



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 26.04.2000
COM(2000) 247 final

**COMMUNICATION FROM THE COMMISSION
TO THE COUNCIL, THE EUROPEAN PARLIAMENT,
THE ECONOMIC AND SOCIAL COMMITTEE AND
THE COMMITTEE OF THE REGIONS**

Action Plan to Improve Energy Efficiency in the European Community

EXECUTIVE SUMMARY

There is a pressing need to renew commitment both at Community and Member State level to promote energy efficiency more actively. This is especially true when seen in the light of the Kyoto agreement to reduce CO₂ emissions, where improved energy efficiency will play a key role in meeting the EU Kyoto target economically. In addition to a significant positive environmental impact, improved energy efficiency will lead to a more sustainable energy policy and enhanced security of supply, as well as to many other benefits.

An estimated economic potential for energy efficiency improvement of more than 18% of present energy consumption still exists today in the EU as a result of market barriers which prevent the satisfactory diffusion of energy-efficient technology and the efficient use of energy. This potential is equivalent to over 160 Mtoe, or 1900 TWh, roughly the total final energy demand of Austria, Belgium, Denmark, Finland, Greece and the Netherlands combined.

The Action Plan presented below outlines policies and measures for the removal of these barriers and the realisation of this potential. If a proposed indicative target for improvement of energy intensity by an additional one percentage point per year above the estimated yearly baseline change is met, this can realise two-thirds of the available savings potential by the year 2010. This would result in avoided energy consumption of over 100 Mtoe, equivalent to avoided CO₂ emissions of almost 200 Mt/year or around 40% of the EU Kyoto commitment¹. Meeting the Community-wide target of doubling the use of cogeneration to 18% of EU electricity production by 2010 is expected to lead to additional avoided CO₂ emissions of over 65 Mt CO₂/year by 2010².

Three groups of mechanisms for improving energy efficiency are put forward:

- Measures to enhance the integration of energy efficiency into other Community non-energy policy and programme areas, such as regional and urban policy, taxation and tariff policy, etc.
- Measures for re-focusing and reinforcing existing successful Community energy-efficiency measures.
- New common and co-ordinated policies and measures.

¹ See footnote 12, page 5.

² *European Cogeneration Review*, July 1999.

1. BACKGROUND

1.1 Introduction

In its Resolution on energy efficiency of 7th December 1998³, the Council invited the Commission to come forward as soon as possible with a proposal for a prioritised Community action plan for energy efficiency. It proposed a number of measures, sought indications of the contribution of other Community policies towards energy efficiency, and stated that the plan should show Community and Member State responsibilities, particularly regarding financing and timetables.

The Resolution was itself a response to the Commission's Communication on energy efficiency⁴, which set out a Community strategy for energy efficiency. The Council supported this strategy and the proposed indicative target for the Community as a whole of a one percentage point per year improvement in energy intensity⁵ to the year 2010 over and above that which would otherwise be attained. The European Parliament has presented a positive opinion on the Communication, expressing clearly the need for renewed and forceful action in energy efficiency and proposing an even more ambitious annual target for improving energy intensity⁶.

In addition to the Council Resolution and the opinion of the European Parliament referred to above, opinions from individual Member States, the Economic and Social Committee, industry and other stakeholders have been taken into account. A first meeting was held with Member States on 14th January 1999 with the purpose of obtaining further information on national programmes and hearing their views on the future shape of the Action Plan. An EU-wide energy efficiency conference was held on 8-10 November 1999⁷ where technical details of possible policies and measures were discussed. The results of this conference have also been considered.

The Action Plan, as it is set out below, must be read and seen against the background of the Commission Communication and the Council Resolution on energy efficiency, which are logical steps in a process. Moreover, the Action Plan must be seen in the wider context of Community energy and environmental policy and indeed other relevant Community policies. It is also constructed in such a way as to contribute substantially to the integration of energy and environmental objectives into other policy areas⁸.

The Council Resolution confirms the importance of an energy efficiency strategy at Community level and stresses the crucial role to be played by Member States in achieving this strategy. The Action Plan makes a point therefore of distinguishing between Community and Member States' responsibilities. Great store is set in the Action Plan on Member States' own

³ OJ C 394/01, 17.12.1998.

⁴ *Energy Efficiency in the European Community – Towards a Strategy for the Rational Use of Energy*, COM(1998) 246 final, 29.04.1998.

⁵ Changes in energy intensity for final energy consumption are a first and rough estimate indicator for changes in energy efficiency. This is due to the fact that energy intensity can also include temperature effects and the weighting effects of economic restructuring. A more definitive indicator is the bottom-up aggregation of the energy consumption of all end users, corrected for temperature and structural effects. A set of such indicators is envisaged to be produced officially by Eurostat during the year 2000. *Stockmann Report*, PE 228.977/final, 25.02.1999 and *Resolution A4-0086/99*.

⁷ *The SAVE Conference for an Energy-efficient Millennium*, Graz, Austria.

⁸ *Strengthening Environmental Integration within Community Energy Policy*, COM(1998)571 of 14.10.1998.

policies and programmes in this field, a number of which have already led to significant progress.

1.2 Market Barriers and Renewed Efforts to Promote Energy Efficiency

The underlying assumption behind a plan of action for energy efficiency is that, whilst market forces have gradually improved energy efficiency in past years, it is clear that additional steps can and should be taken. There still remains a large economic potential for further improvement that can be estimated now to be over 18% of present energy consumption⁹. This remains as a result of the existence of a number of market imperfections and barriers specific to the energy and energy technology markets. Policies and measures exist which, when implemented, can reduce or even remove these barriers and lead to the realisation of a large part of this potential, thereby significantly reducing levels of energy intensity and lowering greenhouse gas emissions.

Neither the Community nor the Member States' efforts undertaken so far have managed to overcome all of the existing barriers to investment in energy efficiency. **Energy prices**, for example, still do not accurately reflect energy costs including externalities; **lack of or incomplete information** often hampers the use of cost-effective and energy-efficient technology. There are also numerous **institutional and legal barriers** which prevent improved energy efficiency. One example is the continued practice of selling energy in the form of kWh instead of efficient heating and cooling, lighting and power, which is what the energy consumer actually wants. There are also many different types of **technical barriers** to energy efficiency, including the lack of harmonised and standardised components. Another important technical barrier is the lack of appropriate transmission infrastructures. **Financial barriers** also exist, an example of which is the unduly short pay-back period required for many demand-side investments compared with those for energy production.

1.3 Aims of Action Plan

The mechanisms to remove existing market barriers in order to allow market forces to work effectively to improve energy efficiency are described only briefly and indirectly in the Action Plan. They have been addressed in earlier documents, including the Commission Communication on energy efficiency from 1998¹⁰. The primary objectives in presenting the Action Plan for Energy Efficiency may be summarised as follows:

- To refocus attention on promoting energy efficiency and to activate stakeholders;
- To present for endorsement common and co-ordinated policies and actions to be undertaken in the light of the Kyoto Agreement to contribute to the reduction of greenhouse gas emissions by 8% by the period 2008-2012, and to achieve other Community energy and environmental goals including those set forth in the *European Climate Change Programme*¹¹;
- To clarify the roles, related costs and to suggest timetables for the Community and the Member States;

⁹ MURE model estimation. European Commission March 1998.

¹⁰ COM(1998) 246 final, 29.04.1998. *Op cit.*

¹¹ Draft Communication under discussion in the Commission.

- To realise the available economic potential for improving energy efficiency in line with the proposed target for reduced energy intensity of one percentage point per year, compared to a business-as-usual trend which is estimated now to be close to zero. Meeting this target would realise two-thirds of the estimated savings potential of 18% by the year 2010. This would result in avoided energy consumption of over 100 Mtoe, and avoided CO₂ emissions of nearly 200 Mt/year or around 40% of the EU Kyoto commitment¹². Meeting the Community-wide target of doubling the use of cogeneration to 18% of EU electricity production by 2010 is estimated to result in additional avoided CO₂ emissions of more than 65 Mt CO₂/year by the year 2010¹³.
- To increase awareness of the fact that, although a target of 1% per year improvement is ambitious, it can be exceeded if additional resources are made available.
- To establish the foundation for a continuous and long-term improvement in energy efficiency through the use of market forces and market transformation, with accelerated development and diffusion of new energy-efficient technologies.

1.4 Means of Implementation

The Action Plan presented below is an integrated and coherent combination of policy instruments which reinforce each other. They are designed to complement and reinforce Member State activity in this area, not to duplicate them. Proposed actions consist of :

- Measures designed to **integrate the energy efficiency dimension** into Community non-energy policies and programmes;
- Measures to strengthen and expand **existing energy efficiency policies and measures**; and
- **new policies and measures.**

Many proposed actions fall into the category of **voluntary measures**, co-ordinated at Community level. In other cases, **legislation** is proposed when it is deemed necessary.

The **SAVE programme** within the Energy Framework Programme will be used as the principal co-ordinating arm of the Action Plan, both as a basis for preparing common actions, and to provide the means of implementation and evaluation at Community level. Other Community programmes, including the 5th RTD Framework Programme, are also important in this process.

The **selection** of measures is based on relative economic potentials in the targeted areas, on the feasibility and cost-effectiveness of implementing the measures and on their expected impact. As the measures complement each other, an optimal mix is an important objective.

The **time frame** for the Action Plan covers essentially the period to 2010 and much of its impact will be measurable until then and beyond. Most of the actions, however, will be

¹² This is based on a carbon intensity of 2.2 tn CO₂/toe 1996; 2.1 tn CO₂/toe in 2010. 3086 Mt CO₂ emissions 1990 and a 7% baseline increase in emissions to 2010. 50% fossil-based primary energy is assumed for 2010. The Kyoto target of –8% for six GHG will require a total of 450 Mt/year of avoided CO₂.

¹³ *European Cogeneration Review*, July 1999, *Op cit.*

initiated during the present lifespan of SAVE and other ongoing Community programmes, i.e., up to and including 2002.

With regard to **resources**, the Action Plan assumes that present budget levels for Community programmes, including SAVE, will be at least maintained. The same is assumed for the average of the budgets for Member State energy efficiency programmes. Evaluations will provide information on the future adequacy or otherwise of funding in this field, including recommendations for funding upon the expiry of now ongoing programmes.

Co-ordination of Community policies and measures with those of Member States requires a strong level of consultation. Experts meeting as well as high-level meetings on energy efficiency policies and measures will be held on a regular basis. Member State objectives and targets in the area of energy efficiency and cogeneration will be reviewed and analysed with a view to establishing their contributions to overall Community targets.

Monitoring and evaluation of individual measures and programmes and of the Action Plan itself will be conducted at regular intervals. At the expiry of the implementation phase of the Action Plan, a full-scale review will be undertaken in the light of progress made in order to assess what further steps may need to be taken. This will be co-ordinated with similar monitoring and evaluation activities undertaken for renewable energy sources.

More detailed information on the policies and measures proposed in this Action Plan, including suggested timetables, costs, impact analysis and responsibilities, are found in *Annex 1*.

2. PROPOSED POLICIES AND MEASURES

2.1 Measures to Integrate Energy Efficiency into Non-energy Policies and Programmes

A general emphasis is placed in this Action Plan on integrating energy efficiency into other non-energy policy instruments and programmes where there are known cost-effective advantages and where it is possible to do so without significantly altering the original intent of the policy or programme in question. This has been pointed out in the Commission Communication on Strengthening Environmental Integration¹⁴. In many cases energy efficiency is not adequately addressed in these policy areas due to a lack of knowledge on how such goals can be attained while pursuing other policy objectives.

Transport policy is a priority area for energy efficiency as transport absorbs over 30% of total final energy consumption. Road traffic is of particular importance as it accounts for about 85% of overall transport CO₂. Policy priorities of a non-technological nature include incentives for optimal occupancy of vehicles, public and private, the promotion of new and alternative infrastructure and subsequently modal shifting and modal integration, management alternatives to air transport, completion of the internal market in rail transport and changing behaviour regarding mobility. A clearer mandate is sought to accelerate and broaden these developments through incentive programmes, pilot actions and greater Member State involvement.

For modern **enterprise policy**, sustainable development is a cornerstone. As energy efficiency is a key factor for the competitiveness of many industry sectors, it forms an important part of

¹⁴ COM(1998) 571 of 14.10.1998, *op. cit.*

the overall action plan on sustainable development, which is under preparation for the domain of enterprise policy. The development of self regulation and similar arrangements, often being the most effective mechanism for achieving further progress, will have a key place in this process. Where it is necessary to propose regulatory measures, there will be a full assessment of the costs and benefits arising, and the regulatory provisions will be framed in such a way as not to jeopardise the single market.

Regional and urban policy and programmes, such as the Regional Development and Cohesion Funds, have potentially large energy efficiency dimensions in both Objective 1 and Objective 2 areas. The Structural Funds regulation as well as the regulation for the Regional Fund and the guidelines for the Structural Funds and their co-ordination with the Cohesion Fund support improved energy efficiency. In this respect the guidelines give priority to the promotion of energy-efficient equipment in SMEs, in households and public buildings as well as to investment by industry in energy-efficient and innovative technologies, such as Combined Heat and Power (CHP). These can therefore be more closely coupled with, for example, voluntary agreements, energy audits, labelling and best practice initiatives in Member States. The proposed Green Paper on urban policy in the transport sector will also provide information for additional initiatives.

Taxation and tariff policy are important instruments for promoting energy efficiency. The Commission's tax proposal¹⁵ concerning the broadening of the minimum tax base for energy products is an example of this. It provides for a minimum base and possible tax-exemptions for energy efficiency investments. Member State measures in this area are also important and their use in promoting energy efficiency will be encouraged. Carefully designed tariff structures for energy supply and distribution can also improve efficient end use and will therefore be promoted.

International co-operation and pre-accession activities are critical elements in promoting energy efficiency in and outside the Union. Harmonised efficiency standards for internationally traded goods and services are a good example. For the Accession Countries, early co-operation through Community programmes such as the Fifth Framework Programme, SAVE and Synergy will allow for approximation of legislation, dissemination of information and diffusion of technology. This process is already underway. Implementation of the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects should facilitate the accession process and help CIS countries. Energy efficiency will be given increased importance in EU relations with developing countries, *inter alia* through actions implemented jointly and anticipated increased possibilities for generating carbon credits in these countries by increased collaborative RTD and by the transfer of energy-efficient technologies and services. International liberalisation initiatives, particularly in the framework of a new multilateral trade round, are crucial in promoting the wide diffusion of energy-efficient technologies worldwide.

Member State policies and measures form the bedrock of energy efficiency in the European Union. Greater integration and co-ordination with Community Programmes will be necessary to meet proposed objectives. For this reason Member State policies and measures will be examined and Member State programmes monitored on a regular basis. Focused conferences and workshops will be held at regular intervals for the presentation of Member State activities as well as Community initiatives in an effort to re-define continually the roles of each in the implementation of individual measures. A summary table of Member State policies and

¹⁵ COM(1997)30 final.

measures can be found in **Annex 2**. This is intended to provide an indication of the frequencies of the most common categories of activities.

In addition, Member State objectives and targets in the area of energy efficiency and co-generation will be reviewed and analysed in collaboration with the respective Member States. These goals will be placed in a common framework for measuring and monitoring, with a view to establishing their probable contributions to overall Community targets.

2.2 Initiatives to Strengthen and Expand Existing Successful Energy Efficiency Policies and Measures

In the following section, brief descriptions, implementation plans and complementary measures for specific ongoing programmes are presented for all end-use sectors. These initiatives are designed to reinforce and strengthen each other and normally involve considerable Member State collaboration. Detailed information on these measures, including descriptions and timetables for individual actions, are provided in **Annex 1**.

2.2.1 Transport Efficiency

Unless appropriate action is taken, CO₂ emissions from transport are expected to increase by about 40% between 1990 and 2010¹⁶. Despite the existing difficulty to limit energy consumption in the transport sector by taxation, increased information, and similar measures a number of ambitious Community and Member State initiatives to improve energy efficiency are now under implementation with the common objective of achieving sustainable mobility. The European Union has adopted a strategy on CO₂ and cars, which aims to reduce by one-third the average CO₂ emissions of new cars by 2005/2010 compared to the 1995 baseline, using voluntary agreements. These must be fully implemented and monitored, and additional incentives provided to accelerate the rate of compliance. The measures presented for the transport sector include further action on vehicle fuel economy and improved pricing.

The long-term EU target as expressed in the 5th Framework Programme is a 50% reduction in CO₂ emissions per passenger-kilometre and per payload-kilometre. In the shorter term the aim is 5 to 10% energy savings in order to achieve aggregate reductions in CO₂ emissions. Other technical targets include the improved use of hydrocarbon fuel and increased competitiveness of alternative transport fuel. With a view to monitoring and to identify successful practices in the field of environmental integration into transport policy, the Transport and Environment Reporting Mechanism (TERM) has been set up. Several of the indicators on which the Reporting Mechanism is based relate directly or indirectly to energy efficiency. As TERM has been conceived as a continuing process it will need to be further extended and to be revised regularly.

2.2.2 Household Appliances, Commercial and Other End-use Equipment

- Energy efficiency labelling scheme

For domestic appliances, the *EU labelling scheme*¹⁷ has been established for a number of years in an effort to increase the flow of accurate and objective consumer information. It will now be strengthened and extended to cover all major appliances and installed equipment, in full conformity with Community WTO-relevant commitments.

¹⁶ COM(97)481final of 1.10.1997.

¹⁷ 92/L 297/16, OJ, 13.10.1992.

A SAVE financed study published in September 1998 evaluated the energy labelling scheme. It found that the level of compliance was comparatively low¹⁸. In spite of this, the label, when applied, was shown to have had a substantial impact, with a third of purchasers saying that the label had influenced their choice of refrigerator or freezer. This study will form the basis of a forthcoming report to the Parliament and the Council.

The previous success of the labelling scheme will now be built upon through increased and more pro-active enforcement by Member States regarding unlabelled and inaccurately labelled appliances. Increased promotion of the scheme will also be an important element in increasing its impact. The effectiveness of Member States enforcement agencies will be improved by increased co-operation. Additional supporting measures (such as a public database to disseminate information on models, efficiency levels and prices) will be implemented either by agreement with manufacturers or, failing this, by an amendment to Directive 92/75¹⁹ prescribing such a database. For office equipment the Commission will present to Council and Parliament during the year 2000 a Regulation to implement the Energy Star labelling scheme, following the conclusion of an agreement with the U.S.

The energy label will also be closely co-ordinated with the Community Eco-label award scheme, which is a voluntary and selective label already applicable to certain domestic appliances, such as washing machines and refrigerators, and which is awarded only to products that meet strict environmental requirements, including requirements related to their energy consumption.

- Negotiated Agreements and minimum efficiency standards

A number of Member States and many manufacturers have indicated a preference for the use of *negotiated agreements* in the form of voluntary commitments on the part of and between equipment manufacturers, instead of regulatory legislation. These are recognised by the Commission (*inter alia* by means of a Recommendation) and have the same objective as mandatory minimum efficiency requirements. Since the adoption of the "Refrigerator Directive" for mandatory energy efficiency standards (96/57/EC), negotiated agreements have more and more become an accepted and practical alternative to this type of legislation. Currently two agreements have been negotiated by the Commission with appliance manufacturers: the reduction of stand-by losses of televisions and video recorders and an agreement for washing machines. In the commercial and industrial sectors there is no labelling scheme, and mandatory minimum efficiency standards are necessary here unless acceptable negotiated agreements are concluded. A large number of appliances will now be the subject of negotiated agreements or commitments. These include water heaters, air conditioners, dishwashers, driers, electric motors, pumps, fans and commercial refrigeration equipment, pending a satisfactory resolution of the issue of the involvement of the European Parliament in future negotiations. A framework Directive will also be presented which will raise the ambitions of negotiated agreements and, should it prove necessary, facilitate the adoption of mandatory minimum efficiency standards based on pre-established economic criteria.

¹⁸ "Cool Labels", ECU, University of Oxford, 1998 .

¹⁹ 92/L 297/16, OJ, 13.10.1992, *op. cit.*

2.2.3 Industry (including the electricity and gas supply industry)

- Long-term Agreements in industry

There is a large savings potential which can be realised by the removal of technical barriers in industry through minimum efficiency protocols or equivalent agreements in which industries follow guidelines for cost-effective energy-efficient processes and methods in production. Through the use of bench-marking, **Long-term Agreements** have led to the increased use of effective motors, compressors, pumps, fans and other equipment, as well as to efficient processes. This has taken place nationally, where a number of Member States have ongoing programmes, comprising successful agreements with industry. An increased supporting and co-ordinating role at Community level has been sought by Member State industry and will now be implemented. *Agreements* in industry will be strengthened and their use expanded to include the chemical, steel, pulp and paper, cement and textile industries, and the energy supply industry, following preparatory activities. In addition, a Commission Communication on the subject of harmonisation and co-ordination of Community-level and Member State Long-term Agreements will be prepared. The purpose of this is to provide a harmonised framework to facilitate EU-wide negotiations and allow a level playing field for European industries. If after these initiatives, Long-Term Agreements were seen to be ineffective in achieving significant improvements in energy efficiency and a reduction in emissions, then the Commission would be ready to adopt mandatory energy efficiency objectives tailored to specific industries.

- Combined heat and power (CHP)

The use of combined heat and power (CHP) presents a substantial potential for increased energy efficiency and reduced environmental impact. It is also considered to be a priority area for many Member States. The Communication on CHP (COM(97)514 final) outlines the barriers and a strategy for the European Union, and was endorsed by Member States in December 1997 in the form of a Council Resolution²⁰. The impact of energy market liberalisation on the penetration rate of cogeneration and the development of improved financing mechanisms will be followed closely, as will RTD in the area. It should also be noted that the Commission proposal for a revision of Council Directive 88/609/EEC on polluting emissions from large combustion plants will require that new plants apply CHP where feasible, making provision for the use of biomass and promoting efficient production with fossil fuels. The Community-wide target of raising the use of cogeneration to 18% of EU electricity production by 2010, as outlined in the Communication on CHP, will be pursued through numerous strengthening policies and measures, often in co-operation with Member States. Meeting this target is expected to lead to avoided CO₂ emissions of over 65 Mt CO₂/year by 2010²¹. Measures will address *i.a.* the technical barriers and costs associated with connection to the grid.

- Energy services offered by utilities and SME's

The Commission remains of the view that there is a need to increase the focus on the electricity and gas industry's role in promoting the development and use of energy services and energy-related services. Commitments will therefore be sought from utilities and service companies on a voluntary basis to include energy efficiency along with performance

²⁰ Council Resolution of 8.12.1997.

²¹ *European Cogeneration Review*, July 1999.

contracting and similar proven approaches to market energy efficiency as a part of their corporate goal, provided they meet normal criteria for cost-effectiveness. The use of rational planning techniques will also be encouraged. These efforts will be directed toward correcting the institutional barrier resulting from the continued practice of selling energy in the form of kWh instead of efficient heating and cooling, lighting and motive power, the services which the consumer actually wants. The Commission will continue to promote demand-side management in Member States through pilot projects and dissemination activities under the SAVE, RTD and other Community Programmes with a view to providing a comparison of demand-side and supply-side options on an equal economic basis. The impact of such activity on SME's and the emerging market for innovative bundling of services from multi-service companies in this context will be stressed. The use of information technology in providing energy and energy-related services will be a priority area.

2.2.4 Buildings

- An Amended Council Directive (93/76/EEC)

Council Directive 93/76/EEC to Limit Carbon Dioxide Emissions by Improving Energy Efficiency (SAVE), contains six measures to be taken by Member States to promote energy efficiency in buildings and other end-use sectors. This Directive has led to the introduction of successful programmes in many Member States; in some the results have been limited.

Council Directive 93/76/EEC has the potential to improve energy efficiency substantially and to avoid or reduce carbon dioxide emissions in all Member States by helping to overcome a number of barriers in buildings and in other sectors. Strengthening specific articles in the Directive will enhance the Directive's impact by providing additional precision and more stringent monitoring requirements.

The Commission envisages to propose an Amended Directive which will more clearly define the proposed measures and strengthen reporting and compliance procedures. This will allow for increased co-ordination and harmonisation of programmes which, however, will remain primarily Member States' responsibility. The Directive will be extended to cover such areas as thermal insulation in existing buildings, installed equipment, expanded certification and granting of licenses. It is also proposed that it be extended to cover small-scale renewable energy use in individual buildings, transport efficiency, CHP, energy audits, energy management and Guarantee of Results schemes.

- Additional Measures for the Building Sector

Buildings account for 40% of the EU's energy requirements. The building sector offers one of the largest single potentials for energy efficiency and should thus be a major focus for action. Among the main Community actions in the building sector are the "Boilers Directive" (92/42/EEC), the "Construction Products Directive" (89/106/EEC) and the "buildings" articles in the existing Directive 93/76/EEC. Numerous technical barriers will be removed as standards and norms are established on a wider scale.

Pilot projects, the Amended Directive 93/76/EEC and energy labelling will be designed to help Member States in their task of ensuring that efficient "installed systems" (heating, cooling, and hot water) and building components (e.g., windows) are supplied by qualified installers, who use appropriate and simple design tools. In addition, for existing buildings, when renovated, energy efficiency standards will approach those for new buildings.

Measures to achieve efficient installed systems include best practice information, labelling and its extension into local information schemes, the incorporation of energy efficiency into public procurement, and measures to promote the upgrading of outmoded systems. This information will provide final customers with clear and reliable comparisons of the performance of the energy systems they may be considering. Also included is the extension of energy certification to such systems and training and certification of installers. Pilot projects to develop design tools and studies to identify efficient equipment and systems will likewise be proposed for use by architects, energy consultants, etc. An EU *Green Light* programme to promote efficient lighting and best practice in commercial and public buildings is also being launched.

Measures will be taken to encourage building companies to use integrated environmental management systems such as EMAS in order to allow a more systematic inclusion of environmental issues such as the nature of building materials and to ensure and improve monitoring and evaluation of these measures. The revision of Council Regulation (EEC) No. 1836/93 allowing voluntary participation by companies in the industrial sector in EMAS during the year 2000 will facilitate this.

Horizontal Measures

2.2.5 Research and technology policy

New technology plays an important role in energy efficiency under the Fifth RTD Framework Programme. 1042 M€ will be allocated between 1999 and 2002 for energy, out of which some 440 M€ are expected to concern energy efficiency, mainly for research on and demonstration of energy-efficient technologies on the demand side (domestic and tertiary, industry, transport), but also for utilities. The renewed focus under the Energie Programme on downstream projects promoting the market uptake of end-use technology will be an important element in technology diffusion strategy. This will be closely co-ordinated with other activities proposed below. European Energy RTD on energy efficiency will thus have a crucial impact not only in the short term but especially in the longer term in achieving a sustainable energy system.

2.2.6 Energy Efficiency at the Local and Regional Levels

There is a large savings potential which can be realised by greater decentralisation of energy management and increased public involvement at the local and regional levels. The search costs to consumers involved in obtaining site-specific information on available technology can be reduced considerably. The Commission has encouraged the involvement of elected representatives, alongside other local partners, since the early 1990s, by supporting the establishment of energy management agencies in regions, islands and cities through, *inter alia*, the SAVE Programme. These agencies will now assume added responsibilities in the form of increased dissemination of information and results from Community and Member State studies, pilot actions and programmes. Networks have been set up or are being set up whose role is to promote transnational co-operation and transfer of know-how; among these are OPET's, EnR, FEDARENE, ENERGIE-CITES and ISLENET.

2.2.7 Third-Party Financing (TPF), Guarantee of Results and Related Schemes

Third-Party Financing and model contracts are presently being promoted in the public sector in Member States in accordance with Directive 93/76/EEC. Numerous TPF pilot projects have been implemented, increasingly on a purely commercial basis. This is also true of

Guarantee of Results schemes. Additional action, however, is needed to establish more firmly the credibility and viability of these, other financing schemes, including performance contracting and investment clearing houses in order to remove financial and institutional barriers to investments in energy efficiency. In an Amended Directive 93/76, enhanced measures to promote the use of these instruments will be proposed, while increased involvement by the European Investment Bank in using them will be explored.

2.2.8 Increased Dissemination of Information and Training

A renewed Community information campaign is planned, focusing the attention of consumers and other stakeholders on energy efficiency and valorising its environmental and other benefits. This campaign will be implemented in co-operation with Member States and will build on the results of recent programmes and projects.

Training and certification on the use and maintenance of energy-efficient technology will be expanded. In a later stage, standards of quality for training and certification will be established.

Information resulting from labelling, benchmarking, best practices guidelines and results from pilot actions and studies supported by Community programmes will be made more readily available to decision-makers and other interested parties, especially through the increased use of information technology.

2.2.9 Increased Monitoring and Evaluation

In order to promote policies, programmes and measures which provide the intended impact on energy intensity at the lowest possible cost, it is necessary to establish common effective and reliable monitoring and evaluation methods. For this to be done, increased co-operation among Member States and other organisations is required to ensure comparability of data and harmonisation of methodology. Monitoring and evaluation methodologies in Member State and Community programmes for energy efficiency are therefore to be reviewed with a view to harmonisation. Community-level activity in the area of energy intensity and energy efficiency indicators is being increased with a view to developing a set of common harmonised indicators for the Community. Eurostat and Member States will work closely together for the development of energy efficiency indicators. The work will be co-ordinated with similar activities carried out by the IEA and will exploit existing work already developed under the SAVE Programme. Tracking of the impact of specific policies and measures on emissions of CO₂ will be enhanced using this and similar instruments. International comparisons of energy intensity changes will also be given special consideration.

Regarding evaluations, the Action Plan, itself, will be evaluated at regular intervals in conjunction with planned evaluations of SAVE and the Energy Framework Programme.

2.3 New Policies and Measures

A number of new policies and measures are outlined below. These are measures which have been successfully implemented on a limited scale in a number of Member States. Studies and pilot actions indicate that there is added value in developing larger, EU-wide initiatives based on these successes.

2.3.1 Public Procurement of Energy-efficient End-use Technology

It has been demonstrated in a number of countries, including some Member States, that the use of co-ordinated **public procurement** guidelines, regulations and agreements by public sector entities is an effective way to promote the diffusion and demonstration of energy-efficient technology and to provide leadership by example. Such guidelines can be applied by the EU Institutions as well as by Member State, regional and local governments. They can cover virtually all energy-using equipment, including transport vehicles. The intention is for public bodies to take the lead by setting good examples regarding energy efficiency and to use the significant public procurement potential which exists to increase demand for energy-efficient technology. This work will be closely co-ordinated with the Community environmental management and audit scheme (EMAS), the Community eco-label award scheme, with existing Member State public purchasing guidelines and practices, and with Community Best Practices as they become established. Account will also be taken of public procurement regulations and Community WTO commitments. A study of existing public procurement programmes will soon commence to provide recommendations for launching a large EU-wide pilot project to develop harmonised public sector guidelines for constructing, purchasing, leasing and maintaining energy-efficient and environmentally sustainable buildings and equipment, including that in the transport sector. The European Commission will take the lead in this endeavour by launching a **public buildings initiative** for energy-efficient Commission buildings, soon to be followed by suggestions for similar initiatives for the buildings of the European Parliament and the Council.

2.3.2 Co-operative Technology Procurement

Technology procurement is an instrument used to specify and develop new energy-efficient technology, generally through a competitive tendering process. It aims at creating and launching new products with higher energy-efficiency requirements than comparable existing products on the market. Technology procurement in the present context is used to match producers' possibilities and consumers' needs and aggregated demand, and to allow the market to function more efficiently with regard to the often neglected dimension of energy efficiency. Such competitive procurements have been shown in several Member States to promote market transformation in terms of the types and availability of the energy-efficient technology which is both demanded and supplied. The results of ongoing pilot projects and discussions with Member States will provide guidance on appropriate technology areas to be pursued at Community level. Both *common* EU-wide procurements and *co-ordinated* procurements involving Member States with diverging technology requirements will be pursued. The diffusion and impact of the resulting technological improvements will be strengthened and broadened through the use of the EU labelling scheme, negotiated agreements, public procurement and best practice initiatives.

2.3.3 Energy Audits in Industry and the Tertiary Sector

A number of Member States have implemented successful energy auditing programmes, with and without financial incentives. These have been shown to have positive and measurable effects on CO₂ emissions, on competitiveness and on the profitability of the audited companies. Energy audits also produce large amounts of real data on energy consumption and energy saving opportunities in different industrial sectors, building types and technical systems. This information is often difficult and unnecessarily costly to obtain by other means.

Energy audits in Member States comprise a wide range of different types of working methods and scopes of work. Energy audits can range from a preliminary study, intended to detect

areas where a subsequent and more detailed and targeted audit should be carried out, to a complete package of proposed measures ready for implementation. A study is planned on energy audits and optimal replication possibilities in the EU, including an updated and comprehensive review of Member State activities in this area. Thereafter, an initiative at Community level will be proposed. The main areas of interest are industry and the tertiary sectors, where it is shown that such measures are feasible and cost-effective. Consideration will be given to the approach and methodology defined in EMAS.

2.3.4 A Best Practice Initiative

Successful Best Practice programmes have been implemented in several Member States. A feasibility study has been carried out to determine the added value of these actions and of the applicability on a Community level of such an initiative. The study has considered possible structures for wider best practice applications and possible interactions with the best available techniques and benchmarks developed under the auspices of the Integrated Pollution Prevention and Control (IPPC) Directive and other frameworks. A European Energy Efficiency Best Practice Initiative, implemented in full co-operation with Member States, will now be launched as a large pilot action under the auspices of the SAVE Programme. The scheme will provide a framework for decision-makers and end-users for a comprehensive source of independent and accessible energy efficiency advice, guidance and training on new technology and techniques, adding substantially to the information necessary for a more effective functioning of the energy and energy technology markets.

3. CONCLUSIONS AND FUTURE COURSE OF ACTION

The measures outlined in this plan of action, although ambitious, are realistic. As Member States will be called upon to participate actively in the plan, it is clearly for the Council and the Parliament to establish a mandate for the implementation of this Action Plan by endorsing it and by identifying the proposals set forth in it as priority areas.

Co-ordination of Community policies and measures amongst each other and with those of Member States is also critical in the implementation of this plan. Following the first experts meeting on energy efficiency policies and measures held in January 1999, further such meetings to improve co-ordination and convergence of national and Community actions are planned, at the working as well as the policy level. These will promote a renewed impetus and commitment to energy efficiency in the context of a sustainable energy policy, permit experience to be shared and follow and review progress and co-ordination at EU and Member State level.

ANNEX 1

COMMUNITY INITIATIVES FOR COMMON AND CO-ORDINATED POLICIES AND MEASURES BY SECTOR AND INDIVIDUAL ACTION

Transport Policy and Transport Efficiency

Transport sector initiatives include transport policy, with infrastructure and modal integration and shifting, as well as technical energy efficiency. For the period 2000-2002, activities in the transport sector which promote energy efficiency include legislation, voluntary agreements, and information dissemination as well as integrated transport and land-use planning, reducing individual motorised vehicle movement, pricing, and infrastructural development.

Definition of action	Current status and timetable	Action by	Comments (financing, impact, etc.)
a. Legislative measures			
Auto oil II programme	Under discussion	Parliament, Council	Cost for relevant studies.
<u>Passenger cars</u> <ul style="list-style-type: none"> • Voluntary Agreement with automotive industry. • Fiscal measures • Consumer information. Car Labelling Directive 1999/94/EC. 	<p>Concluded.</p> <p>Under discussion.</p> <p>Adopted 1999.</p>	<p>Commission, Parliament, Council</p>	Limited cost for industry.
Taxation of Energy Products COM (97)30 12.03.97	Under discussion.	Parliament, Council.	Non available.
Efficient internal rail freight <ul style="list-style-type: none"> • Pricing of rail infrastructure Directives. • Relationship between the State and the railways. • Technical harmonisation and interoperability. 	<p>Ongoing</p> <p>Ongoing.</p> <p>Ongoing.</p>	<p>Commission, Parliament, Council.</p> <p>Commission, Parliament, Council.</p> <p>Commission, Parliament, Council.</p>	No direct cost.
b. Other Actions			
Strategic Environmental Assessment (SEA) of TEN-T*. Environmental sustainability considerations in the selection of projects.	Ongoing.	Commission.	
Global Navigation Satellite Systems (GNSS).	Ongoing.	Commission.	
Fair and efficient pricing of transport modes.	Ongoing.	Commission.	(Internalisation of external costs.)
Galileo.	Ongoing.	Commission.	
PACT programme**.	Ongoing. (1998-2001).	Commission.	1999 budget 6M€
Promotion of low and zero-emission vehicles.	Ongoing.	Commission and Member States.	Pilot actions.
Promotion of electronic alternatives to transport.	Ongoing.	Commission and Member States.	Pilot actions.
Revision of Council Regulation No. 1836/93 on EMAS.	2000.	Commission, Council, Parliament .	Extended to include transport sector`s environmental impact.
Communication on air transport and the environment.	Adopted. Council Conclusions 2000.	Commission, Council Parliament.	

* Trans European Network.

** Pilot Actions for Combined Transport.

Equipment

The equipment sector below covers domestic, commercial, industrial and to a limited extent transport energy end use. Important areas are white goods, lighting, building components, brown goods and peripheral commercial and industrial equipment.

Continuing work in the standardisation bodies CEN and CENELEC to improve the repeatability and reproducibility of test results for energy efficiency levels in equipment will be supplemented by efforts to improve the co-operation between test labs, and the consistency of their results.

Among other measures, adequate funding to allow technical/economic analysis and mandates to the standardisation bodies shall be sought to implement these agreements.

Definition of action	Current status and timetable	Action by	Comments (financing, impact, etc.)
a. General			
Public database of labelling information on individual appliances.	Discussions underway. Envisioned 2000.	Commission.	100k€ p.a. budget for database. Will increase impact of labelling.
Council Regulation setting up a voluntary labelling programme for office equipment, using the Energy Star logo.	Negotiations between EU and USA completed; agreement expected to be adopted in 2000.	Commission, Council, Parliament.	
Technology procurement.	Following EU procurement for refrigerator/freezers, motors & lighting, e.g. to be implemented.	Commission, Member State industry and organisations.	See also industry table.
White Goods			
-Refrigerator/freezers -Phase 2: Labelling. Negotiated Agreement (or Amended Directive 96/57)	Adopt 2001; in force 2002. Envisioned 2002.	Commission.	Study underway.
-Washing Machines - Phase 1 Negotiated Agreement. Phase 2 Labelling. (Higher efficiency levels.) Negotiated agreement.	Agreed; first level in force 1998; second level in force 2000. Adopt 2001, in force 2002. Envisioned 2003.	Commission.	Impact 7 TWh. Mandate (on 40°C wash); study underway (250k€ budget).
-Dishwashers Phase 1 – Negotiated agreement Phase 2 – Labelling. (Higher efficiency levels.)	1999. Adopt 2003; in force 2004.	Commission.	Study completed. Study 200k€.
-Driers – negotiated agreement.	Envisioned end 2000.	Commission.	Study completed.
-Domestic ovens: Labelling – Electric Labelling - Gas Negotiated Agreement (electric).	Adopt 2000, in force 2001. Adopt 2001, in force 2002. Envisioned end 2002.	Commission.	Study underway.
Lighting			
-Lamps Labelling Extension of Directive 98/12 to excluded types.	Measurement standards mandated Adopt 2001, in force 2002.	Commission.	Additional cost for mandate (100k €).
-Proposed Directive for Ballasts.	Adoption envisioned 2000; first level in force in 2002.	Commission, Council, Parliament.	Impact 10 TWh.
-CFL's: Competition to increase domestic sector penetration ;campaign & fixtures competition.	Finalised 2000.	Commission with Eurelectric and utilities.	National energy agencies in competition; dedicated fixtures.
'Green light programme'.	Launched 2000.		See ("Buildings").

Equipment - continued

Building Components			
-Windows	Study in 2000.	Commission	150K€ for study.
Installed Equipment			
-Boilers: Information (Dir. 92/75)	Adopt 2000; in force 2001.	Commission.	Study on Heating Systems (1999) cost 300k€. Measurement standards mandate 100k€.
-Water Heaters: Negotiated Agreement (elect.). Negotiated Agreement (gas) Information (Dir. 92/75)(el. gas).	Envisioned 2000. Envisioned end 2001 Adopt 2000 – 2001.	Commission	Second study underway. Impact 2 TWh.
-Individual air-conditioners: Labelling. Negotiated Agreement.	Adopt 2000. Envisioned end 2000.	Commission.	Study underway . Mandate 100k€.
Brown Goods			
-TV and VCRs (stand-by mode and on mode). Negotiated agreements.	Agreed; in force start 2000.	Commission.	Impact 7 TWh.
-Other consumer electronics (hi-fi, power supplies, etc).	Envisioned 2000.	Commission.	
Commercial and Industrial equipment			
Negotiated Agreements for -Vending machines, ovens, washers and driers.	Envisioned 2000.	Commission.	Study underway.
Negotiated Agreement for - Electric motors.	Envisioned 2000.	Commission.	Study completed.
Negotiated Agreements for Pumps, air compressors, Industrial fans.	Envisioned between end 2000 and end 2001.	Commission.	Studies underway.

Industry (including the electricity and gas supply industry)

All industrial sectors including the energy transformation sector are included in the sector dealing with industry. Energy-intensive as well as less energy-intensive industry comprise the enterprises dealt with here. In addition to information dissemination and best practice, Long-term Agreements, audits, technology procurement and innovative financing schemes are important elements in industrial energy efficiency actions.

Definition of Action	Current Status and timetable	Action by	Comments, (financing, impact, etc.)
a. Programmes			
Draft Communication on Long-Term Agreements.	Launch 2000.	Commission, Council & Parliament.	Application in collaboration with Member State industry.
Long-Term Agreement at EU level with the chemical industry.	To be negotiated during 2000.	Commission with Member States and industry.	Preceded by a SAVE pilot project or feasibility study. (Cost 200 k€.)
Long-Term Agreements in steel, pulp and paper, cement, textile, energy supply industry.	To be negotiated during 2001-2002.	Commission with Member States and industry.	Preceded by pilot projects or feasibility studies.
Promotion of Electric Motor System database EuroDEEM to end-users; linked to VSDs, pumps, fans and compressors.	To be carried out during 2000.	Commission with Member States.	Development cost of 600 k€ from the 4 th RTD Framework Programme.
Promotion of energy services and agreements in the electricity supply industry to foster demand-side measures.	Amended Proposal for a Directive on Rational Planning Techniques.COM (97)69final under review.	Commission, Eurelectric and individual ESI companies.	Joint study - Commission/Eurelectric on energy services; pilot actions.
Use of technology procurement at EU level for equipment procurements.	EU pilot actions on procurement 2000-2001.	Commission with Member States and industry.	Cost of pilot project /feasibility study 300 k€).
Energy audits in Member States reviewed and analysed. Pilot actions to co-ordinate and harmonise methods.	Study 2000. Community Initiative 2001.	Commission in collaboration with Member States, industry, tertiary.	Study cost 200k€.
Industry Best Practice Programme.	Pilot action 2000-2001.	Commission, Member States, nat. agencies, industry.	Co-ordination with EMAS, IPPC Directive, etc. (See "Buildings").

Buildings

Buildings account for around 40% of energy consumption, and have a savings potential of over 20%. However, under the subsidiarity principle, most actions are primarily the responsibility of Member States. The various actions described in the table represent those areas where the added value of action at Community level is clearest.

Definition of action	Current status and timetable	Action by	Comments (financing, impact, etc.)
Insulation of new buildings. Requirements extended to include heating and other installed systems to allow for the use of renewables.	Already in 93/76/EEC and implemented in most Member States.	Member States, some already imposing overall energy use limits.	Requirement could often be higher in some Member States. <i>Amended Dir. 93/76/EEC.</i>
Imposing efficiency standards when granting or renewing licences, incl. rentals (e.g. for change of use, bldg. processes).	Some limited experience in Member States.	Member States.	Promotion in Member States. <i>Amended Dir. 93/76/EEC.</i>
Programmes or incentives to improve insulation of existing buildings.	Many Member States already promote this.	Member States.	Very large savings potential in average existing building. <i>Amended Dir. 93/76/EEC.</i>
Energy certification - already in 93/76; to include installed equipment.	Programmes exist; large potential for penetration, coverage of e.g. heating, ventilation and air-conditioning (HVAC) .	Member States.	Existing actions to be strengthened. <i>Amended Dir. 93/76/EEC.</i>
Requirements for installed systems to be included in building codes.	Will be encouraged in Member States.	Member States.	Heating and cooling efficiencies in building codes. <i>Amended Dir. 93/76/EEC.</i>
Regular inspection of boilers, heating, air conditioning and hot water systems; promotion of upgrading. Boilers Directive.	In existing Directive 93/76/EEC for heating systems. Boilers Directive (92/42/EEC) report 2001.	Member States. Commission. Council, Parliament.	Should encourage the replacement of inefficient (20-30 year) old systems. <i>Amended Dir. 93/76/EEC.</i>
The provision of 'local information schemes' for installations and components.	Pilot projects in 2000.	Member States.	To be implemented by trained installers; linked to energy labelling of installed products.
Training and certification of installers. Third-Party Financing and Guarantee of Results.	Pilot projects. New co-ordinated actions under preparation.	Member States.	Advice on installation of <i>energy systems</i> . <i>Amended Dir. 93/76/EEC.</i>
EU Green Light programme to promote efficient lighting and best practice in commercial and public buildings. (To feed into a wider EU Best Practice Initiative.)	Participation to be broadened 2000.	Commission in collaboration with Member State energy agencies.	Tertiary sector buildings. Cost of 200 k € for 4 th FWP for programme definition. Cost of 200k € for SAVE II test of programme in 1999.
Public Procurement Guidelines to increase and demonstrate energy efficiency.	Study 2000. Pilot action 2001.	Commission, Council, Parliament.	Study and pilot action cost 300k€. Strong Member State participation required.
Best Practice in Buildings.	Pilot action planned 2000.	Commission, National agencies.	See also industry.

CHP

Initiatives promoting increased use of CHP installations will cover a range of different sectors, including industry, the domestic and tertiary sector, the power sector and the heating sector. The target for wider use of CHP will be followed by legislative measures, higher priority in programmes, and a number of other actions aimed at improving co-ordination of promotional activities, market monitoring etc.

Definition of action	Current status and timetable	Action by	Comments (financing, impact, etc.)
a. Legislative measures			
Large Combustion Plant Directive. Amended 88/609 Directive proposed.	Under discussion in Council.	Parliament, Council.	No cost for EU budget. Feasibility studies. CHP a priority.
Member States to promote CHP through national actions.	New proposal 2000.	Commission, Member States	No cost for EU budget. <i>Possibly in an Amended Directive 93/76/EEC.</i>
Reform of agricultural policy and production of biomass for use in CHP.	Proposals under debate.	Commission.	Cost calculations not yet available.
b. Programmes			
Projects promoting CHP in industry, the domestic and tertiary sectors, the power sector and the heating sector in many Community and national programmes.	Ongoing.	Commission, Member States, Member State organisations	Includes 5 th Framework Programme and Energy Framework Programme (SAVE).
Use of Structural Funds. Member State proposals according to amended regulations.	Under discussion 2000-2006.	Commission, Member States.	
c. Other Action			
Co-ordination of Commission activities concerning CHP. Ad hoc working group for information exchange.	New initiative.	Commission.	No additional cost.
Follow-up groups for the transposition of Directives 96/92 (Internal electricity market) and 98/30 (Internal gas market). To avoid obstacles for CHP.	Ongoing.	Commission, Member States.	No additional cost.
CHP Statistics (data collection). Monitoring of CHP penetration in the European energy market.	Ongoing.	Commission, Eurostat.	0,1 M€/year.
Directors-General for Energy Committee. National programmes for the promotion of CHP discussion.	To be proposed during 2000.	Commission, Member States.	No additional cost.
Actions supporting cross-border strategies for promotion of CHP at regional level. (with energy authorities, utilities, CHP producers etc.)	New initiative.	Commission, Member States, energy industry.	Cost of pilot actions.
Promotion of CHP through public and technology procurement initiatives.	New initiative.	Commission.	Costs of studies and pilot actions to be made available.

Horizontal measures			
Definition of action	Current status and Timetable	Action by	Comments (financing, impact, etc.)
Research and Technology Policy	Increased links between technological and non-technological programmes to remove barriers and develop, demonstrate and promote new approaches leading to increased energy efficiency. 2000-2002.	Commission, Member States	Approximately 440 M€ to energy efficiency RTD 1999 – 2002.
Local and Regional level Activity.	Continued expansion and use of agencies and networks 2000-2002.	Commission, Member States, nat. & local authorities.	Open to Associated Countries.
Increased Dissemination of Information.	Campaign 2000-2002 to gain wide acceptance.	Commission, Member States.	Focus on energy efficiency in reduction strategy.
Third-Party Financing and other Financing Schemes.	Review and pilot studies 2000-2001. More focus on financial institutions.	Commission, Member States, industry.	Clearing houses for investments in energy efficiency to be considered.
Increased Monitoring and Evaluation.	Harmonised methods for monitoring energy efficiency and evaluations 2000-2002 and beyond.	Commission, Council, Parliament, Member States.	All sectors. Partially financed through SAVE . Major review of programme by 2003.

ANNEX 2

Member State Energy Efficiency Policies and Measures²²

<i>Type of Policy or Measure</i>	<i>Number of Policies or Measures</i>
<u>Mandatory</u>	
Laws/Permits	24 implemented
Standards	68 implemented; 2 planned
Labelling	27 implemented; 1 planned
Individual metering	9 implemented; 1 planned
Inspections	25 implemented; 1 planned
<u>Voluntary</u>	
Sectoral Agreements	26 implemented; 1 planned
Certification	11 implemented; 1 planned
Programmes	42 implemented; 2 planned
<u>Financial Incentives</u>	
Subsidies	72 implemented; 3 terminated
Loans	5 implemented
Incentives/Audits	15 implemented; 1 planned
Fiscal Measures	88 implemented
Procurement	3 implemented
Incentives/TPF	1 implemented; 1 planned
Social and Special Funds	8 implemented
<u>Information</u>	
Technical Guides	29 implemented
Advice Centres	16 implemented
Consulting	10 implemented
Energy Accounting	4 implemented; 2 planned
Awards	4 implemented
Associations	6 implemented
Training	10 implemented
Includes policies and measures in industry, the residential, tertiary and transport sectors.	

²² Detailed tables and analysis are available in the publication *Member State Energy Efficiency Policies and Measures 1999*, European Commission, 1999.