

CHAPTER 5.

ENERGY POLICY AND EU FINANCING

5.1 Introduction

The construction of an internal market and the objective of greater social and economic cohesion have led, logically, to the elaboration of an EU energy policy based on three fundamental points of focus: competitiveness, security in terms of supply, and environmental protection. These three fundamentals constitute the common objectives towards which energy policies must be geared.

Based on this, the EU has initiated a series of measures aimed at fulfilling the strategic objectives set out for the period 2000-2005. Among those measures, the further creation of energy networks across the Union in order to eliminate those points of congestion that still exist in European energy systems.

As well, the construction of an internal energy market has meant that the EU has had to define an energy framework based on the common objectives of convergence already mentioned. In order to achieve these objectives, the EU has adopted a series of measures, which include:

- international co-operation
- diversification of energy resources
- energy saving
- promotion of energy technology

Community energy policy and financial support have a great bearing on social and economic cohesion, especially with regard to those aspects related to the creation of European networks and the saving and diversification of energy sources.

Table 5.1. EU policy and financial support. Aspects which have a positive effect on social and economic cohesion.

| MEASURE | MANIFESTATIONS | EFFECTS ON COHESION |
|--|--|---|
| European networks | Basic infrastructure Improving connections in isolated regions Opening up of markets | Greater diversification and less vulnerability Improvement in conditions of access to energy sources Equal opportunity Greater competitiveness |
| V Framework Programme Renewable energy sources, energy saving, international co-operation | Improve energy dependence Sustainable development Competitiveness | Improve quality of life Greater productivity Better conditions for the creation of wealth Environment and quality of life |

5.2. Financing of action

5.2.1. Structural funds

Based on information provided by the Commission, between 1994-1999, ERDF (European Regional Development Fund) contributed resources worth 2,900 million euros for action geared towards energy infrastructure, basically European networks (gas and electricity) and for taking electricity to rural areas. Those resources account for 1.5% of the total ERDF budget.

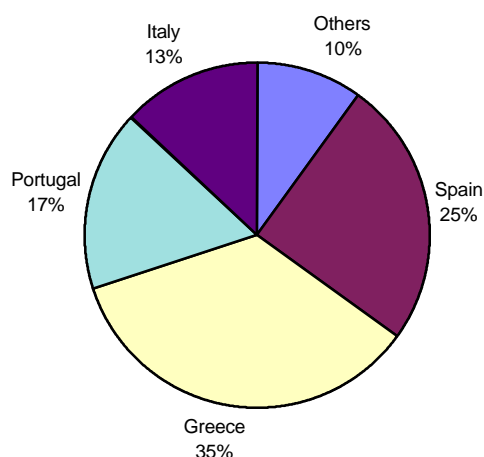
Between 1994 and 1996, community aid for energy, included in the CSF (Community Support Framework) of High Priority Regions, rose to almost 2,500 million euros, with Greece, Spain and Portugal receiving most from that budget. Those three countries accounted for 1,914 euros: i.e., almost 77% of the total allocated to energy.

Table 5.2. Distribution of funds allocated in the CSF for energy. High Priority Regions. Between 1994 and 1996.

| COUNTRY | ECUS (MILLIONS) | % |
|----------|-----------------|------|
| Spain | 624.0 | 25.0 |
| France | 8.0 | 0.4 |
| Greece | 864.0 | 34.6 |
| Ireland | 70.0 | 2.8 |
| Italy | 312.0 | 12.5 |
| Portugal | 426.0 | 17.1 |
| UK | 190.0 | 7.6 |
| TOTAL | 2,494.0 | 100 |

Source: Structural funds, 1994. Sixth Annual Report. European Commission, 1996

Figure 5.1. Distribution of CSF Funds. Energy. 1994-96.



5.2.2. European energy networks

The development of European energy networks has been and is a key element in the achievement of the common objectives of energy policy. The EU has adopted two Decision projects in which the major guidelines for development of networks are outlined, through the identification of projects of common interest. A project must not only be economically viable, but must also meet the following requirements:

- Allow for the functioning of the internal energy market

- Strengthen social and economic cohesion, by reducing the isolation of less privileged areas.

Table 5.3. *European networks. The Iberian Peninsular. Projects with ERDF and EIB (European Investment Bank) finance.*

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|--|
| <p><u>Electricity networks</u> France-Spain Cazaril-Aragon Spain-Portugal Aldeavila-Douro Spain Cantabrian Sea, Mediterranean area Portugal: reinforcements Pego-Rio Major II with the interconnection with Spain</p> |
| <p><u>Recarei-Doura Int</u> Gas networks Spain Galicia, Extremadura Andalusia, South of Valencia Murcia, LNG Ferrol Portugal Setubal – Braga Portugal- Spain/Leira-Cordoba, Braga-Tuy-Oviedo Spain Storage Gaviota, Huete</p> |

- Greater supply security

Among the priorities defined for the electricity sector are the connection of isolated areas, better links between Member States and the eastern countries, as well as with third countries.

With regard to gas, the introduction of that commodity in new regions, supplying isolated regions and greater transport capacity plus the storage of gas by building new gas lines and improving the capacity of existing ones.

With such priorities in mind, the Commission has identified some 74 projects of community interest: 39 for electricity networks and 35 for natural gas networks. In order to begin these projects, the EU, apart from promoting co-operation between operators and Member States has financed viability studies and projects of its own through community entities, especially ERDF and the European Investment Bank (EIB), whose main mission is participating in the finance of projects for the development of the most backward regions (art 198 E of the EC Treaty) in order to promote social and economic cohesion.

Table 5.4. Financial support from the EU to European networks in the Iberian Peninsular. Gas infrastructures.

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| In the pluri-regional CSF for Spain for the period 1994-1999, a budget of 517m ecus was allocated for energy (this quantity becomes significantly higher if we add the amounts allocated in the different CSFs for the Priority Regions), with the enlargement of the gas line networks as a priority. |
| On the other hand, in December 1994, at the Hispano-Portuguese summit it was decided that a project for linkage of the gas networks of Spain and Portugal from the Maghreb-Europe gas line should be presented in order to obtain the necessary co-funding from the community initiative REGEN/INTERREG II |
| Gas lines. Total cost of investment and co-funding from the community Stretch between The Straits of Gibraltar and Cordoba * Investment \$430m * EU subsidy \$140m Stretch Cordoba- Badajoz (Extremadura gas line) * Investment \$180m * EU Subsidy \$64m North west gas line: Braga – Tuy – Coruña – Villalba – Oviedo The stretch between Braga and Villalba has been co-financed by the REGEN/INTERREG community initiative (40% of the cost of the total investment) The stretch between Villalba and Oviedo has been co-financed through the pluri-regional CSF |

SOURCE: Information provided by MINER (Spanish Ministry of Industry and Energy)

5.3 Towards a common energy policy. The V Framework Programme

With the approval of the community programme of financial support for the promotion of energy technology between 1995 and 1998 JOULIE THERMIE II¹ and the final elaboration of the Green Paper (COM (96) 576) on renewable sources of energy, the EU made a major thrust towards strengthening community energy policies.

¹ THERMIE represents the demonstration side of the energy programme. Two different lines of actions have been subsidised:

A project for the efficient use of energy (Type A)

Activities for the promotion and diffusion of energy technologies (Type B)

This programme has approved almost 1,250 proposals, with funding worth 531 M euros.

Table 5.5 THERMIE Proposals and funding approved in the EU

| STRATEGY | N° of PROPOSALS | FUNDING (EUROS m) |
|---------------------------|-----------------|-------------------|
| Rational use of energy | 206 | 139.1 |
| Renewable sources | 234 | 139.7 |
| Combustible fossils | 169 | 183.2 |
| Diffusion of technologies | 350 | 34.2 |
| Complementary measures | 37 | 6.4 |
| Help to SMEs | 113 | 10.0 |
| Others | 140 | 18.4 |
| TOTAL | 1.249 | 531.0 |

Source: Information provided by MINER. Energy in Spain. 1998.

Table 5.6. Proposals and funding approved in the EU

| | N° of PROPOSALS | FUNDING (EUROS m) |
|------------------------|-----------------|-------------------|
| Strategy R & D | 23 | 15.2 |
| Rational use of energy | 96 | 110.5 |
| Renewable energy | 308 | 224.5 |
| Fossil fuels | 43 | 51.2 |
| TOTAL | 470 | 401.2 |

Source: Information provided by MINER. Energy in Spain. 1998.

On December 8, 1997, the Commission presented to the Council a proposal for a twice yearly programme for all actions and the financing of them in order to guarantee the coherence and efficiency of the following lines of action for energy:

- Promotion of renewable energy (ALTENER)
- Energy efficiency (SAVE)
- Promotion of co-generation (PCCE)

Table 5.7. Actions included in the V Framework Programme

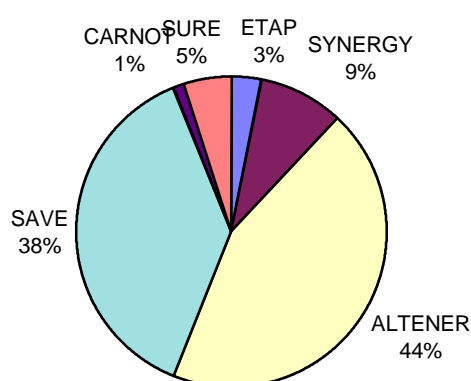
| PROGRAMME | CONTENT | BUDGET (EUROS m) |
|----------------------|---|------------------|
| ETAP | Studies, analyses and forecasts | 5 |
| SYNERGY | International co-operation ² | 15 |
| ALTENER ³ | Encourage renewable energy | 74 |
| SAVE | Rational use / efficient energy | 64 |
| CARNOT | Clean technologies | 3 |
| SURE | Security in the transport of radioactive material | 9 |
| TOTAL | | 170 |

SOURCE: EU Council

The European programme for international co-operation, diversification and energy saving is part of the V Framework Programme⁴, which will run from 1998 to 2002 and whose budget is 170 million euros.

Among the most important objectives of this Programme are security in supply, competitiveness and environmental protection.

Figure 5.2. V Framework Programme. Allocation of the budget according to programmes.



² The EU's energy policy for international co-operation has been diffused through several programmes: PHARE, for Central and Eastern Europe; TACIS, for the New Independent States; MEDA, for the Mediterranean basin; FED for the ACP countries; ALLURE, for Latin America.

³ Of which, 22M euros for the 1998-1999 period.

⁴ Decision 1992/21/CE of the Council, 14 December 1998.

5.4. Brief outline of the six Programmes.

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| ETAP |
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This programme brings together the activities envisaged in the “European energy observatory”⁵.

ETAP is a specific programme of study, analysis and planning, whose aim is the future development of European energy policy. Other priority objectives can be added to these:

- The establishment of a common approach for studies, analysis, forecasting and other types of work in the energy sector.
- The promotion of co-ordinated analyses of EU markets and energy policies as well as those of Member States.
- The assessment and analysis of the development of energy markets in Europe and in the world, mainly with regard to security in supply and competitiveness
- The analysis of the effect of the production and consumption of energy on the environment, especially with regard to climactic changes.
- To facilitate contact between information networks in the energy sector
- The implementation of an active policy for the proper dissemination of results obtained
- The establishment of ways to properly monitor the framework Programme in the energy sector.

In order to achieve these objectives, the EU will undertake and promote, directly, or in collaboration with other interested parties, a series of measures and the funding of them. Among such measures:

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- The observation, monitoring and exchange of comparable data in the energy sector. Plus studies, analyses and forecasts, as well as the development of tendencies, markets and prices.
- Technical and methodological assistance to projects, in order to determine and transfer methods of analysis and forecasting, methods for collecting information, access to electronic networks and the exchange of information through them, etc.
- The development of relations between energy producers and energy consumers and the academic and administrative media, in order to promote research into the economic aspects of the instruments of energy policy.
- Carrying out any kind of initiative (reports, workshops, seminars, lectures) that would aid in the diffusion of results obtained.

The ETAP programme budget is 5m euros.

SYNERGY

The fundamental objective of this programme is to strengthen international co-operation in the field of energy, through aid to third countries and through technical assistance in the definition, formulation and application of energy policy. Also through the promotion of industrial co-operation.

In the interest of such co-operation, the EU contributed by financing a whole series of lines of action, among them:

- Training in energy policy
- Greater dialogue on energy policy and the exchange of information through lectures and seminars
- Analysis and energy forecasting
- Across the border regional co-operation

⁵ Budget line B41040, now called ETAP B41040

- Improvement in the framework for co-operation on industrial energy

SYNERGY finances projects on the initiative of the Commission (100% funding) and projects on the initiative of third countries (up to a maximum of 50%).

This programme has a budget of 15m euros.

ALTENER II

ALTENER is a specific programme designed to encourage renewable energy sources and to support the implementation of a community strategy and plan of action for renewable energy sources.

The programme includes the following objectives:

- To facilitate the creation of the necessary conditions (legal, socio-economic and administrative) for the implementation of a community plan of action for renewable energy sources
- To give incentive to private and public investment for the production and use of energy based on renewable sources

In order to achieve these objectives, the programme subsidises the following lines of action, among others:

- Studies and other actions designed to apply and complete measures that have been put into action by the EU and Member States in the field of renewable energy (100% community funding). Among these actions, some of the most important are the preparation of market and sector strategies, comparative analyses of the environmental repercussions of the projects, as well as the evolution of costs and the long term benefits of classical and renewable energy and the legal, socio-economic and administrative conditions most conducive to the greater use of renewable energy sources.
- Pilot actions of special interest to the EU (50% community funded). These actions are geared towards creating and expanding the structures and

instruments necessary for the development of renewable energy, mainly for local/regional planning, and the planning/evaluation of instruments and for new financial products and market instruments.

- Measures designed for the development of information, education and training structures (100 % community funding). There are other measures, such as encouraging exchanges and providing greater knowledge in order to improve co-ordination of international, community, national, regional and local activities. Also key is the creation of a centralised system for the gathering and diffusion of information and technical knowledge on renewable energy.
- Specific lines of action for the greater use of renewable energy in the market, as well as the technical knowledge that will make it possible to move from the demonstration phase to the phase of commercialisation.
- Monitoring and assessment of actions (percentage to be financed still undetermined). Among the measures of control and assessment mention must be made of those aimed at following the application of the community strategy and plan of action in the field of renewable energy, as well as giving the necessary support to the application of this plan of action, in order to have a greater level of co-ordination and synergy among actions (including those that receive community and / or EIB funding).

The budget for the ALTERNER programme is 74m euros; i.e., it is the most expensive of the six programmes included in the V Framework Programme.

SAVE II

The basic objective of this programme is to promote energy efficiency in the EU.

The objectives of this programme can be summarised as follows:

- To stimulate measures for energy efficiency in all sectors
- To give incentive to investment aimed at energy conservation

- To create conditions for the improvement of final energy consumption per unit of GDP (energy intensity).

SAVE II subsidises the following lines of action, among others:

- Studies, aimed at creating and implementing community measures (100% community funded)
- Pilot actions selected according to sectors in order to speed up investment and achieve greater energy efficiency and to make greater use of energy (50% community funded).
- Measures proposed by the Commission (100% funded) or by third countries (50% funding). The aim of these measures is greater exchange of experiences in order to improve the co-ordination of activities carried out on an international, community, national, regional and local scale and through the proper diffusion of information.
- Monitoring of progress made in the field of energy efficiency in the EU and each Member State. As well, the monitoring and assessment of the activities and measures adopted.
- Specific lines of action for energy management on a regional and urban scale (40% community funded). The final objective is greater cohesion among Member States and regions in the field of energy efficiency.

The SAVE II budget, 64m euros, is the second largest after ALTERNER II.

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| CARNOT |
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The fundamental aim of this programme is to promote clean technologies in the field of solid fuels:

It has the following objectives:

- To encourage the use of clean and efficient technologies in installations that use solid combustibles, in order to reduce emissions generated by their use.

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- To encourage the development of clean technologies of solid combustibles which are being used to achieve the Best Available Technologies at reasonable costs.

Some of the lines of action that have EU financial support are:

- Measures for greater co-operation in order to promote better technical and commercial information (community finance stands at between 50 and 100%).
- Measures, aimed at improving strategic industrial co-operation (community funding of between 30 and 50%) through day long meetings and business seminars, industrial missions “in situ”, studies, assessments and other meetings to promote the industrial exploitation of clean technologies for energy purposes (for example the combined production of heat and electricity).

The budget for this programme is 3M euros.

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| SURE |
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SURE is a specific programme of activities in the nuclear sector, which focuses on transport security for radioactive material, on the control of security and industrial co-operation for the development of certain aspects of security in nuclear plants in the countries included in the TACIS programme (New Independent States: NIS).

These are the objectives of the SURE programme:

- To check and harmonise security practices for the transport of radioactive material in the EU.
- To contribute to the creation, in the NIS, of an efficient and reliable control system
- To promote industrial co-operation and co-operation among regulation organisms and the NIS and the exchange of technical knowledge in the

nuclear industry in order to help those countries to achieve higher levels of security.

The programme therefore includes three lines of action:

- Transport of radioactive material. The aim of this line of action is to improve the norms of security, to contribute to better legislation, to technically evaluate any incidents during transport, for greater coherence in urgency procedures, the elaboration and use of an efficient system of information in the event of accident, etc.
- Industrial co-operation. This is aimed at analysing the legal, financial and industrial context of the NIS and at stimulating measures for industrial co-operation that give rise to a transfer of European technologies with regard to nuclear security. The aim is also to achieve co-operation of EU partners with the NIS, in order to promote security in nuclear plants.
- Training of experts in the New Independent States (NIS) in areas such as security control in the nuclear field.

The budget for this programme is 9M euros.

5.5. Community funds already allocated within the V Framework Programme in 1998-99.

In this section, based on information provided by the Commission⁶, we shall give a brief presentation of the community funds already allocated in four of the programmes within the V Framework Programme between 1998 and 1999.

In four of the programmes we have examined (ETAP, ALTENER, SAVE and SYNERGY) the EU has undertaken to give funding, during the first two years, (1998 and 1999) to the tune of over 68M euros. ALTENER and SAVE account for over 80% of that.

⁶ Annual assessment of the energy sector and the ETAP, SYNERGY, ALTENER, SAVE, CARNOT and SURE programmes. Final Report; DG TREN; May 2000.

ALTENER II

Between 1998 and 1999, the ALTENER Programme has already undertaken 213 contracts at a total cost of 23.9m euros, which represents 90.5% of the budget allocated for that two-year period (26.4m euros).

More specifically, in 1998 and 1999, ALTENER II financed 136 renewable energy projects for a total cost of over 13 m euros.

Table 5.8: Projects financed on renewable energy

| | N° of Projects | | | Quantity (Thousands of Euros) | | |
|------------------|----------------|-----------|------------|-------------------------------|-------------|--------------|
| | 1998 | 1999 | Total | 1998 | 1999 | Total |
| Renewable energy | | | | | | |
| Wind based | 8 | 4 | 12 | 593 | 399 | 992 |
| Hydraulic* | 3 | 2 | 5 | 290 | 278 | 568 |
| Photovoltaic | 3 | 7 | 10 | 267 | 784 | 1051 |
| Biomass | 38 | 23 | 61 | 3937 | 2340 | 6277 |
| Geo-thermal | 2 | 3 | 5 | 164 | 256 | 420 |
| Others** | 17 | 26 | 43 | 1339 | 2795 | 4134 |
| Total | 71 | 65 | 136 | 6590 | 6852 | 13442 |

* Small installations

** Solar thermal and passive

SOURCE: DG TREN; ob. cit.

SAVE II

In 1998, SAVE II financed different projects for a total cost of over 15m euros. In 1999, the programme financed different activities worth 16.2M euros, slightly higher than what had been budgeted (15.8m euros). Which means that in the 1998-99 two-year period, the projects undertaken represented a quantity of 31.2m euros, 2.3% more than the quantity budgeted for both years (30.5m euros).

ETAP

Some 45 contracts have been signed for this programme for the 1998-99 two-year period, for a total of 2.3m euros.

Table 5.9

| | N° of contracts | Quantity (EUROS t) |
|--------------|-----------------|--------------------|
| 1998 | 25 | 1470 |
| 1999 | 20 | 870 |
| TOTAL | 45 | 2340 |

SOURCE: DG TREN; ob. cit and our own elaboration

SYNERGY

In the 1998-99 period, the SYNERGY Programme completed 91 contracts worth 11m euros.

Table 5.10

| | No. of contracts | Quantity (millions of euros) |
|--------------|------------------|------------------------------|
| 1998 | 43 | 5000 |
| 1999 | 46 | 6082 |
| TOTAL | 89 | 11082 |

SOURCE: DG TREN; ob. cit and our own elaboration

Table 5.11. Community funding already allocated to V Framework Programme. 1998-1999.

| PROGRAMME | MILLIONS OF EUROS | % |
|--------------|-------------------|------------|
| ETAP | 2.3 | 3.4 |
| ALTENER II | 23.9 | 34.9 |
| SAVE II | 31.2 | 45.6 |
| SYNERGY | 11.0 | 16.1 |
| TOTAL | 68.4 | 100 |

SOURCE: DG TREN; ob. cit and our own elaboration

Figure 5.3

