenue” outwards from **R1** to **R2**; or
- (iii) to do both.

³ Laffer, an American economist achieved a certain notoriety in the beginning of the 1980s for his theory of how a reduction in taxation could lead to an increase in Government revenue. His Laffer curve showed on the x-axis the level of taxation and on the y-axis the level of Government revenue. It showed that up to a point of taxation, Government revenue would increase as the rate of taxation was increased. But after a certain “threshold” level is reached, Government revenue will go down as tax payers motivation for extra productive work is undermined by excessive taxation, while investing in tax evasion and fraud becomes very productive. His theory provided ideological stimulus to the Reagan administration’s policy of tax cuts.

In the short run both options are difficult to apply successfully.

First, although productivity in the Eastern European energy companies is much lower than in the EU (implying a large scope for efficiency gains) it is hard for the companies to reduce their *average cost of supply* significantly below existing levels. (i) With wage and salary levels of staff still being vastly underpriced (due to continued price distortions inter alia in the housing sector), a reduction in the number of staff has little influence on the total cost of production. (ii) Existing capital stock is largely “written off” in the accountancy books and does not enter the price structure at full replacement value. (iii) Improvements in energy efficiency demand prior “high cost” investments which enter into costs immediately⁴, whereas the benefits in terms of operational savings turn up over the coming years.

Second, the *position of the “energy Laffer curve”* depends on the consumers’ “ability to pay” within the constraints of their household budgets and on their “willingness to pay”. Both are influenced mainly by policy initiatives outside the energy sector. Energy companies can improve the “ability to pay” by providing DSM services to consumers. But more important is the economic growth of the economy and the adoption of specific legislation in social sector - rising minimum salary, unemployment benefits, laws permitting social compensation payments to low income households. “Willingness to pay” can be influenced directly by the energy companies through the provision of better service and in the district heating sector through assistance in the instalment of thermostats in apartment buildings. But service improvements are difficult to achieve as long as incoming revenue falls short of full cost coverage. In addition willingness to pay is improved by the imposition of sanctions in cases of non-payment (easier in electricity than in district heating). But particularly in district heating, sanctions require prior changes in laws and in the organisation of housing associations.

The point of the “energy Laffer curve” discussion is that an analysis of the present status of the transformation process in the energy sector has to look beyond the energy sector as such and must look at a number of regulatory and legal reforms in other areas, in particular in social policy. Some countries, e.g. Latvia, have adopted social legislation permitting municipalities to provide income support to low income citizens in order to enable them to pay their energy bills (and have provided state funding for this purpose). Other countries have not yet such legislation in place. In Poland, for example, subsidies can be paid only to cooperatives and companies, not to individual households.

I kindly invite the conference participants to comment on the Laffer-curve situation in their countries including aspects of social and other related legislation.

Below, a short and very incomplete survey (time and resources were not sufficient for a more in-depth and complete task and little information is provided concerning the situation in Slovakia, Roumania and Bulgaria) is given of the status quo of the restructuring process in the areas of pricing, energy legislation, industry restructuring and privatisation. Most of the information relates to the power and gas industries where elements of “natural monopoly” prevail. The district heating industry is a local industry without major interest to EU internal market rules (except for tendering of new investments), the oil industry is a competitive industry and only subject to environmental/safety/security of supply regulation.

Please feel free to correct mistakes in my presentation, some of my information may be outdated already.

4. Status quo of pricing

Full cost pricing is achieved in the *oil industry* in all countries.

⁴ For companies, such as the Czech power companies which have no difficulties in raising capital internationally, this is not a major constraint. The cost of investment is amortised over the economic lifetime of the equipment and can be matched by savings. For capital starved firms there are important opportunity costs in terms of foregone alternative investments opportunities.

In all countries, the *district heating sector* continues to have serious pricing problems due to the social implications - most public supply is sold to household consumers, the monthly household heating bill is much larger than the monthly electricity bill, the relative cost of production compared to Western European utilities is higher in district heating than in power or in gas and few consumers as yet have the possibility to regulate consumption by using thermostats.

In the *power sector*, substantial advances towards “full cost coverage” have and are being made:

- The Czech republic the commercial and industrial tariffs have been set at full cost and household tariffs will gradually be desubsidized to reach full cost in the year 2000. Overall tariffs are at a level that guarantees a healthy operational profit to CEZ without any direct Government subsidy; which, in combination with its solid balance sheet has resulted in the favourable BBB+ rating by Standards & Poor. This enables the company to raise finance on the international lending market at lower levels than the lending rate of the European Bank.
- In Hungary, current prices almost allow break-even operation of the power industry, and household consumers already pay higher tariffs than industry. The Government has set 1997 as the deadline for full cost coverage including capex component and a decent profit;
- In Poland, retail prices continue to be heavily subsidised, and the tariff structure is upside down with household tariffs being lower than industrial tariffs. But the national transmission company PES has concluded the first bidding round for long term PPAs.
- In the Baltics, full coverage of financial cost although not achieved is facilitated in Lithuania and Estonia by the low financial costs of national power production due to the oil shale based power plants in Estonia and the nuclear power plant Iglimina in Lithuania⁵. In Latvia full cost coverage is still a future goal. The absence of domestic fuels apart from wood and some hydropower makes it particularly difficult to achieve full cost coverage due to the prevailing price distortions between high cost imported products such as fuels and relative low prices of local inputs such as salaries.

5. Status quo of energy legislation and regulatory frameworks

For various reasons, the English model of power sector restructuring and regulation has been a major source of inspiration for energy legislation in most Eastern European countries. The concept of an independent regulator is adopted in most countries. Thus, the a priori basis for the legal and regulatory framework was very free market oriented in the first draft laws. Although the final laws in adopted or draft form have become less liberal than the original draft proposals, the legal basis is rather well adapted to the requirements of the EU transit and TPA-directives.

Presently, a new energy law has been adopted by Parliament:

- in Hungary in 1994
- in Czech Republic in 1994.
- in Latvia, a separate law on the establishment of a regulatory body has been presented to Parliament in 1995 and is about to be adopted; an energy umbrella law is expected to be adopted later this year.

In the other countries, a new energy law is at a very advanced stage of preparation. In Poland for example, the technical work is very advanced not only on the draft energy law but also on the draft secondary laws. In Estonia, a special price commission including three experts, three consumer representatives, three producer representatives and a secretary has been in operation under the Ministry of Economy since 1994.

⁵ Please note the wording “financial cost”. The “economic cost” which includes the external environmental costs and safety risks is much higher and certainly not covered by the present tariffs.

6. Industry Restructuring

In all countries, the energy utilities have been corporatised and in a number of countries the vertically integrated power industry has been split up into the separate components of production, transmission and distribution. The establishment of CENTREL in 1992 to promote the cooperation of the Czech, Hungarian, Polish and Slovak power systems and the decision of UCPTE on integration of the CENTREL system into UCPTE not later than in 1997 as well as the BALTIC RING project are major milestones to facilitate the exchanges of power between the present and the new future EU countries.

- The Czech Republic, the national power company CEZ, although predominantly Government owned has been successfully restructured as a company operating as a market oriented company able to attract sufficient funds on a competitive basis in order to finance environmental and upgrading measures. It seems that the regional gas companies will be privatised in the nearer future and that privatisation of the regional power utilities is a long term goal.
- The restructuring of the power industry in Poland is driven by the Polish transmission company, PSE; the system integrator within a decentralised structure consisting of 19 CHP and 15 power plants on the production side and 33 companies in distribution. The evolving commercial structures, while inspired by the English model, have strong elements of the proposed “French unique buyer” model. The PSE operates with three types of PPA-contracts (purchasing power agreements): long term PPAs of 15-20 years having the goal of securing finance to power projects; medium term PPAs of 4 years similar to the English contracts after 1990 and having the goal of securing stability of supply
- In Hungary, the formerly highly centralised industry has been carved up in about 14 companies, half in generation and half in distribution.
- In Latvia, the difficult pricing and associated debt situation of the energy industry has limited progress in industry restructuring to the divestment of ancillary activities. A break-up of the vertically integrated power company would have brought few benefits, and accentuated the problem of intercompany debt. But present discussions foresee a privatisation of power production, whereas transmission and distribution is to remain in state hands.
- In Estonia, Eesti Energia is still a vertically integrated company. But the Government will restructure the company. Joint stock companies will be formed on the basis of power stations, transmission and distribution networks and a holding company will be formed to hold these shares. The Government will keep the transmission company and the holding company in state hands, the other companies could be wholly or partially offered to private and municipal investors.

7. Status quo of Privatisation and foreign investments

(a) General

In some countries, e.g. Czech Republic, Hungary, Poland privatisation is much advanced in general⁶; in others, in particular Roumania (where the state sector accounts for 90% of industrial production) it has hardly started yet. In the energy industry, the privatisation process has been slow in all countries, partly because of its “strategic industry” image, partly because the “monopoly” status of energy industries protects them against the fierce competitive pressures that make private capital so attractive in other industries.

(b) Oil industry

In the oil industry, with the exception of some countries, for example Slovakia⁷, there are already numerous examples of EU-EE joint-ventures in upstream as well as downstream projects, inter alia:

- In Latvia, recently agreement was reached with the Danish oil company DONG to develop a minor offshore field
- In the Czech Republic a consortium of four western oil companies comprising Shell, TOTAL, Agip and Conoco has agreed to pay US\$ 173 million for a 49% stake in Czech Refineries (CRC), a new company set up to own the country’s two main oil refineries at Chemopetrol Litvinov and Kaucuk in northern Bohemia. The state will retain 51% via Unipetrol, a new company that has been created to assume control of the entire Czech oil, petrochemical and petrol retailing sector.
- Lithuania has invited bids for international investors for shares in the national refinery.

(c) Energy utilities

Apart from a genuine political will to privatise and to accept foreign investments, an important precondition for attracting foreign investment is either a clear commitment to full cost pricing or as a second best, an adequate PPA-framework. The latter implies (i) that the necessary legislations and regulations are in place, (ii) that cost reimbursements are linked to inflation and debt service components are currency linked, (iii) that there are take-or-pay electricity sales contracts and deliver-or-pay fuels contracts, and (iv) that contractual performance of government owned entities is guaranteed by the Government.

- Poland is behind in the privatisation of larger enterprises in general. Therefore, it is understandable that not a single energy utility has been privatised. The “Law on the Privatisation of State owned Enterprises, one of the three laws on the “Commercialisation Programme of State owned Enterprises” which was to supersede the Law on the Privatisation of the SEOs with later amendments has not been agreed upon yet. In January 1995, Energoprojekt, a company with a staff of 200 became the first company to be privatised in the power sector. The Ministry of Industry and Trade has announced plans to offer stakes of up to 49% in its 18 power plants to raise money for their technological upgrade. The first to be offered is the power complex in Kanin comprising the Patnov and Kanin lignite power plants and the Adamov oil fired power plant. However, one must see in practice how these declarations are going to be implemented. Several serious investors have made significant efforts since 1990 in vain to identify investment objects in the

⁶ In Hungary and Poland the private sector accounts for more than 55% of GDP, in Czech Republic for more than 65%.

⁷ Slovnaft, the state owned oil refining and petrochemical company took over 51% of the shares in the largest gasoline distributor, Benzinol (80% of sales outlets in the country) although several large foreign concerns had bid for it. Slovnaft plans to issue bonds through the British firm NatWest to finance its expansion.

Polish power industry. The Vattenfall power company's attempt to become engaged in the Krakow Heat & Power Plant has been a particularly frustrating experience although the proposed joint venture would have brought substantial economic, financial and environmental benefits.

- In Hungary, all power companies - except the national grid, the national dispatch centre and the PAKs nuclear power station will be available for privatisation. It seems there will be no restrictions with regard to majority ownership of the private sector, nor with regard to nationality. The only companies which will not be available for majority private ownership will be the national grid, the national dispatch centre and the PAKs nuclear station. A new plan is being discussed presently for the privatisation of MVM, the state entity which controls the three major thermal power plants and the nuclear power plant Pak. The plan is being supported by the ministers of industry and of privatisation, whereas the minister of finance has some reservations. Tenders for distribution companies will be issued this year and for generation plants next year.

8. Conclusion

The EU "internal market" initiatives in the energy utility sector broadly cover:

- Liberalising generation and the building of infrastructure
- Unbundling production, transmission and distribution
- Introduction of Third Party Access (TPA)
- All of the above within the principle of subsidiarity: national governments determine the right and service obligations of utility companies and are free to establish criteria for the granting of licenses to build infrastructure

In EU countries these initiatives have not been received without debate and controversy. In the area of TPA, in particular, many players have seen a threat to their home markets. The French, for instance, are very keen that the EU adopt their "single buyer" system, which effectively prevents outside generators from supplying local industrial and distribution companies. Seen in this light, the transformation process in the Eastern European countries has come a remarkable long way. The fact that the countries had to rethink their structures from the scratch has given them an advantage in the debate; and the restructuring process would have been much further advanced if it had not been for the difficult pricing problem.