Phare

Progress and strategy paper

Energy

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Energy

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Foreword

This paper is part of a series which will cover each of the main areas of Phare activity. It describes the nature of the problems faced in Phare's partner countries during their transition from planned to market economies. It goes on to examine actions undertaken to date, and to assess their impact on the transformation process.

There is clearly a need to ensure that the approach being taken in any given sector is relevant to the longer-term goals of economic transformation. For this reason, these papers also contain the thinking of those responsible for operating Phare on actions for the future and how Phare should contribute to the next phase of the transition.

The papers do not reflect any official position of the European Commission. They have been written by the Phare Operational Units and are intended as a stimulus to discussion for all those involved in the debate on economic transformation in central and eastern Europe.

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Section 1

Introduction: On the way to convergence

The European Council of Copenhagen agreed that the associated countries of central and eastern Europe (Poland, Hungary, Czech Republic, Slovakia, Bulgaria, Romania) will be able to become members of the European Union as soon as the necessary conditions are met. The Europe Agreements provide the new framework to prepare these countries for progressive integration into the Community, and change substantially the relationship between the European Union and the associated countries. The necessary financial assistance of the Community is handled by the Phare Programme (grants), and the European Investment Bank (loans). Other Community programmes are complementing this assistance in the energy sector (THERMIE programme for research, technology and development, SYNERGY). In this framework, a coherent approach is necessary, taking into account the general and specific provisions made in the Agreements in order to achieve the necessary convergence prior to accession. The Phare Programme is also supporting economic restructuring, and setting in motion this process of convergence, in the case of the central and eastern European countries (CEECs) which have not yet signed Europe Agreements (Slovenia, Estonia, Latvia, Lithuania, Albania). For all the CEECs and the European Union, the European Energy Charter reflects common interests in the energy sector.

After characterising in Chapter 1 the main features of the central and eastern European countries' energy sectors, with a focus on the possible bottlenecks and obstacles hampering a structural convergence between these countries and the European Union, a set of convergence objectives for the energy sector is proposed in Chapter 2, with reference to existing EU policy and legislation, and to the provisions of the European Energy Charter. Convergence objectives are not only related to harmonisation of legislation: they concern economic reform, structural adjustment and sustainable development, fields in which the energy sector plays a major role. In order to allow evaluation of progress towards these objectives, to define assistance needs, and to assess assistance efficiency, corresponding indicative criteria are proposed. In Chapter 3, foreign assistance is discussed as a set of tools facilitating and accelerating movement from the obstacles to the objectives. Concrete proposals are made to improve its impact.

The present document is a framework for dialogue between the Commission and the Phare partner countries. Following the present document, a specific "country orientation document for the energy sector" will be drafted by each central and eastern European country, in which the particular features of the country and its energy policy will be taken into account and corresponding indicative objectives will be proposed. After consensus between the country and the Commission on objectives and milestones, the country orientation document will be the basis for regular in-depth discussions between the Commission and the partner country, allowing definition of the nature and the amount of Phare assistance in the energy sector for the following years.

NB: The present document, in coherence with the Commission Staff Working Paper "Community Assistance in the energy sector to the countries of central and eastern Europe and in the CIS" (COM (93) 635 final) does not discuss in detail nuclear-safety programmes, for which a general strategy has been proposed in the framework of "Nuclear Safety in the context of the Electricity sector in central and eastern Europe and the CIS" (COM (93) 635 final), currently under consideration in the Council.

Section 1

Bottlenecks and obstacles to a structural convergence in the energy sector

Inheritance from the centrally planned economies

In the centrally planned economies, the energy sector's main task was to allow a reliable and abundant supply of energy to both industrial and domestic consumers. The development of the energy sector was therefore almost exclusively supply oriented, the demand side being anticipated and assumed by the objectives set up by the Plan. There was no link between the real cost of energy in terms of production, transport and distribution to the users, on the one hand, and the price paid by them, on the other, the difference being covered by state subsidies. Energy companies were state-owned monopolies, with low productivity and low levels of service quality. Energy production and transport was one of the main industrial activities in term of investment, actually increasing its share of total investment over time. Investment for the energy sector represented in the late 80s between 20 and 40 % of overall industrial investment in the different CEECs. This led to inadequate allocation of financial resources, limiting the investment resources available for other important areas of the national economies.

Excessive use of energy combined with inadequate exploitation and obsolete combustion technologies caused considerable damage to the environment. SO_2, NO_x and CO_2 emission levels were 2 to 10 times higher than the EC standards. Consequences for air quality and public health were disastrous, with an average life length in the most polluted areas (Black Triangle) being five to seven years shorter than the EC average. Mining activities were also carried out without regard for the environment and had dramatic consequences on landscapes, water resources, etc. Soviet designed RBMK and, to a minor extent, VVER nuclear power plants did not comply with IAEA safety standards.

In the framework of the COMECON, the different countries were specialised and interdependent. Dependency on the former Soviet Union was particularly strong with regard to:

- natural gas and oil for which central and eastern Europe was nearly 100 % dependent on former Soviet Union, except for Romania (with nevertheless a tendency towards increasing dependency in the last ten years), for Albania and for Hungary,
- nuclear fuel cycle and nuclear plants technology, which were entirely controlled by the Soviet Union. Therefore, the Czech Republic (even if some nuclear equipment was produced in Plzen), Slovakia, Hungary, Lithuania, and Bulgaria were very dependent on Russia in this regard. The exceptions were Romania (which developed its activity in relation with Canada), Slovenia (with US technology), Poland, Estonia, Latvia and Albania (having no nuclear plant).
- electricity, because the grids of central Europe were interconnected and operated synchronously with the Soviet power grid, allowing exchange only among the former Eastern block. The exceptions were Slovenia, already a member of the Western European "UCPTE" network, and Albania, exporting electricity to the West through synchronous operation with the UCPTE network, presently interrupted by the conflict in former Yugoslavia.

In an attempt to maximise use of domestic resources, some countries developed a high dependency on one primary resource. This was the case in Poland and, to a minor extent, the Czech Republic with solid fuels, in Bulgaria with nuclear electricity, in Albania with hydropower, and in Estonia with oil shale. In general, the share of solid fuels was significantly higher than the European Union average, while the share of natural gas and oil was lower.

New challenges after launching the economic reforms

External constraints: a major price shock

Three to four years into the economic reform process, the energy sector has started to move to a market logic in a very difficult economical and international context. Energy import bills now have to be paid in hard currency at world market prices. The combined effect of this external increase in prices and of devaluation of local currencies has been to make imported energy suddenly three to six times more expensive in national currencies. This price shock has been of the same order of magnitude for the CEECs in the early '90s, as the so-called "oil shocks" for Western Europe in the '70s, having the same type of negative consequences on foreign trade, industrial costs, inflation, foreign indebtedness, etc.

In an attempt to reflect the evolution of energy costs, tariffs are being increased and partially liberalised. In some countries (Czech Republic, Slovakia, Hungary, Poland), the industrial tariffs for energy nearly cover production and transport costs, and sometimes even exceed them, cross-subsidies compensating for low recovery of payments from households. In all countries, the new energy tariffs for households, which are still far from covering real costs, have caused serious social problems linked to the discrepancy between income levels and market level of energy bills.

In the Baltic Republics for example, the average market energy bill for a household is of the same order of magnitude as the average salary. In an interim period, state subsidies are provided to households in order to alleviate the tariff shock, for example for heating. At the same time, state budgets have decreased or even abolished (Czech Republic) their subsidies to energy companies.

Demand side: consumption decreases but energy intensity picks up.

A specific and common feature of central and eastern European countries' energy situation is the significant decrease of global energy consumption. Even in the CEECs which started their transformation early (Hungary, Poland), energy consumption seems to be continuing to decrease or to be stabilising at levels considerably lower than before the reforms. The debate is open on the evolution for the middle and longer term. If it is obvious that economic activity should pick up in the next years, it is probable that this tendency will not be accompanied by a proportional increase in energy consumption. Energy consumption per unit of production will decrease in industry, under the influence both of high energy prices and of the structural evolution of economic activities, with a strong decrease of heavy industry. In transportation and tertiary activities, consumption recovery might come earlier. In general, the respective shares of natural gas and oil in the energy balance are likely to progress to the detriment of solid fuels, which does not necessarily mean that the global demand for these fuels will increase rapidly in all the CEECs.

During the reform period however, the global energy intensity (energy consumption per unit of GDP) has increased, since the collapse of economic activities has been generally more marked than the decrease in energy consumption. The levels of energy intensity were already 3 to 5 times higher than the average level in the European Union before the reforms. They have increased by 5 to 15 % during the last 4 years.

On the consumer side, and even if specific energy-saving strategies will have an influence on consumers' behaviour, the prospect for energy-saving investments is limited by the scarcity of middle- or long-term loans and the unwillingness of the banks to lend money to companies or individuals having a very limited liability. In this context, it becomes clear that high energy prices are not a sufficient condition for progress in energy efficiency and that market mechanisms cannot fully play their role during the transition period.

Supply side: heavy investment programmes for environment and modernisation

Energy companies are facing heavy investment programmes for rehabilitation of power plants and networks, and for environmental and nuclear safety upgrading. In addition, a final decision is yet to be reached on whether investments started before the transition (nuclear power plants of Temelin in the Czech Republic, Mochovce in Slovakia and Cerna Voda in Romania, pumped storage of Kruonis in Lithuania, etc.) will be completed, and if so, in what form. The overall prospect is therefore that electricity companies' indebtedness could increase.

In a context of high supply costs, low liability from clients and decreasing demand, energy companies are facing or will face financial and economical difficulties. In some countries (Baltic Republics, Albania, Bulgaria) these difficulties have turned into shortages of energy supplies to households (heating and electricity) and industry, since energy companies experience difficulties in paying their suppliers. In general, the absence of a balanced energy policy is also a part of the current

supply difficulties. Given the low quality of the service provided by energy suppliers, potential foreign investors in all branches of industry might be discouraged.

Because of the high cost and long pay-back periods of supply diversification investments (pipelines, storage and interconnection of electric networks), the traditional dependency on the former Soviet Union has not significantly decreased for the majority of CEECs, even if some projects are under preparation (harbour terminals in the Baltic Republics, Ingolstadt-Kralupy oil pipeline between Czech Republic and Germany, etc.). On the contrary, additional difficulties of supply are linked to the state of relations between Ukraine and Russia. The CEECs are therefore very vulnerable in strategic terms and the normal exercise of competition between suppliers is not allowed, which implies difficulties in reducing the cost of energy imports.

On the foreign investors' side: need for a legal framework

Potential foreign investors willing to participate in the reconstruction of energy infrastructure are still discouraged by the lack of a satisfactory legal framework to ensure favourable treatment and provide all the necessary guaranties in the pre-investment and investment phases. In this context, a favourable issue of the Energy Charter negotiations on the basic agreement would be a significant step forward.

On the state's side: difficult de-monopolisation

In the face of the strong pressure put on Governments and International Financial Institutions by the monopolistic energy companies to obtain assistance, support and guaranties for their ambitious investment programmes, governments and Parliaments are finding it difficult to take a final decision, because of the unclear demand side forecast. There is a risk that the energy sector would continue to absorb a very significant part of the scarce financial resources, hampering or delaying necessary and/or profitable investments in other key sectors.

The state budgets are no longer in a position to finance expensive investment programmes. De-monopolisation and privatisation of the energy companies and mines are therefore envisaged. In several CEECs the process has started and energy companies are being restructured, commercialised (i.e. transformed into joint-stock companies) and partially or totally privatised (there are various examples of electricity and gas distribution, and municipal heating, being transferred to local authorities). Given the very fragile financial situation and heavy investment programmes, however, few foreign investors are however ready to take risks. Local communities, to which extensive responsibilities, such as district heating, have been transferred do not always have the expertise or the financial resources to promote the necessary modernisation investments.

Summary:
Since energy is used for all human activities, energy prices and energy intensity have a strong influence on macro-economics and a significant social impact. After five years of transition, the CEECs are presently facing a critical situation characterised by:

1 Inefficient allocation of scarce capital resources (too much emphasis on supply side)

2 Inadequate energy tariffs

3 High global energy intensity

4 Weak environmental and nuclear safety performances

5 Low productivity and low quality of service (monopolisation of energy companies)

6 Heavy dependency on one energy supplier or one primary energy resource

7 Bottlenecks in transborder networks

In the short run, the global energy bill is thus increasing inflation, the trade deficit and indebtedness, and therefore hampering macro-economic stabilisation. In addition, the energy issue is extremely sensitive at the micro-economic level in terms of the burden to competitiveness and for social acceptance of the reforms.

High energy prices for final users should motivate necessary energy-saving investments in the future. However, in a context of insolvency and of scarcity of capital, there is a risk that the classical market mechanisms will not be able to play their role fully in the short run, so that the energy factor could constitute a lasting bottleneck for macro-economic adjustment. If adequate solutions are not sought rapidly at the national, regional and international levels, so as to provide adequate financial resources and to facilitate foreign investment, structural convergence with a view to European integration could be endangered.

Section 2

Convergence objectives and indicators of achievement

For each obstacle to structural convergence identified at the end of Chapter 1, this chapter suggests objectives, taking into account, when relevant, the available legal references (EU legislation, European Energy Charter, and Europe Agreements). For each objective, quantitative aggregated criteria are proposed. Since the energy situation in the EU countries is evolving, and is not necessarily transferable to the CEECs, the objectives and quantitative criteria should be considered as indicative only. They will have to be adapted, on a country basis, in specific country orientation documents, which will be discussed between each Phare country and the Commission, allowing general convergence of policies, assessment of reform progress, and support to decision-making process related to foreign assistance. These documents will be regularly up-dated.

	Obstacles	**Objectives**	**Aggregrated indicators**
1	Inefficient allocation of scarce capital resources (too much emphasis on supply side)	Up-dated energy policy, in accordance with EC guidelines	
2	Inadequate energy tarrifs	Price transparency	Energy prices/real costs
3	High global energy intensity	Specific energy efficiency strategy	Energy consumption per unit of GDP
4	Weak environmental and safety performances	Integrated environment and nuclear safety approach	CO_2, SO_2, NO_x per capita
5	Low productivity and low quality of service by energy companies (monopolisation)	Market orientation	Import/Consumption
6	Heavy dependency on one energy supplier or one primary energy resource	Security of supply	Interconnection capacity
7	Bottlenecks in transborder networks	Interconnection of European energy networks	

Energy policy

Energy policy is still a mixed competence between the Community and the Member States. Even if energy policy was not mentioned explicitly in the Treaty on European Union, many parts of this Treaty, as well as the Euratom, European Steel and Coal Community, and European Community Treaties, are applicable to the energy sector. Community energy policy is based on security of supply, market-related energy pricing, and respect for the environment. Specific objectives include the completion of the Single Energy Market, energy efficiency and strengthening the Community's international role.

The Community is currently reviewing its energy policy objectives, which were set out in 1985, in the light of of e.g. growing environmental concerns, progress towards completion of the single Energy Market, increasing external dependence, etc.

Objective

In a context of the significant decrease in energy consumption and high requirements for modernisation investments, each partner country should prepare and officially adopt an energy policy based on an in-depth demand-side approach and on least-cost analysis, in order to avoid misallocation of scarce financial resources. For this purpose, modern databases, allowing a good knowledge of present energy consumption breakdown and demand forecast, should be developed. The energy policy should be regularly up-dated (at least every two years). As far as possible, they should take account of the EU guidelines.

Energy policy: Legal references

The objectives of energy policies within the European Union are defined in the Council resolution (86/C241/01) of 16 September 1986. The Commission is presently preparing new energy policy guidelines which will take account of new developments, such as enhanced environmental concerns, single energy market, etc.

Indicator

Availability of an updated national energy policy

Price transparency

Price issues are fundamental for a market approach allowing competition between suppliers, and an acceptable pay-back period for investment in the energy sector. Energy tariffs must therefore reflect real costs of production transport and distribution.

Objective

Energy pricing and taxation strategies should be developed, the objective being that prices should cover real costs of energy, with possible transitional arrangements, in particular for domestic consumers, to take account of the discrepancy between local purchasing power and world market levels of imported fuel prices. Possible subsidies should be conditioned to rational use of energy. In a longer term perspective, energy tariffs should comply with guidelines included in the EU directives, in particular in terms of consumers' access to information on tariffs.

Price transparency: Legal references

Within the EU, the Council on Environment of 3 December 1981 decided that prices at consumer level must reflect conditions and long term tendencies of the world market. One of the facts determining prices at consumption level should also be the cost of substitution, including investment costs. Prices must be as transparent as possible, consumers must have access to information concerning the modalities of determination of prices and tariffs; prices at consumption level must give incentives for the rational use of energy. This decision was completed by the Council directive 90/377 concerning a Community procedure to improve the transparency of gas and electricity prices charged to individual end users. See as well European Energy Charter, article 3.2: price formation shall be based on market principles.

Indicator

Actual energy tariffs for industry and households compared with those obtained by using calculation methods contained in EU regulation.

Energy efficiency strategy

Market pricing for fuels is the first energy-saving incentive. However, after the oil shocks, EU member states have developed specific energy-efficiency strategies, in the framework of their energy policies (see above). A fortiori, in the context of scarce capital resource, high investment needs, and general insolvency risks prevailing in the CEECs, the process of decreasing energy intensity has to be started and facilitated by ad hoc measures.

Objective

A proactive energy-efficiency strategy should be developed with the aim of decreasing energy intensity. This strategy should take account of the experience available in the EU, namely in the framework of the SAVE programmes and in the RDT programmes. Energy-efficiency strategies in central Europe should include the setting up of responsible bodies such as energy agencies capable of managing significant budgets efficiently, as is already the case in Romania, Czech Republic, Slovakia and Lithuania.

The type of action has to be adapted to the specific conditions of economic reform, including for example guaranty schemes, energy-saving funds complementing commercial schemes when necessary, training related to third-party financing, development of energy consultant, etc. Transfer of European technologies should be facilitated, in particular through the THERMIE programme.

Energy-saving strategy: Legal references

The communication from the Commission to the Council (COM (92) 182 final) develops the Community strategy to limit CO_2 emissions and to improve energy efficiency (SEC 91/ 1744 final), through certification of energy consumption in buildings, billing of heating, air conditioning and hot water costs on the basis of actual consumption, promotion of third-party financing for energy-efficiency investments in the public sector, thermal insulation of new buildings, regular inspection of boilers and vehicles, energy audits. This communication has been implemented through a series of Council Decisions (COM (92) 180, 181, 182 final (SAVE programme), 226).

See as well directives 78/170 and 82/885 defining the minimum efficiency standards for the installation of new heat generators, future directive on minimum efficiency for refrigerators, Council Resolution of 9 June 1980 (series of guidelines for energy-efficiency programmes in housing, industry, agriculture, commercial sector, transport and production of energy).

Within the Energy Charter, a specific protocol currently under negotiation defines the policy principles for the promotion of energy efficiency.

Indicator

Energy consumption per unit of GDP is a comprehensive indicator. Covering all economic sectors, its evolution is capable of revealing in-depth transformations at a glance.

A decrease in energy intensity can be obtained both by limiting energy consumption and by increasing the value of production, which in its turn can be obtained by an increase of productivity, an improvement in the product's quality level, and a real appreciation of local currencies. Growth in all these significant parameters is reflected in the decrease of energy intensity expressed in toe/MECU (tons of oil equivalent per million ECU). Even if comparisons from one country to another are subject to statistical uncertainties, evolution of energy intensity in one particular country with regard to an objective allows assessment of its energy-saving policy.

National programmes

The first objective of the national programmes was to establish permanent contacts, through programme management units (PMU) staffed with both foreign and local experts, working on a permanent basis within the ministries in charge of energy in the partner countries (see annex II). The PMU task is threefold: advisory, coordination of foreign assistance, and management of the Phare programmes and projects, either through advance-payment systems (Bulgaria, Czech Republic, Slovakia, Hungary and Poland) in relation with Commission Delegations, or directly in relation with the Phare operational unit in Brussels for the other countries and the multi-country programmes.

It has taken a relatively long time to achieve an effective integration of the foreign experts in the ministries' work, mainly because of language problems, but also because it took time before the foreign advisors got acquainted with local practice, and before the local partners realised the profit they could gain by associating foreign colleagues in the preparation of their energy policies. The experience has, however, proved fruitful when there is sufficient willingness and adaptability on both sides.

Regarding the type of activities undertaken in the different countries, the following can be mentioned in summary:

Albania: A permanent EU energy expert financed by Phare is advising the newly-created Committee of Energy for the development of a national energy strategy.

Bulgaria: Because of the very critical situation of the electricity sector, very much dependant on the nuclear units of Kozloduy, Bulgaria has been a priority for Phare energy, with two emergency-assistance programmes, one for electricity imports, the other for spare parts for the non-nuclear power plants. In addition, a very wide spectrum of technical assistance has been provided to the National Committee of Energy, covering solid fuels, natural gas, energy efficiency, etc. The projects are managed by a PMU with two EU experts and local officers. A co-financing scheme is envisaged with the EIB and the EBRD concerning the rehabilitation on the coal power plant of Maritsa. The Phare participation would cover expenses related to desulfurisation.

Czech Republic: A wide range of activities covering institution-building, price issues, least-cost approaches, with a specific focus on energy efficiency. Phare also finances an Energy Efficiency Fund, supporting small- and medium-scale energy-saving investments through the banking sector. A PMU staffed with two EU experts, two local ones, and three officers of the Ministry of Industry is managing the programmes.

Estonia: A permanent EU advisor financed by Phare is helping the government develop an energy policy and improve energy efficiency. Specific projects will be developed in these areas. A cooperation with the EBRD is developing in the framework of the "Bangkok agreement".

Hungary: Several pilot projects regarding municipal heating have been undertaken, with favourable effect on energy efficiency, namely in the town of Eger, where the energy consumption of a municipal heating has been decreased by 30 %. Phare THERMIE and DG XVII's Synergy programme are co-financing with the Hungarian Ministry of Industry an Energy Centre actively involved in energy-efficiency promotion, in particular through public awareness campaigns, training and advisory activities. The Centre has taken over the implementation of several Phare projects, after a reorganisation of the PMU in expiry of the foreign assistance contract to the Ministry of Industry and Trade. The Ministry still has overall responsibility for management of the programme management and implements directly the projects related to energy policy and the regulatory framework.

Latvia: Technical assistance projects have provided valuable results in the area of energy policy and energy-efficiency strategy. A permanent EU advisor co-ordinates these activities and supports the government in the field of crisis management. A permanent EU financial advisor helps the energy companies in enforcing new accountancy techniques and to prepare projects to be supported by International Financial Institutions, in particular the EBRD.

Lithuania: A permanent EU advisor assists the newly-established Energy Agency in implementation of the Energy Strategy developed in the framework of a Phare project, undertaken jointly with the Lithuanian energy Institute, in liaison with the World Bank and EBRD.

Poland: Phare is deeply involved in the energy-sector restructuring process, together with U.K. Know-How Fund, USAID and the World Bank. 7 EU experts and 4 local experts are participating in the drafting of the energy law in the framework of the Energy Restructuring Group based at the Ministry of Industry. Projects concerning development of a Master plan for the energy sector, and another related to integrated resource planning and demand management have recently been launched.

Romania: Phare activity mainly concerns energy efficiency, with a technical assistance programme to the Romanian Energy Conservation Agency (ARCE), and

activities on municipal heating and on the electricity sector (least-cost study in liaison with EIB). An environmental-impact-assessment study is being conducted for the lignite sector, in liaison with the World Bank. A programme in the regulatory field is now being developed. A PMU will be set up at the Ministry of Industry in the first half of 1994.

Slovakia: In addition to the PIU staffed with one EU expert, two local experts and local officers of the Ministry of Economy, Phare is financing technical assistance projects in all energy areas with a focus on energy-saving in industry and in public building. Numerous training activities are developed for energy consultants. An Energy Saving Fund financed by Phare has recently been set up. Relations are developed with the Energy Agency.

Slovenia: Phare activities are developing in the areas of regulation, energy-saving, electricity tariffs and accounting methods for energy companies. A permanent energy advisor to the Ministry of Economy is financed by the Synergy programme (DG XVII).

While 1991 budgets are totally committed in all countries with the exception of Hungary, 1992 budgets will be totally committed by mid-1994. Regular co-ordination with the International Financial Institutions is ensured both by PMUs and by Brussels, through regular contact with EIB, EBRD and the World Bank.

In Bulgaria, the Czech Republic, Lithuania, and Slovakia, specific nuclear-safety programmes are financed by Phare. In Bulgaria, the nuclear-safety programme is managed by a specific PMU. In the Czech Republic, Lithuania and Slovakia, the possibility of coordinated management of the energy and nuclear safety programmes is presently being considered.

Multi-country

The network of experts (both local and foreign) working for Phare energy is in close relation through the regional Phare activities, in the framework of which bi-annual plenary meetings and steering committees are organised.

The multi-country energy programme is facilitating cooperation between all the Phare partner countries. It is developing very efficiently, with a considerable involvement of partner countries. During the plenary meetings, experience related to the national programmes is shared on an informal basis as well, allowing high-quality collaboration and improvements in working methods. The regional projects cover the following areas:

Interconnection of energy networks: A European master-plan for interconnection of natural gas networks, financed by the regional programme, will be available in September 1994. A feasibility study for the interconnection of south-east European electricity networks with UCPTE is underway. A large technical assistance project to support the interconnection of CENTREL (Poland, Czech Republic, Slovakia, Hungary) with UCPTE is underway as well. The question of the relations between the UCPTE networks extended to central Europe with the former Soviet network will be studied by a future Phare regional project. In the oil sector a demand-side analysis combined with training of specialists will be undertaken in 1994.

Twinning and training programmes are allowing an efficient transfer of experience and know-how between EU specialists and their colleagues of central and eastern Europe, in the electricity sector (ongoing) and in the field of energy efficiency for local communities (to be launched in 1994). Other twinning programmes will be developed in the coming months. An important project has been launched to facilitate implementation of the European Energy Charter principles in CEECs' legislation.

Energy and environment: A very important programme is being prepared, to develop a coordinated strategy in the field of clean and rational use of coal in central and eastern Europe.

The multi-country projects are advancing quickly, 76 % of the 1992 budget being committed at the end of 1993. The International Financing Institutions and representatives of the utilities from both the EU and the partner countries take part in the regional activities, the principle being that the Phare studies related to interconnection of networks should identify investment projects which the utilities and the IFI will then co-finance, possibly together with Phare when appropriate.

The Phare energy tool box

Whereas Phare energy programmes initially tried to meet CEECs' needs on a case-by-case basis, in future, energy-sector projects for which Phare funding is proposed will have to be integrated into a coherent strategy defined by concrete convergence objectives agreed with the Commission in the context of the strategic orientation document. The table below lists the types of projects which could form the Phare energy tool box.

	Objectives	Phare energy tools	Examples
1	Energy policy	Set up of demand-side databases	Romania 91
		Least-cost development studies	CSFR 91
		Development of energy policies, based on realistic demand-side analysis	Lithuania 91
		Sector restructuring policy	
		Audit of existing energy-pricing systems	Poland 91/92
2	Price transparency	Strategy on energy prices and taxation	CSFR 91
		Development of accountancy and billing systems	Lithuania 93
		Definition of a comprehensive energy-saving strategy	
3	Energy-efficiency strategy	Audits related to energy-saving potential in different sectors	Latvia 91
		Assistance to the creation of energy agencies or to existing ones	CSFR 91
		Training for energy consultant	Romania 91
		Training for energy managers and decision makers	Czech Rep. 92
		Development of financial incentives and tools (energy-saving funds)	Poland 92
		Development of energy-efficiency standards	Czech Rep. 93 and Slovakia 93
		Pilot projects	Hungary 91
		Development of consumers' awareness and information	Hungary 91

	Objectives	Phare energy tools	Examples
4	Integrated environment and nuclear-safety approach	Environmental impact and safety assessment studies	Romania 91
		Audit of existing environmental and safety regulations and recommendation for future adaptation	Bulgaria 94
		Environment up-grading strategy for energy companies	Regional 94
		Co-financing of investments for environment and safety improvement	
		Development of clean-coal technologies	
5	Market orientation	Development of secondary legislation (license schemes)	Poland 91/92
		Screening of existing regulation	Regional 92
		Commercialisation, restructuring and privatisation of Energy companies	Poland 91/92
		Screening of existing regulation	Hungary 91
			Regional 92
6	Security of supply	Strategic study on diversification of supplies	Lithuania 92
		Strategic study on use of local and renewable energy resources	
		Feasibility studies related to storage or harbour facilities	
7	Development of European energy networks	Interconnection feasibility studies	Regional 92
		Technical assistance to operators to help them fulfil conditionalities of interconnection	Regional 92
		Twinning programmes	Regional 92, 93
		Co-financing of equipment or of interconnection infrastructures	

New perspectives

Phare Energy as a convergence tool

It is foreseen in the conclusions of the Copenhagen summit, that the energy sector is an area in which regular high-level meetings will take place between the Council and the authorities of the associated partner country on questions of common interest. This high-level dialogue needs to be prepared on the basis of concrete cooperation activities. After three years of experience a valuable knowledge of the transition processes in the energy sector has been gained by the CEECs authorities, by the foreign experts and by the Commission staff (Phare and DG XVII). As a general methodology for the future and in the framework of the Association Agreements, Phare energy programming will initiate a convergence dialogue, whose progress will be assessed by reference to convergence objectives and criteria which have been jointly defined. New projects which could accelerate movement towards these objectives will be discussed. This means that commitment or disbursement rates will no longer be the only available indicators to judge the success of Phare in the energy field.

In the terms of reference defining the Phare energy project, the available legal EU references will have to be systematically included.

Phare Energy as a possible support to investment projects

Whereas Phare was almost exclusively devoted to technical assistance in 1990 and 1991, the 1992 guidelines identified several areas in which Phare was able to co-finance investments, including those aimed at nergy efficiency. The emphasis on investment has been strengthened by the Edinburgh and Copenhagen Councils, where it was decided that up to 15 % of the overall Phare budget could co-finance investment projects related to European networks, including in the energy field.

The decision to allocate 150 MECU to facilitate cross-border cooperation between regions is another recent development which could allow Phare involvement in concrete energy investments. It is designed to support investment in local and regional infrastructure projects, such as interconnection of energy distribution networks.

These new orientations provide extended possibilities for Phare energy to develop its activities in the field of investment co-financing together with the International Financial Institutions (EIB, EBRD, the World Bank), by following up the conclusions of technical assistance projects with concrete and visible projects (in so far as the latter are compatible with the national energy policies and the legal framework). In addition, co-financing could be developed with the research and technology development programmes, with THERMIE and other Community programmes. In this regard a good example of complementarity is the co-ordinated approach currently being developed between the ECOS/OUVERTURE and Phare multi-country programmes in the field of energy-saving for local communities.

Nevertheless, strict conditions should be established to ensure an efficient use of Phare money in co-financing schemes. In the energy sector, and as a logical consequence of the analysis contained in Chapter 1, investments funds should not be devoted to increase production capacities, but to rehabilitate existing ones (productivity, environment and safety up-grade), to increase energy efficiency, to develop transport and distribution networks and quality of service, to diversify energy sources, to set up adequate billing systems, etc. For interconnection of energy networks, conditionalities should be raised in terms of environmental standards, in order to avoid de-localisation of polluting capacities.

A meeting will be organised in September 1994 by the DG XVII's Synergy programme for representatives of the Phare partner countries and foreign investors to discuss the new ways to finance investment in the energy sector.

More involvement for local companies

Until now, companies from the CEECs themselves have not been greatly involved in the operation of Phare activities. In the energy sector, there was an attempt to ensure efficient collaboration between foreign consultants and local experts through sub-contracting arrangements and through twinning programmes. For the regional projects related to electricity interconnection, terms of reference were drafted by local experts.

In the future, this orientation will be strengthened, and more local companies will be invited to tender. One of the first examples of this openness to local consultancy or engineering companies will be the call for tenders for the Programme Coordination Unit (PCU) for the multi-country programme. A pre-selection process managed by the PMUs of the different partner countries will determine which CEEC companies should be invited to tender. This will be a good opportunity to develop contacts between the PMUs and the local companies.

More responsibility on the recipient's side

Responsibility for how Phare energy funds are used will be progressively devolved to recipients. Participation of foreign experts in the PMUs will be decreased and the PMUs will be more linked to local bodies responsible for the implementation of the energy policy (energy agencies or energy centres, for example).

More emphasis on project output and follow-up

In the frame of the convergence dialogue, more emphasis will be put on project output and follow-up. Where relevant, an improved dissemination of results will be sought, through seminars, brochures and articles. The partner governments will be requested to officially endorse the final conclusions of a project and to give information on the follow-up.

In this regard, a symposium will be organised by the DG XVII's Synergy programme in November 1994 in Budapest, during which the results of regional studies related to interconnection of energy networks will be presented and discussed.

Improved coordination

Phare energy will strengthen its links with other donors (EU member states, IFIs: EIB, EBRD, the World Bank, etc.), namely for co-financing of investments.

Increased efforts of coordination will also be necessary between the different Phare programmes in environment, nuclear safety and energy, including involvement of the corresponding Directorates-General of the Commission (DG XVII and DG XI), and with other community programmes such as THERMIE. In this particular case, EC energy centres in the partner countries could play a specific role in identifying and channelling projects of common interest.

It is not logical to discuss energy policy without an in-depth view of nuclear safety and environment aspects. Coordination with Phare activities in the fields of industrial restructuring and privatisation must also be ensured, when energy companies are concerned. The coal sector, in which number of DGs (XVIII, XVII, XVI, XII, XI, V, I) are involved, is to be considered as a priority area for coordination. A task-force has been set up to allow coherence and to manage common activities.

Conclusion

After the first phase of economic reforms, during which emphasis was placed on legislation, privatisation and institution-building, a second phase will now start, in which restructuring of large companies and rehabilitation of infrastructure will be the key issues. Whereas assistance to the reform process mainly concentrated on technical assistance and training during the first phase, it has to be adapted to the new requirements of the second phase. This is particularly true for the energy sector, where the heavy investment requirements are most unlikely to be financed solely through market mechanisms. Only a very close coordination at the European level between CEECs and international institutions will ensure efficiency in the selection and the financing of these projects. As regards the coordination of the CEECs with the European Union, the Phare energy programme will have a particular role in ensuring an in-depth dialogue between the EU and the partner countries, so that energy strategies and the foreign assistance programmes which support them are coherent and allow the necessary structural convergence with a view to European integration.

After it has been discussed with the CEECs and with the EU member states, this strategic orientation document and the corresponding national versions should be the basis for a common approach in the energy field. The documents will be regularly up-dated to take account of the progress made in the convergence process on both sides.

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Country sheets

Albania

	Objectives	Phare energy tools	Status
1	Energy policy	EU energy advisor	ongoing
2	Price transparency		
3	Energy efficiency		
4	Integrated environment and nuclear-safety approach		ongoing
5	Market orientation	see regional project Energy Charter	
6	Security of supply		
7	Development of European energy networks	see regional project Balkan electricty networks interconnection	planned
		see regional project natural gas interconnection	ongoing

Bulgaria

	Objectives	Project Status	Status
1	Energy policy	Organization and policy formulation of the energy sector	ongoing
		Setting up of regional energy centres	planned
		Setting up of energy database	planned
		Development of energy statistics	ongoing
		Setting up of regional energy plans	planned
2	Price transparency	Prices and tariffs - economic and social impacts	ongoing
3	Energy-efficiency strategy	Energy efficiency and conservation at the demand side	ongoing
		Publicity compaign for energy saving	ongoing
		Management training	ongoing
		Energy efficiency in buildings	planned
		Generation plant improvement	ongoing
4	Integrated environment and nuclear-safety approach	Environmental acceptability of continued use of briquettes for domestic heating	ongoing
5	Market orientation	see regional project Energy Charter	ongoing
6	Security of supply	Economic and social study Bobov Dol mining complex	ongoing
		Development and utilization of domestic lignites	ongoing
		Use of gas for households	ongoing
		Assessment of renewable energy sources	ongoing
7	Development of European energy networks	Study on high-voltage transmission and medium-voltage distribution network including connection of the electricity system to the UCPTE system	ongoing
		see regional project Balkan electricity networks interconnection	ongoing

Czech Republic

	Objectives	Phare energy tools	Status
1	Energy policy	Setting up and management of an energy data-base	ongoing
		Least-cost study for the power sector	completed
		Coherence with EU energy policy (technical assitance to the Ministry of Industry on request)	ongoing
2	Price transparency	Energy pricing and taxation	ongoing
3	Energy-efficiency strategy	Energy efficiency in buildings	ongoing
		Energy efficiency in the paper and glass industries	ongoing
		Energy audits for drying technologies	planned
		Energy audits in breweries	planned
		Energy audits in public buildings	planned
		Audits in cogeneration plants	planned
		Revolving fund for energy efficiency	ongoing
		Training in energy efficiency for municipalities	planned
		Energy conservation training for plumbers	planned
4	Integrated environment and nuclear-safety approach	Energy concept for the town of Most	ongoing
		Energy concept for the town of Ostrava	ongoing
		Energy concept for the town of Prague	ongoing
		Action plan for the towns of Karlovy Vary and Brno	ongoing
		Clean-coal sector study	ongoing
5	Market orientation	see regional project Energy Charter	ongoing
		Regulatory institutions	completed
		Management training for electricity utilities	planned
6	Security of supply	Renewable energy	ongoing
7	Development of European energy networks	see regional project CENTREL interconnection	ongoing
		see regional project Natural gas interconnection	ongoing
8	Miscellaneous	Life assessment of boilers	planned
		Investment analysis for district heating projects (training)	planned

Estonia

	Objectives	Phare energy tools	Status
1	Energy policy	EU energy advisor	ongoing
2	Price transparency		
3	Energy efficiency		
4	Integrated environment and nuclear-safety approach		
5	Market orientation	see regional project Energy Charter	ongoing
6	Security of supply		
7	Development of European energy networks	see regional project electricity interconnection of eastern neighbours with the extended UCPTE network	planned
		see regional project natural gas interconnection	ongoing

Hungary

	Objectives	Projects	Status
1	Energy policy and laws	Coal-sector study	completed
		District heating sector study	ongoing
		Regional energy concept for	ongoing
		Baranya County	ongoing
		Setting-up of an energy database	ongoing
		Development of energy statistics	
2	Price transparency		
3	Energy efficiency strategy	Setting up of the Energy center responsible for training in energy saving and management	completed
		Energy-saving campaign	completed
		District heating pilot projects	ongoing
4	Integrated environment and nuclear-safety approach		
5	Market orientation	see regional project Energy Charter	ongoing
6	Security of supply	Promotion of the use of renewable energy through pilot projects	planned
7	Development of European energy networks	see regional project Electicity interconnection CENTREL	ongoing
		see regional project Natural gas interconnection	ongoing

Latvia

	Objectives	Phare energy tools	Status
1	Energy policy	EU energy advisor	ongoing
		Energy strategy	completed
2	Price transparency		
3	Energy efficiency	Comprehensive energy-conservation strategy	completed
4	Integrated environment and nuclear-safety approach		ongoing
5	Market orientation	see regional project Energy Charter	
6	Security of supply		
7	Development of European energy networks	see regional project electricity interconnection of eastern neighbours with the extended UCPTE network	planned
		see regional project natural gas interconnection	ongoing

Lithuania

	Objectives	Phare energy tools	Status
1	Energy policy	EU energy advisor	ongoing
		Energy strategy	completed
		Least-cost planning for the electricity sector	planned
2	Price transparency		
3	Energy efficiency	Updating of Energy-Conservation Programmes (insulation of buildings, energy conservation in industrial processes, metering of heat)	planned
4	Integrated environment and nuclear-safety approach		
5	Market orientation	Organisation of the electricity and heat sectors	planned
		Decentralisation of the energy sector to local communities	planned
		see regional project Energy Charter	ongoing
6	Security of supply	Advisory services to gas-contract negotiation	planned
7	Development of European energy networks	see regional project electricity interconnection of eastern neighbours with the extended UCPTE network	planned
		see regional project natural gas interconnection	ongoing

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