

---

# ENERGY IN EUROPE

---

COMMUNITY ASSISTANCE IN  
THE ENERGY SECTOR TO THE  
COUNTRIES OF CENTRAL  
AND EASTERN EUROPE AND  
THE FORMER SOVIET UNION

---

SPECIAL ISSUE - AUGUST 1993

---



FOR FURTHER INFORMATION  
CONCERNING ARTICLES OR ITEMS  
IN THIS ISSUE PLEASE CONTACT:

*The Editor*  
Energy in Europe  
DG XVII  
Commission of the European Communities  
200 rue de la Loi  
B-1049 Brussels  
Belgium

Tel: 32-2-295-2879  
Fax: 32-2-295-0150  
Telex: COMEU B 21877

Opinions expressed in this publication do not  
necessarily reflect those of the Commission of  
the European Communities.

Luxembourg: Office for Official Publications  
of the European Communities, 1993

ISBN 92-826-6358-2

Reproduction of contents is subject to  
acknowledgement of the source.

*Printed in Belgium*

---

# **E N E R G Y**

# **I N   E U R O P E**

---

**COMMUNITY ASSISTANCE IN  
THE ENERGY SECTOR TO THE  
COUNTRIES OF CENTRAL  
AND EASTERN EUROPE AND  
THE FORMER SOVIET UNION**

---

**SPECIAL ISSUE - AUGUST 1993**

---



---

## CONTENTS

---

INTRODUCTION AND BACKGROUND .....	5
CONCLUSIONS .....	7
COMMUNITY FINANCIAL CONTRIBUTION .....	7
STATUS REPORT ON THE PHARE AND TACIS 1991 PROGRAMMES .....	8
PHARE AND TACIS 1992 PROGRAMMES AND FUTURE PROSPECTS .....	9
OTHER EC PROGRAMMES IN THE ENERGY SECTOR.....	11
Thermie .....	11
International Energy Cooperation Programme .....	12
INTERNATIONAL COORDINATION.....	13
G-24 Energy Working Group.....	13
NIS.....	14
POLICY FRAMEWORK .....	14
Bilateral Agreements .....	14
European Energy Charter .....	14
ANNEX 1 .....	16

---



---

COMMUNITY ASSISTANCE IN THE ENERGY SECTOR TO  
THE COUNTRIES OF CENTRAL AND EASTERN EUROPE AND  
THE FORMER SOVIET UNION

---

REPORT BY THE SERVICES OF THE COMMISSION  
SEC(93)1016, June 1993

#### INTRODUCTION AND BACKGROUND

*This report, requested by the Presidency, describes the Community's programmes which assist the Eastern countries address their energy problems. It is complementary to the report prepared by the services of the Commission in April 1993 on Community efforts in improving nuclear safety in these same countries<sup>1</sup>. The present report covers the non-nuclear energy components of the PHARE and TACIS programmes as well as the energy-focused Thermie and International Energy Cooperation programmes. It also describes efforts to coordinate international action and the policy framework for Community actions, in particular the European Energy Charter.*

The energy sector in the countries of Central and Eastern Europe and the former Soviet Union suffers from a number of problems arising principally from the failures of the system of serious centrally planned economies. Under this system, emphasis was placed on cheap supplies of energy, especially to industry, with little or no attention paid to energy efficiency either in terms of supply or end use. In later years, the energy sector suffered from lack of investment which has led to inefficiencies and wastage in energy supply and the

postponement of new energy supply projects especially in the former Soviet Union. In addition, the environmental implications of this inefficient and wasteful system of energy supply and demand are very great, not least in the area of nuclear safety.

There exists therefore an enormous potential for energy saving in Eastern countries. Experts consider it feasible for example to save 30% of the energy used today in the FSU - a saving which would amount to an extra ECU 20 billion of oil exports per annum. Reduced domestic consumption would therefore allow increased energy exports and associated hard currency revenues for energy producers, and reduced imports and hard currency expenditure for the energy importing countries. Reduced energy demand would also alleviate the environmental impact of energy production, supply, and use, and provide Eastern countries with more freedom of choice with regard to decisions on future energy options. In many ways, energy saving may be regarded as the key to turning round the energy sector in Eastern countries and the litmus test for Community assistance in this sector.

Following the break-up of the former Soviet bloc and the emergence of independent states, the Community has been quick to launch and implement assistance programmes. In the energy sector, the PHARE and TACIS programmes (CCEE and NIS respectively), both based on Council regulations, have aimed to reform and restructure the energy sectors of Eastern countries by way of technical assistance projects. The Thermie programme was extended to Eastern countries to promote new energy technologies, aiming in a first stage, to obtain short-term results by achieving concrete energy-saving actions in the major end-use sectors. The International Energy Cooperation Programme represents a quick-acting and versatile tool in support of the major programmes and provides a focus on

---

<sup>1</sup> 'Existing and planned efforts by the Community to assist the Central and Eastern European countries to improve the safety of their nuclear reactors' - Report by the services of the Commission, April 1993.

From the experience gained from these various Community programmes, certain guidelines are emerging for future actions in the Eastern countries to achieve significant results in the short- to medium-term. These include:

***Sustainability***

Projects must be selected which have a lasting impact in the countries concerned. This may be achieved for example by way of institution building and/or training local managers/technicians.

***Investment-oriented***

Projects must increasingly pave the way for capital investment in the energy sector and hence support real economic development in Eastern countries. There is no longer scope for studies which have little or no follow-up.

***Effective coordination between donors***

This must be made more effective. The Community, as the largest donor in terms of grant financing, has a major role to play. More effective coordination is essential to achieve the large-scale capital investment required.

***Local contribution***

The potential for the involvement of local organizations in Community projects is greater than first assumed. Local expertise is often high quality and available at a fraction of the costs of Western consultants. This potential must be tapped to ensure genuine transfer of know-how and skills.

***Local conditions, including economic, political, social and cultural factors***

Such differences between Eastern countries must be fully taken into account when implementing Community programmes. Successful projects in the Visegrad countries, for example, might not be appropriate in the radically different conditions which prevail in Central Asia for instance.

***Reference projects***

The Thermie programme has demonstrated the benefit of such projects, often involving small investments in low-cost technologies to achieve significant energy savings. There is a need to create more 'references' in all energy sectors as a step towards a more rational supply and use of energy in Eastern countries.

**SOME OF THE ACRONYMS USED**

CCEE	Countries of Central and Eastern Europe
NIS	New Independent States of the former Soviet Union
FSU	Former Soviet Union
PHARE	Poland/Hungary Aid for Economic Restructuring, (now extended to include 11 CCEE)
TACIS	Technical Assistance to the Commonwealth of Independent States (plus Georgia and Azerbaijan)
THERMIE	Programme for the promotion of New Energy Technologies
IECP	International Energy Cooperation Programme
PIU	Programme Implementation Unit (PHARE)



**CONCLUSIONS**

The European Energy Charter provides the framework for future energy cooperation on the European continent and indeed beyond. This will involve a process of harmonization and integration leading to an eventual single European Area in the energy sector.

Taking this into account, the Community must apply consistent and rational policies in the energy field, both in terms of implementing the principles and provisions of the European Energy Charter and in the framework of the Community's bilateral agreements with the countries concerned, including the Europe Agreements<sup>2</sup>, and the Partnership and Cooperation Agreements<sup>3</sup> currently under negotiation.

Within this overall framework and to give effect to these various Agreements, the policy approach towards the Community's Eastern partners in the field of energy needs to be as coherent and well coordinated as possible. To support specific actions, there should be continuity of Community funding which takes account of periodic variations in PHARE and TACIS funding.

In the non-nuclear energy sector, the Community should continue to focus on energy saving in terms of both energy supply and end use. The potential for energy saving is enormous and, if realised, significant economic and environmental benefits will accrue to the Eastern countries and indeed to the Community as well. It would also allow Eastern countries more freedom of choice with regard to their range of future energy options.

Community actions must be targeted to produce results which have a lasting impact. This will mean, among other things, greater involvement of local entities, more emphasis on training, and above all concentration on actions which lead to capital investment. Successful projects, demonstrating concrete results, as in the case of the Thermie 'rash' programme, should become 'reference' projects for widespread replication throughout the Eastern region.

The need for effective coordination is paramount. This applies to coordination between the various Community programmes concerned. Policies must be consistent, and action coordinated between the energy components of the PHARE and TACIS programmes and Thermie. The smaller International Energy Cooperation Programme, through carefully targeted projects, e.g. transboundary projects, may provide the necessary binding to make the Community's operations in this sector an integrated and consistent whole.

Coordination with other national and international donors is also vital. Whilst international coordination is

necessary on certain global issues, experience has shown that there must also be coordination sector by sector. The decision to move the G-24 Energy Working Group downstream to on-the-spot country coordination may be the future direction to follow in the countries of the region.

In addition to coordination activities, there is clearly a need for the Community to rely very much for the implementation of its energy programmes on the energy expertise to be found within the Commission and in Member States' administrations. The Commission will take account of this necessity. To improve the effectiveness of these programmes, the Community's energy industry should be involved to a greater extent than has been the case up to now.

The importance of the energy sector is such that it holds a key to the fortunes of economic development and the reform process in the Eastern countries. The Commission will therefore continue to give the energy sector very high priority across the range of Community assistance programmes, taking into account the policy priorities set by the beneficiary countries.

**COMMUNITY FINANCIAL CONTRIBUTION**

To date the Community has committed the following budgetary resources to non-nuclear energy programmes in Eastern countries:

	PHARE	TACIS	Other EC Programmes*	TOTAL
	in MECU			
1991	35.6	57.0	3.0	95.6
1992	25.1	46.0	11.5	82.6
TOTAL	60.7	103.0	14.5	178.2

\* Thermie and the International Energy Cooperation Programme.

Prior to 1991 the energy sector under PHARE was dealt with under the environment and therefore some energy projects were launched under this heading, especially in the power generation, district heating and energy saving fields.

The total Community funding therefore for non-nuclear energy programmes in 1991 and 1992 amounted to some ECU 178 million.

<sup>2</sup> Europe Agreements with Poland, Hungary, Czech and Slovak Republics, Romania, and Bulgaria.

<sup>3</sup> Partnership and Cooperation Agreements being negotiated with the NIS.

## STATUS REPORT ON THE PHARE AND TACIS 1991 PROGRAMMES

### PHARE 1991 PROGRAMME

The year 1991, just after the Gulf crisis, was the first in which 'energy' played an independent role in the PHARE framework, i.e. one or two years after the other sectors, such as environment. It should be noted that in 1990 energy was dealt with within the PHARE environmental programme.

1991 PHARE energy expenditure is summarised in the table below:

COUNTRY	1991 PHARE BUDGET (MECU)
Hungary	5
Czechoslovakia	5
Bulgaria <sup>1</sup>	8.8
Bulgaria (emergency assistance) <sup>2</sup>	10
Poland	3
Romania	1
Estonia <sup>3</sup>	0.25
Latvia <sup>3</sup>	1.25
Lithuania <sup>3</sup>	1.25
<b>TOTAL</b>	<b>35.55</b>

<sup>1</sup> The Bulgarian programme is a two year programme (1991/92).

<sup>2</sup> Assistance on a humanitarian basis for electricity imports to overcome shortages in winter 1991/92. Shortage was largely due to closure of units of Kozloduy nuclear power plant on demand of IAEA because of safety concerns. Kozloduy accounts for 40% of Bulgaria's electricity supplies.

<sup>3</sup> Funded under TACIS programme, but managed by PHARE.

There is a total of 44 projects. In most countries the programme provides for the establishment of a Programme Implementation Unit (PIU), which has three main tasks: implementation of the projects; coordination of projects of international donors; and energy policy advice. Experience has shown that the PIUs, consisting of one to three external resident experts, can provide more EC energy policy advice when fewer projects have to be implemented.

Energy projects in 1991, apart from PIUs, are focusing on basic analytical work, such as assistance for the development of regulatory frameworks, (e.g. in the Czech and Slovak Republics) formulation of energy policy (e.g. in Lithuania) and setting up of energy conservation and efficiency strategy (e.g. in Latvia and Bulgaria). Also, subsectoral strategic technical assistance has been foreseen, e.g. in the district heating sector (Hungary), the power sector (Romania), solid fuels sector (Bulgaria and Hungary).

Training of management in energy utilities and in the administrations, supporting the economic restructuring

process, will be carried out in Poland, Bulgaria and Hungary.

Institutional support has been provided in Romania to the Energy Conservation Agency, whereas in Hungary an Energy Centre has been cofinanced with the Commission's Directorate-General for Energy and the Hungarian authorities.

Of the total of 44 projects, 33 are underway and include the establishment of PIUs in all beneficiary countries. The value of these 33 projects represents ECU 20 million, or 56% of the total budget.

There have been delays in implementation for a number of reasons; the lack of familiarity of the beneficiaries with the notion of technical assistance in general and PHARE procedures in particular; the difficult integration of the PIUs in the local Ministries, e.g. Hungary, Bulgaria; lengthy and complicated tendering procedures; and the break-up of the former Czechoslovakia, etc.

It should be noted that the Commission has decided to investigate the operation of the Hungarian PIU after continued problems. The results of the enquiry may lead to an improvement of the PHARE implementation process in the region as a whole. Effective implementation depends very much on the active participation of the various local parties.

### TACIS 1991 PROGRAMME

**Total budget: MECU 400; Energy: MECU 115, of which MECU 53 - nuclear safety, MECU 57 - non-nuclear energy, MECU 5 - implementation.**

Following the European Council's decision in Rome (December 1990) to support economic reform and recovery in the then Soviet Union, Council Regulation (EC/EURATOM) No 2157/91 of 15 June 1991 provided the legal basis for a technical assistance programme comprising five focal areas for assistance (energy, transport, food distribution, training, financial services). In the energy field, nuclear safety received a large share of the budget (ECU 53 million); other priority sectors targeted for assistance were energy saving, electricity, oil and gas, and sectoral structures.

Almost immediately after the signature of **Financing Memoranda** on 12 December 1991, the break-up of the Soviet Union created the need for an adjustment of the programme and a commitment from the New Independent States (NIS) to implement the 1991 programme. This was obtained in a **Basic Agreement**, signed on 11 February 1992 by representatives of the CEC and all 12 NIS.

Political problems in, and the eventual disintegration of, the Soviet Union led to the need for many projects to be redefined and renegotiated. Towards the latter part of 1992, the process of tendering and contract awards accelerated considerably.

The current state-of-play per sector is shown below:

TACIS 1991 ENERGY SECTOR PROGRAMME AS AT 1 MAY 1993

SECTOR	A BUDGETARY ALLOCATION (MECU)	B NO. OF PROJECTS	C VALUE OF PROJECTS (MECU)	D VALUE OF PROJECTS LAUNCHED (MECU)	E D AS % OF C
Electricity	17	28	16.5	16.5	100
Oil/gas	17	22	16.3	13.2	81
Saving	21	29	17.6	17.1	97
Sectoral	2	2	1.3	0.3	
TOTAL	57	81	51.7	47.1	91.00

In the electricity sector, there are projects which aim to restructure and provide the legal framework for the electricity supply industry. A number of projects will introduce new management techniques and provide training while others concentrate on tariffs and pricing. There are also studies to facilitate the refurbishment of power stations including environmental improvements.

With regard to the oil and gas sector, there are projects to restructure the gas supply industry and train managers. There are projects to improve oil and gas production and transportation methods, including a large technical assistance programme (MECU 4.7) for the Tyumen region. A package of MECU 3.5, comprising four projects, is assigned to address the problems of the oil refining sector.

In the energy savings field, a total of MECU 10 is dedicated to strengthening the activities of the four EC Energy Centres in the FSU, while a number of smaller projects aim to improve energy efficiency in specific industries or locations. To facilitate energy saving in practice, there are four workshops devoted to energy metering and management.

**PHARE AND TACIS 1992 PROGRAMMES AND FUTURE PROSPECTS**

**PHARE 1992 PROGRAMME**

In 1992 the PHARE beneficiary countries generally decided to set aside a limited budget for assistance in the non-nuclear energy sector (see table).

The 1992 PHARE energy programmes build further on the 1991 programme, or initiate new assistance, such as assistance for Albania in the form of a resident energy policy adviser.

A new feature of the 1992 programme is the ECU 7 million regional energy programme, comprising five projects: electricity interconnection, natural gas interconnection; oil refining/transportation; management twinning (electricity sector); and legislation/regulation (with

special regard to the Energy Charter). Calls for tender are underway for these projects.

Assistance in the energy sector is currently provided in 11 countries (Slovenia already benefits from the regional programme) and first results of strategic studies will become available shortly.

**PHARE 1992 TOTAL BUDGET FOR ENERGY PROGRAMME BY COUNTRY AND REGION**

COUNTRY/REGION	1992 PHARE BUDGET (MECU)
Czech and Slovak Republic	4
Bulgaria (emergency assistance) <sup>1</sup>	10
Romania	2.5
Estonia	0.3
Latvia	0.5
Lithuania	0.6
Albania	0.2
Regional programme <sup>2</sup>	7
<b>TOTAL</b>	<b>25.1</b>

<sup>1</sup> Winter 1992/93 necessitated, as in 1991/92, emergency aid; 1992/93 programme focuses on improved availability of thermal power plants.

<sup>2</sup> Covering Estonia, Latvia, Lithuania, Poland, Czech and Slovak Republics, Hungary, Slovenia, Romania, Albania and Bulgaria.

Total budget for the non-nuclear energy sector in 1992 is MECU 25.1 (including emergency aid for Bulgaria), which gives a combined total of MECU 60 for 1991 and 1992 (3.5% of total PHARE budget of ECU 1 785 million for 1991-92).

The implementation of the 1992 programme has already started for Albania (PIU on the spot), Latvia and the regional programme (one project underway, four calls for tender launched out of a total of six). The 1992 programme will also involve the extension of PIU contracts in the beneficiary countries.

## TACIS 1992 PROGRAMME

*Total budget: MECU 450; Energy: MECU 146, of which MECU 100 - nuclear*

While implementation of the 1991 programme had barely begun, **Indicative Programmes (IPs)** were signed with each of the 12 NIS following programming missions in March/April 1992; a second round of programming missions served to elaborate more concrete **Action Programmes (APs)** which were approved by the Commission after the favourable opinion of the Management Committee before the end of the year.

A number of important changes distinguish the 1992 approach:

- negotiation, definition and implementation are based on a **bilateral, geographical approach**;
- a high-level **National Coordinator** was nominated by the authorities of each NIS as the CEC's official interlocutor; local **Coordinating Units (CUs)** operating under the supervision of a local manager and staffed with EC consultants were set up in capitals to assist with the day-to-day management of the programme;
- the shift from sectoral to more **integrated projects** and the concentration on a few priority sectors per country aim at enhancing the impact of technical assistance.

The overall structure of the programme was reorganised on the basis of the following categories: Human Resources Development; Food Production and Distribution; Networks (including energy); Support for Enterprise; Policy Advice to Governments.

Energy, which received the largest budget share in 1991, continues to feature among the priority sectors for 1992 with an allocation of MECU 100 for nuclear safety (including MECU 20 for the International Science and Technology Centre) and approximately MECU 46 for projects in the non-nuclear sector.

The terms of reference for most of the 42 projects in the non-nuclear sector have been completed. The endorsement of the terms of reference has to be given by the recipient organization, through the Coordinating Unit, however, before calls for tender are launched. Implementation will not therefore proceed before the Autumn of 1993.

Annex 1 gives a summary of budgetary allocations and projects for all NIS.

## FUTURE PROSPECTS

The PHARE General Guidelines 1993-1997 confirm the Europe Agreements as the legal and political framework for most PHARE assistance. The move towards a multiannual programme approach, and an

increasingly active role for PHARE in stimulating investment, are set out.

The draft TACIS Regulation 1993-1995, also foresees a move to multiannual programming and the possibility of triangular operations involving PHARE countries. In 1993 there will be a concentration on priority sectors, depending on the priorities expressed by the NIS. Early indications are that energy could be a top priority for Armenia and Azerbaijan, and a 'second priority sector' for Russia, Ukraine, Moldova and Kyrgyzstan.

In the energy sector, one can envisage projects which implement the principles and provisions of the European Energy Charter and the various bilateral agreements with Eastern countries. Moreover, projects will focus on the implementation of results becoming available from strategic studies already carried out under the 1991/92 programmes; energy policy formulation; institution building; the organization of the sector and legal-regulatory matters.

It is possible that the Community, by way of the PHARE programme, will assist the CCEE tackle the problems associated with the restructuring of the solid fuels sector by a coordinated approach at a regional level. Moreover, efforts will be made under PHARE and TACIS to develop and integrate the region's large energy networks, in particular the gas and electricity grids. The studies already launched under PHARE and TACIS will pave the way for the considerable investments required.

Another key issue will remain, of course, energy efficiency and saving. In this area, the creation of energy saving funds and agencies is already under consideration by several beneficiary countries.

Furthermore, PHARE and TACIS could enhance financial support on a multiannual basis for the EC Energy Centres in Eastern countries. This would strengthen their capacity for implementation of energy efficiency programmes and provide valuable ongoing transfer of know-how to local partners. The training of personnel from the Energy Ministry and utilities will continue to be an important instrument in the restructuring process.

Strengthening cooperation with International Financial Institutions, such as the EIB, EBRD and the World Bank will be a priority in the coming years, with a view to the preparation of investment decisions.

**OTHER EC PROGRAMMES  
IN THE ENERGY SECTOR**

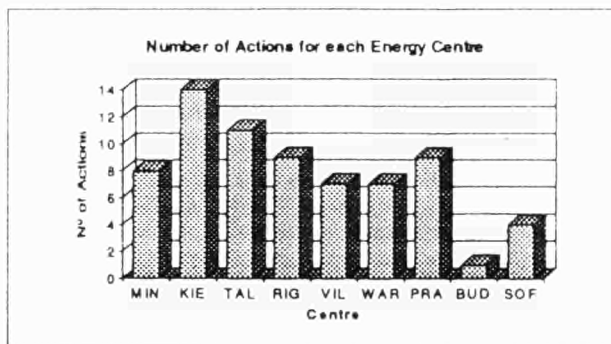
**THERMIE**

The Community programme for the promotion of energy technologies, Thermie, helps new innovative technologies to penetrate the market place, both inside and outside the European Community. The work carried out through Thermie in Eastern countries is closely linked to the wide range of actions already being carried out within the European Community, in which the network of **Organizations for the Promotion of Energy Technology (OPET)** plays a vital role. The Commission Decision of 5 December 1991 to undertake promotional activities in Third Countries, particularly in the Eastern countries effectively represents an extension of the OPET network.

**The EC Energy Centres:**

A permanent representation in the countries concerned was considered an essential aspect of the planned cooperation. Local partners with experience and expertise relating to energy technology were identified for cooperation, and by mid-1992 EC Energy Centres were operational across the CCEE and FSU. Fourteen EC Energy Centres have now been established, situated in Moscow, St Petersburg, Tyumen (Russia); Kiev (Ukraine); Minsk (Belarus); Vilnius, Riga, Tallinn (Baltic States); Warsaw, Katowice (Poland); Prague (Czech Republic); Bratislava (Slovakia); Budapest (Hungary); and Sofia (Bulgaria). Their main objectives are:

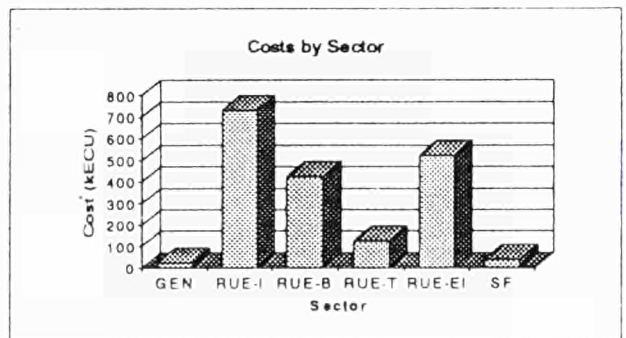
- to promote the transfer and use of efficient European energy technologies;
- to provide a permanent representation of European energy technology experts;
- to facilitate the establishment of European equipment manufacturers and suppliers in the Eastern countries, as well as defining opportunities for joint venture actions.



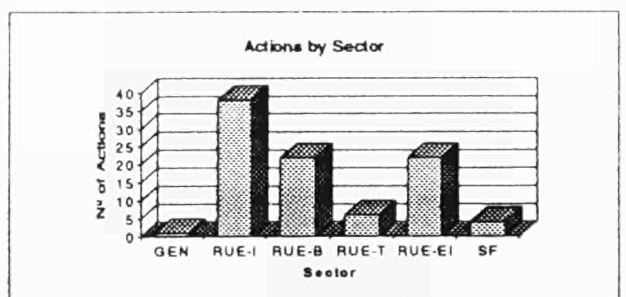
Twelve of the Energy Centres deal with the coordination of OPET activities in all sectors on an equal basis, while the Centres of Katowice and Tyumen have been established to meet local demands in the solid fuels and oil sectors respectively. The Centres at Moscow, St Petersburg, Minsk and Kiev have been strengthened by TACIS (1991) funding amounting to ECU 2.5 million per Centre.

**Assessment and Advice Activities, 1992-1993:**

In parallel to the establishment of the EC Energy Centres, a so-called 'crash' programme was developed to undertake a series of specific short-term activities at local sites and covering all main sectors. Most of these actions involved technical assessments and advice concentrating on the identification of opportunities for cost-effective energy savings. Overall, these actions were designed to form a basis for the future promotion of energy efficient technologies by indicating the benefits to be gained from their implementation.



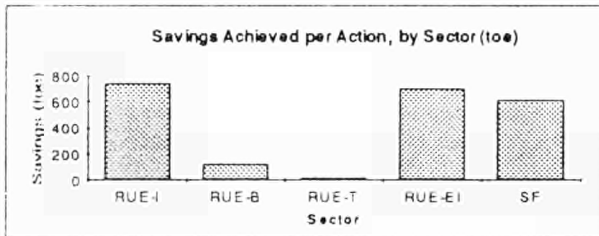
In less than 12 months, from January 1992, the first 'crash' programme was successfully completed, with 94 assessment and advice activities, involving the direct participation of well over 100 CCEE organizations. The total cost of this 'crash' programme was just over MECU 1.9 which equates to approximately ECU 20 000 per action. At the same time, some 50 promotional actions including seminars and workshops were launched.



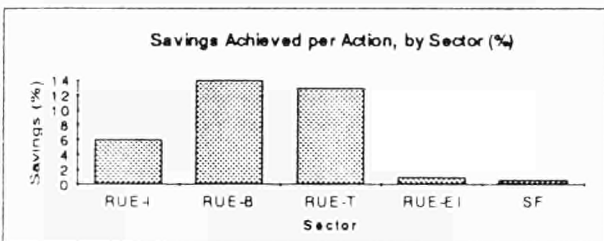


Virtually all of the actions undertaken resulted in the identification of significant potential energy savings. At each of the sites chosen for the 'crash' initiatives, advice was provided by European Community experts as to how improvements in efficiency could be attained, particularly through no- and low-cost measures.

An example of the real benefits that have been achieved can be seen at the EC Energy Centre Moscow, where 14 actions were completed. It has been estimated that these actions will produce energy savings of 2.8 GJ over the next five years, for a cost of only ECU 318 000. This represents a pay-back period of under ten weeks.



Over the programme as a whole, the average level of potential energy savings identified was 23%. In terms of physical units, the percentage represents a total of about 2.5 million tonnes of oil equivalent (toe) each year of potential energy savings, equivalent to over 1.3 toe/year for each ecu spent on 'crash' activities. For actions involving the rational use of energy, the largest savings were identified, as expected, in the industry and energy industry sectors.



The opportunity for replication of the actions undertaken is considerable. An estimate of the total potential for energy savings has indicated that about 4.2% of the total energy consumption in all those countries in which EC Energy Centres have been established, can be achieved. The savings would naturally be far greater if the measures were taken up by similar organizations in all of the countries involved.

Many of the project reports claim a significant reduction in the emission of pollutants such as SO<sub>x</sub>, NO<sub>x</sub> and CO, as one of their major successes. It is estimated that the potential improvements in energy

efficiency from all 'crash' programmes would result in savings of around 7 million tonnes CO<sub>2</sub>/year.

The excellent relationships established, together with the use of Community technology to facilitate the improvements made, have helped to forge links between manufacturers and key actors from a potentially enormous market. This is clearly another significant outcome of the 'crash' programme.

#### *The 'Regular' Programme:*

The second phase of associated measures was designed to further encourage and facilitate the uptake of EC energy technologies, a number of which had been first introduced through the 'crash' programme. The intention was to spread awareness through the sort of promotional activities already employed under Thermie in the EC.

Building upon the results of the 'crash' programme, 50 of these regular activities were completed under contracts that ended in October 1992. The cost of this element of the programme was around MECU 1.3, or approximately ECU 27 000 per action.

#### *Future Prospects:*

All EC Energy Centres will develop and maintain the necessary technical expertise and associated facilities to provide a permanent focus to facilitate the effective operation and coordination of all relevant EC programmes in the energy sector. In addition, the Centres will have a major role in identifying both potential markets for European equipment manufacturers and suppliers, as well as defining opportunities for joint venture actions.

As an on-going and effective coordination of all EC energy efficiency initiative is necessary to overcome the perceived market barriers to the implementation of EC energy technologies, a series of well-defined activities is essential to ensure that all technical and financial barriers in particular are surmounted. The EC Energy Centres will continue to play a pivotal role in the successful development of this strategy.

### INTERNATIONAL ENERGY COOPERATION PROGRAMME (IECP)

The Directorate-General for Energy is responsible for this Programme which covers energy assistance to the developing world, e.g. Latin America, the Mediterranean countries, China etc, and to the countries of Central and Eastern Europe and the former Soviet Union.

The IECP began assistance actions in the energy field in Central and Eastern Europe some time before the commencement of the PHARE programme. Care has been taken to avoid duplication with later EC programmes such as PHARE and TACIS and an

effort made to ensure complementarity with these other programmes. Bearing this in mind, priority has been given to projects which fall into one or more of the following categories:

- direct support to the implementation of the principles and provisions of the European Energy Charter and associated agreements;
- the application of EC energy policy principles, where appropriate, in Eastern countries;
- trans-boundary projects covering regions not fully covered by any other single EC programme;
- actions which are preparatory and/or complementary to other EC programmes.

Whilst the funding amounts are modest (about MECU 3 in 1992, about MECU 4 in 1993), especially in relation to other EC programmes in the region, particular advantages of the IECF should be noted as follows:

- it concentrates solely on the energy sector and therefore focuses exclusively on the problems associated with this sector;
- it covers potentially all Eastern countries and can therefore cut across boundaries which exist between other EC programmes, e.g. PHARE and TACIS. This is especially relevant in a region which was, and remains from an energy supply point of view, largely self-contained with energy supplies broadly flowing from Russia southwards and eastwards;
- whilst adhering to best administrative practice, it provides for actions to be taken relatively quickly and efficiently.

Projects in the 1992 IECF include the following:

**Training for decision-makers in energy:**

- Seminar on demand-oriented energy policy (co-financed by ADEME);
- study tours for energy policy makers from the FSU to provide direct experience of energy policy and the Charter principles in practice in EC Member States;
- workshops on energy legislation and regulation, with emphasis on the European Energy Charter (initially in Russia, Ukraine, Kazakhstan and Armenia).

**Advice and support for energy policy development:**

- Action to advise on the restructuring of the Polish oil sector (in conjunction with Polish consultants, allowing valuable transfer of know-how);
- workshop on social and economic reconversion of CCEE/FSU coal fields (in cooperation with the UN Economic Commission for Europe).

**Coordination aimed at optimizing the results of all EC assistance programmes and projects:**

- Initiation and support for the establishment of EC Energy Centres in Hungary and Albania (in cooperation with PHARE and Thermie).

In addition to the above programme of projects, the IECF has provided the financial support (about MECU 1 per year) for the European Energy Charter Conference. This covers the administrative costs associated with the Charter negotiations, including the Conference Secretariat, meetings and seminars etc. It underlines the commitment of the Commission, and DG XVII in particular, to the success of the Charter.

INTERNATIONAL COORDINATION

**G-24 ENERGY WORKING GROUP**

The G-24 agreed at their High Level meeting of 30 October 1990 to declare energy a new priority sector for coordinated assistance. (Nuclear energy is dealt with in a separate G-24 Nuclear Safety Working Group). The decision to create an Energy Working Group, chaired by the Commission's Directorate-General for Energy, has ensured that coordination is achieved in an energy policy context, which takes into account the Commission's own policies and programmes in the energy sector.

The G-24 Energy Working Group prepared a strategy paper for energy assistance over the medium and long term, which was adopted by the G-24 High Level meeting of 30 January 1991 and sent to the CCEE. The paper provided flexible guidelines for assistance, and identified three broad priority areas for cooperation:

- policy formulation and planning, comprising restructuring of the sector, pricing issues, forecasting, development of regulatory frameworks, etc.;
- energy supply and demand - including energy efficiency and conservation in the short term, and improvement of production and distribution, as well as diversification of energy supply in the longer term; and
- energy, environment and safety, including nuclear safety and clean coal technologies.

Among the other coordination activities of the G-24 Energy Working Group, aiming at avoiding duplication and promoting efficient cooperation among donor countries, the creation of a special energy 'scoreboard' should be mentioned. This scoreboard lists on-going and planned actions of the G-24 members.

The Directorate-General for Energy convened a special G-24 meeting on the electricity sector on

4 June 1991. The following key areas of assistance were identified: interconnection of networks; environmental protection and energy efficiency; tariffication and pricing; training; restructuring of the industry; and nuclear safety.

The Energy Working Group meeting of 16 March 1992 focused on improving procedures among G-24 participants, in case of severe energy shortages in the CCEE, especially during the winter time.

On 4-5 March 1993, a meeting of the Energy Working Group was held in Tallinn (Estonia) focusing on the development of a regional approach to the energy sector in Latvia, Estonia and Lithuania. At the present time, after the first few years of experience, the G-24 is reviewing its working structure, including the future of the various working groups. The Energy Working Group is probably set to follow a country-specific approach, with meetings arranged on the spot in the countries concerned, as was the case in Tallinn in March 1993.

## NIS

On 22-23 January 1992, Ministers and senior officials from more than 60 countries and international organizations met in Washington for the Coordinating Conference on Assistance to the NIS. The objective of the Conference was to focus international attention on the urgent humanitarian needs of the NIS and to establish mechanisms for the coordination of aid to the 12 countries concerned. For this purpose four working groups were set up including one on energy.

The Energy Working Group, chaired jointly by the Netherlands and Venezuela, met on several occasions initially in Washington and subsequently in Paris and Brussels. A series of fact-finding missions, led by the IEA and the Commission, was undertaken by the Group in March-April 1992 to all the NIS. The result of the Group's work was a report, summarising short-term and technical assistance needs in the energy sector, submitted to the Tokyo Conference in October 1992.

Coordination has since taken a new form in the shape of Country Consultative Groups (CCGs) which have been set up to foster close cooperation between international institutions and partners, and to encourage structural reforms and coordinate technical assistance. The Commission is working closely with the World Bank, which is coordinating the whole exercise, to ensure that the Community's approach and experience is properly reflected in the CCG process.

Links have been established with the OECD/IEA to take part in the data base (CCEET) collecting and making available information on energy projects in the NIS.

At the informal as well as the formal level, contact is maintained with the International Financial Institutions (World Bank, IMF, and EBRD) and other partners such as the UN ECE, the IEA and National Governments in Brussels, London, Washington etc. as well as on the spot in the CCEE and NIS.

## POLICY FRAMEWORK

### BILATERAL AGREEMENTS

The Community's relations with the countries of Central and Eastern Europe are set out in either the Europe Agreements (with Poland, Hungary, the Czech and Slovak Republics, Romania and Bulgaria) or Trade and Cooperation Agreements (Albania, the Baltic States, and Slovenia). In the case of the New Independent States of the former Soviet Union, the Community is negotiating Partnership and Cooperation Agreements. These various Agreements will provide the framework for trade and cooperation between the Community and the countries concerned in a wide range of fields including the energy sector. The Community programmes described above should be seen as instruments of this broader policy framework and as a means of assisting the Eastern countries to realise their full potential as partners of the European Community.

### THE EUROPEAN ENERGY CHARTER

The European Energy Charter was signed in the Hague on 17 December 1991 by almost 50 countries, including the Community and Member States, other OECD countries, CCEE, and all the NIS, except Turkmenistan.

The objective of the Charter is to contribute to economic recovery and reform in the East by creating the right conditions for cooperation between Western and Eastern companies in the area of trade and investments in the energy sector.

Having signed the Charter, the participating countries began negotiation of the European Energy Charter Treaty, which will provide the legal basis for economic activity in the energy field in all signatory countries, and which will implement the political principles set out in the Charter. The participating countries are also negotiating a series of protocols on specific energy sectors, including protocols on nuclear and energy efficiency. At the moment the priority is to complete the negotiations on the European Energy Charter Treaty.

The European Energy Charter Treaty covers all the important aspects of cooperation in the energy sector. It deals specifically with investment



promotion and protection, trading conditions, transport and transit of energy, and other cooperation based on the principles of non-discrimination and transparency.

Given recognition of the need for new investments in the energy sector in the East, the part of the Charter dealing with investment promotion and protection has been given particular attention. The idea is for the Treaty to commit all countries to establish stable and favourable conditions for investors and to ensure that investments are protected and secured by establishing guarantees against unfair or discriminatory treatment. On energy trade, negotiations focus on the possibility of extending GATT rules on energy trade to those countries presently not members of that organization, with the aim of reducing the risk of trade barriers being erected or tariffs on energy imports being increased. Energy transit is also treated in the context of energy trade.

In addition, further provisions on related matters are part of the negotiations, including measures for transitional arrangements, required by many of the NIS and CCEE, as they will need some time to be able to complete the transition to an open energy market regime.

Although the negotiations are not yet finalised, substantial progress has been made and the shape of the new Treaty is now emerging and becoming visible to the negotiating parties. It is expected to finalise negotiations in the course of 1993.

Once ratified by the signatory countries the European Energy Charter Treaty can make a significant contribution to the development of an efficient, environmentally safe, and sustainable energy sector based on the principles of the market economy in all participating countries. It will also provide the basis for a strong and mutually beneficial cooperation in the energy sector between countries in Western and Eastern Europe. Moreover, it will provide the framework in the energy sector for the Community's assistance programmes in the region as a whole. ■

## ANNEX I

## TACIS 1992 - BUDGETARY BREAKDOWN

COUNTRY	TOTAL	ENERGY		ACTION	
		TOTAL	% OF TOTAL	AMOUNT	TITLE
ARMENIA	9.55	1.0	10.47	0.5 0.5	(1) Evaluation of Hydrocarbons Deposits (2) Advice to Government
AZERBAIJAN	12.5	1.5	12.00	1.5	Energy Advisers Group
BELARUS	14.63	1.9	12.99	0.9 0.25 0.25 0.25 0.25	(1) Global Energy Strategy (2) Energy Audit/Power Generation Plant (3) Energy Audit/Petrochemical Industry (4) Training Power Personnel (5) Training Personnel in Petrochem./Chem./Ref. Indust.
GEORGIA	9.0	0.5	5.55	0.5	Development of an Energy Policy
KAZAKHSTAN	20.6	4.0	19.41	1.4 0.9 1.3 0.4	(1) Government Advice (2) Management Training Centre (3) Energy Centre (4) Hydrocarbon Study
KYRGYZSTAN	9.23	1.5	16.25	1.5	Energy Advisers Group
MOLDOVA	9.0	2.19	24.23	2.19	Government Advice & Restructuring
RUSSIA: Moscow	59.0	4.8	8.14 0.8	2.3 1.7	(1) Advice to Industry (2) Advice to Moscow Regional Authorities (3) Advice to Central Government & Agencies
St Petersburg	25.0	4.0	16.0	1.0 0.4 1.5 0.4 0.7	(1) Energy Plan (2) Energy Efficiency Pilot Project 1 (3) Modernisation of Refinery/Power Plant (4) Energy Efficiency Pilot Project 2 (5) Training
Tyumen	12.5	7.8	62.4	2.9 3.0 1.0 0.5 0.3	(1) Assistance to Enterprise Management (2) Valorisation of Oil/Gas Streams & Effective Oil/Gas Production (3) Energy Saving (4) Advice to Tyumen Oblast authorities (5) Project Support Office
TURKMENISTAN	8.8	1.0	11.36	1.0	Energy Advisers Group
UKRAINE	48.28	8.08	16.74	1.016 1.224 0.504 0.300 0.440 0.504 0.440 0.200 3.452	(1) Energy Saving Strategy (2) Oil & Gas Strategy (3) Energy Pricing & Tariffs (4) Transit Tariffs (5) Energy Audit/Sugar Industry (6) Audit/Iron & Steel Industry (7) Audit/Urban Heating (8) Dissemination of Audits/Feasibility Study (9) Information, Advisory, Training Activities
UZBEKISTAN	18.78	6.28	33.44	2.04 0.9 3.34	(1) Oil & Gas Sector Advice (2) Training/Electricity Utility Management (3) Energy Centre
REGIONAL	28.6	1.5	5.24	1.5	Oil & Gas Pipelines Management for Central Asia (and Caucasus?)
TOTAL	285.47	46.05	16.13		

*Note: Assistance to Tajikistan has been suspended pending restoration of political stability in the country.*

**Venta y suscripciones • Salg og abonnement • Verkauf und Abonnement • Πωλήσεις και συνδρομές  
Sales and subscriptions • Vente et abonnements • Vendita e abbonamenti  
Verkoop en abonnementen • Venda e assinaturas**

**BELGIQUE / BELGIË**

**Moniteur belge / Belgisch Staatsblad**  
Rue de Louvain 42 / Leuvenseweg 42  
B-1000 Bruxelles / B-1000 Brussel  
Tél. (02) 512 00 26  
Fax (02) 511 01 84

Autres distributeurs /  
Overige verkooppunten

**Librairie européenne/  
Europese boekhandel**

Rue de la Loi 244/Wetstraat 244  
B-1040 Bruxelles / B-1040 Brussel  
Tél. (02) 231 04 35  
Fax (02) 735 08 60

**Jean De Lanoy**

Avenue du Roi 202 /Koningstraat 202  
B-1060 Bruxelles / B-1060 Brussel  
Tél. (02) 538 51 69  
Télex 63220 UNBOOK B  
Fax (02) 538 08 41

**Document delivery:**

**Credoc**

Rue de la Montagne 34 / Bergstraat 34  
Bte 11 / Bus 11  
B-1000 Bruxelles / B-1000 Brussel  
Tél. (02) 511 69 41  
Fax (02) 513 31 95

**DANMARK**

**J. H. Schuitz Information A/S**

Herstedvang 10-12  
DK-2620 Albertslund  
Tlf. 43 63 23 00  
Fax (Sales) 43 63 19 69  
Fax (Management) 43 63 19 49

**DEUTSCHLAND**

**Bundesanzeiger Verlag**

Breite Straße 78-80  
Postfach 10 05 34  
D-50445 Köln  
Tel. (02 21) 20 29-0  
Telex ANZEIGER BONN 8 882 595  
Fax 2 02 92 78

**GREECE/ΕΛΛΑΔΑ**

**G.C. Eleftheroudakis SA**

International Bookstore  
Nikis Street 4  
GR-10563 Athens  
Tel. (01) 322 63 23  
Telex 219410 ELEF  
Fax 323 98 21

**ESPAÑA**

**Boletín Oficial del Estado**

Trafalgar, 29  
E-28071 Madrid  
Tel. (91) 538 22 95  
Fax (91) 538 23 49

**Mundi-Prensa Libros, SA**

Castelló, 37  
E-28001 Madrid  
Tel. (91) 431 33 99 (Libros)  
431 32 22 (Suscripciones)  
435 36 37 (Dirección)  
Télex 49370-MPLI-E  
Fax (91) 575 39 98

**Sucursal:**

**Librería Internacional AEDOS**

Consejo de Ciento, 391  
E-08009 Barcelona  
Tel. (93) 488 34 92  
Fax (93) 487 76 59

**Librería de la Generalitat  
de Catalunya**

Rambra dels Estudis, 118 (Palau Moja)  
E-08002 Barcelona  
Tel. (93) 302 68 35  
302 64 62  
Fax (93) 302 12 99

**FRANCE**

**Journal officiel  
Service des publications  
des Communautés européennes**

26, rue Desaix  
F-75727 Paris Cedex 15  
Tél. (1) 40 58 75 00  
Fax (1) 40 58 77 00

**IRELAND**

**Government Supplies Agency**

4-5 Harcourt Road  
Dublin 2  
Tel. (1) 66 13 111  
Fax (1) 47 80 645

**ITALIA**

**Licosa SpA**

Via Duca di Calabria 1/1  
Casella postale 552  
I-50125 Firenze  
Tel. (055) 64 54 15  
Fax 64 12 57  
Telex 570466 LICOSA I

**GRAND-DUCHÉ DE LUXEMBOURG**

**Messageries du livre**

5, rue Raiffeisen  
L-2411 Luxembourg  
Tél. 40 10 20  
Fax 40 10 24 01

**NEDERLAND**

**SDU Overheidsinformatie**

Externe Fondsen  
Postbus 20014  
2500 EA 's-Gravenhage  
Tel. (070) 37 89 911  
Fax (070) 34 75 778

**PORTUGAL**

**Imprensa Nacional**

Casa da Moeda, EP  
Rua D. Francisco Manuel de Melo, 5  
P-1092 Lisboa Codex  
Tel. (01) 69 34 14

**Distribuidora de Livros  
Bertrand, Ld.º**

**Grupo Bertrand, SA**  
Rua das Terras dos Vales, 4-A  
Apartado 37  
P-2700 Amadora Codex  
Tel. (01) 49 59 050  
Telex 15798 BERDIS  
Fax 49 60 255

**UNITED KINGDOM**

**HMSO Books (Agency section)**

HMSO Publications Centre  
51 Nine Elms Lane  
London SW8 5DR  
Tel. (071) 873 9090  
Fax 873 8463  
Telex 29 71 138

**ÖSTERREICH**

**Manz'sche Verlags-  
und Universitätsbuchhandlung**

Kohlmarkt 16  
A-1014 Wien  
Tel. (0222) 531 61-133  
Telex 112 500 BOX A  
Fax (0222) 531 61-181

**SUOMI/FINLAND**

**Akateeminen Kirjakauppa**

Keskuskatu 1  
PO Box 128  
SF-00101 Helsinki  
Tel. (0) 121 41  
Fax (0) 121 44 41

**NORGE**

**Narvesen Info Center**

Bertrand Narvesens vei 2  
PO Box 6125 Etterstad  
N-0602 Oslo 6  
Tel. (22) 57 33 00  
Telex 79668 NIC N  
Fax (22) 68 19 01

**SVERIGE**

**BTJ AB**

Traktorvägen 13  
S-22100 Lund  
Tel. (046) 18 00 00  
Fax (046) 18 01 25  
30 79 47

**SCHWEIZ / SUISSE / SVIZZERA**

**OSEC**

Stampfenbachstraße 85  
CH-8035 Zürich  
Tel. (01) 365 54 49  
Fax (01) 365 54 11

**ČESKÁ REPUBLIKA**

**NIS ČR**

Havelkova 22  
130 00 Praha 3  
Tel. (2) 235 84 46  
Fax (2) 235 97 88

**MAGYARORSZÁG**

**Euro-Info-Service**

Club Sziget  
Margitsziget  
1138 Budapest  
Tel./Fax 1 111 60 61  
1 111 62 16

**POLSKA**

**Business Foundation**

ul. Krucza 38/42  
00-512 Warszawa  
Tel. (22) 21 99 93, 628-28-82  
International Fax&Phone  
(0-39) 12-00-77

**ROMANIA**

**Euromedia**

65, Strada Dionisie Lupu  
70184 Bucuresti  
Tel./Fax 0 12 96 46

**BÄLGARIJA**

**Europress Klassica BK Ltd**

66, bd Vitosha  
1463 Sofia  
Tel./Fax 2 52 74 75

**RUSSIA**

**CCEC**

9,60-letiya Oktyabrya Avenue  
117312 Moscow  
Tel./Fax (095) 135 52 27

**CYPRUS**

**Cyprus Chamber of Commerce and  
Industry**

Chamber Building  
38 Grivas Digenis Ave  
3 Deligiorgis Street  
PO Box 1455  
Nicosia  
Tel. (2) 449500/462312  
Fax (2) 458630

**MALTA**

**Miller distributors Ltd**

Scots House, M.A. Vassalli street  
PO Box 272  
Valletta  
Tel. 24 73 01  
Fax 23 49 14

**TÜRKIYE**

**Pres Gazete Kitap Dergi  
Pazarlama Dağıtım Ticaret ve sanayi  
AŞ**

Naribahçe Sokak N. 15  
Istanbul-Cağaloğlu  
Tel. (1) 520 92 96 - 528 55 66  
Fax 520 64 57  
Telex 23822 DSVO-TR

**ISRAEL**

**ROY International**

PO Box 13056  
41 Mishmar Hayarden Street  
Tel Aviv 61130  
Tel. 3 496 108  
Fax 3 544 60 39

**UNITED STATES OF AMERICA /  
CANADA**

**UNIPUB**

4611-F Assembly Drive  
Lanham, MD 20706-4391  
Tel. Toll Free (800) 274 4888  
Fax (301) 459 0056

**CANADA**

Subscriptions only  
Uniquement abonnements

**Renouf Publishing Co. Ltd**

1294 Algoma Road  
Ottawa, Ontario K1B 3W8  
Tel. (613) 741 43 33  
Fax (613) 741 54 39  
Telex 0534783

**AUSTRALIA**

**Hunter Publications**

58A Gipps Street  
Collingwood  
Victoria 3066  
Tel. (3) 417 5361  
Fax (3) 419 7154

**JAPAN**

**Kinokuniya Company Ltd**

17-7 Shinjuku 3-Chome  
Shinjuku-ku  
Tokyo 160-91  
Tel. (03) 3439-0121

**Journal Department**

PO Box 55 Chitose  
Tokyo 156  
Tel. (03) 3439-0124

**SOUTH-EAST ASIA**

**Legal Library Services Ltd**

STK Agency  
Robinson Road  
PO Box 1817  
Singapore 9036

**SOUTH AFRICA**

**Safto**

5th Floor, Export House  
Cnr Maude & West Streets  
Sandton 2146  
Tel. (011) 883-3737  
Fax (011) 883-6569

**AUTRES PAYS  
OTHER COUNTRIES  
ANDERE LÄNDER**

**Office des publications officielles  
des Communautés européennes**

2, rue Mercier  
L-2985 Luxembourg  
Tél. 499 28-1  
Télex PUBOF LU 1324 b  
Fax 48 85 73/48 68 17

Price (excluding VAT) in Luxembourg: ECU 6



OFFICE FOR OFFICIAL PUBLICATIONS  
OF THE EUROPEAN COMMUNITIES

L-2985 Luxembourg

ISBN 92-826-6358-2



9 789282 663585 >