STANDARD SUMMARY PROJECT FICHE

PROJECT NUMBER HU0102-06

1. Basic Information

1.1 Désirée Number: HU0102-06
   Twinning Numbers: HU/IB/2001/EY/01, HU/IB/2001/EY/02

1.2 Title: Support to the Adoption and Implementation of the Acquis in the Energy Sector

1.3 Sector: Energy

1.4 Location: Hungary

2. Objectives:

2.1 Overall Objective(s):
   Adoption and effective implementation of the of the Directives concerning energy market liberalisation (in particular electricity and gas), energy efficiency and renewable energy.

2.2 Project Purpose:
   • Legislation for the liberalisation of the Hungarian energy markets adopted and data processing system for the application of the legislation be in place.
   • Strategies, procedures, and methods for increasing the use of renewable energy sources to be developed and successfully applied.
   • Harmonisation of energy statistics with the EUROSTAT and International Energy Agency (IEA) systems completed.

2.3. Accession Partnership and NPAA priority:
   AP, chapter 4.2: Prepare for the internal energy market, notably the electricity directives, (including adaptation of energy prices to cost levels and the establishment of a regulator), and to improve energy efficiency and renewable utilisation.

   NPAA, Chapter 4.4: Preparation for the electricity and gas market in transition: The most important task concerning the legal harmonisation of the Hungarian energy sector is the adoption of the directives on liberalisation.

   Utilisation of renewable energy sources: Our main objective is to bring Hungary’s energy efficiency and renewable – which are at present significantly different – in line with the EU practice.

   Further modernisation of the statistical system: Several elements of the Acquis specify that by the date of Hungary’s accession, a statistical system relating to energy must be set up and operate in Hungary, that is compatible with the EU’s data collection and information system.

2.4. Contribution to National Development Plan: Not applicable

2.5 Cross Border Impact: Not applicable
3. Description
3.1 Background and justification:

The Hungarian Government summarised its energy policies and a business model of the energy sectors in Government Resolution No. 2199/1999 (VII.6). The Resolution also defined Accession-related measures with special attention to the liberalisation of the electricity and gas markets as well as to renewable energy utilisation and to the improvement of energy information. Without significant reforms in all these areas, Hungary can not meet the related EU requirements. – The following are the main features of these policies:

Energy market liberalisation (Component 1.)

The Government decided to liberalise the Hungarian energy market in line with Directive 96/92/EC on the electricity market, and with Directive 98/30/EC on the natural gas market. In the EU, substantial social-economical benefits have been accomplished through increased competition in the energy markets. The Energy Department of the Ministry of Economic Affairs and the Hungarian Energy Office (HEO) will share the regulatory tasks concerning electricity, gas, quality of public services and consumer protection. New institutional functions were delegated to HEO, including the monitoring of trade and foreign trade to ensure that the level of services within the electricity and gas industries is not impaired by the liberalisation process. For the highest possible service standard, HEO must be capable to impose specific conditions should this be necessary.

The equipment supply part of the project supports the HEO monitoring function concerning the trade (pool), the foreign trade (to monitor the transactions of the eligible consumers), the consumer protection (through the monitoring of service quality and through the decrease of the present 13% of the grid losses. - Losses acknowledged by the authorities are 10.5% now, of which 6-8% is technically justified. The data providing system will define the origin of the rest of the loss. Diminishing the losses is a direct social benefit.)

Renewable energy utilisation, Energy statistics (Component 2.)

The ratio of renewable energy of total energy consumption is currently only 3 to 4 percent. The Energy Conservation Programme and Action Plan up to 2010 (Government Decision 1107/1999 (X.8.) has set the target of doubling the rate by 2010. For this, a strategy, a procedure, and the appropriate methods are to be developed. They will be based on the adoption of the relevant EU Directive Proposal, and on the analysis of practices and experience of Member States. Connected to this is the target of preparing for the green certificate system proposed by the Directive Proposal of the European Parliament and the European Council. Special attention is to be paid to the interrelation with ongoing opening of the Hungarian energy market.

The energy statistics in the EU have quickly developed into a demand-side data system. The Hungarian economic/energy system and the related information system have also been transformed. Nevertheless, the Hungarian Energy Statistics system does not fully conform to EU requirements
and further development is required. Introducing and thereafter monitoring of energy efficiency measures will require a large number of statistical efficiency indicators. A complex and coherent indicator system must be developed that will have to include dependable connections to the concerned EU authorities.

Based on the agreement between the CSO and MoE and on the governmental responsibility of the MoE for the energy supply, MoE is responsible for the state energy statistics. Energy Centre is a Non-profit Company established by the MoE and the Ministry of Environment. Among others Energy Centre is in charge of the data collection and data processing for the national level energy statistics, under the umbrella of the National Statistical Data Collection Programme. One of its main activities is to prepare the monthly, quarterly and annual energy balances of the country and to prepare the energy related data of Hungary for the international organisations (EUROSTAT, IEA).

3.2. Linked activities:

The energy sector has benefited from the Phare programmes HU9103, HU9402, HU9512, HU9609 (the projects listed in Annex V), but none of these projects relates directly to the utilisation of renewable energy. One of the beneficiary institutions, the Hungarian-EU Energy Centre, was established with direct support, including equipment support, by the European Commission.

Furthermore, the Hungarian Government launched two specific programmes, both included in Government Decision 1107 (1999.X.8): the Energy Market Opening Program (EMOP) and the Energy Conservation Programme and Action Plan.

A third programme, the National Renewable Energy Programme is under preparation. In the frame of EMOP, four government institutions were granted funds to investigate energy sector model alternatives. Supporting EMOP there are two small projects financed by the Public Private Infrastructure Advisory Facility (PPIAF) of the World Bank.

In addition to the Phare Programmes and the Hungarian Government’s efforts, Hungary has been taking part in Community programmes such as the following:

- SYNERGY
- THERMIE Programme (R&D in the Energy Sector)
- OPET/FEMOPET Programme (information network for dissemination the results of the 5th Framework Programme),
- SAVE II Programme (rational use of energy).

3.3 Results:

- Enacting clauses of the energy act in the fields of electricity and gas are finalised
- Secondary legislation drafted as specified in the twinning covenant concerning energy market liberalisation.
- All studies completed concerning specific areas of the market liberalisation.
• Data processing capacity of the Ministry of Economic Affairs, Hungarian Energy Office and Energy Centre for energy market liberalisation established
• Strategy, procedures and methods for increasing the use of renewable energy sources completed including proposals for extending and harmonising governmental funds to support investment and research and development of renewable energy producers
• Support system is drafted for renewable energy generators along with the alternative mechanism (to be later decided) of green certificate system of the tendering procedure.
• All relevant legislation is drafted and passed in accordance with adoption to EU legislation on internal energy markets.
• Database of renewable energy utilisation projects is established
• The Green Certificate system is drafted
• Energy efficiency indicator system is completed, tested and operating
• Energy statistics system is harmonised with the EU systems ensuring good co-operation between all involved; data processing capacity for the system ensured

3.4 Activities:

Project activities include the preparation and implementation within two twinning covenants and one supply contract, as detailed in the following.

3.4.1 Twinning:

Twinning for Component 1: Energy Market Liberalisation

A pre-accession adviser (PAA) will be assigned to the Hungarian Energy Office for 12 months. The PAA will be supported by team of short-term experts for the subjects specified below.

In addition to the Ministry of Economic Affairs and the Hungarian Energy Office, other partner institutions relevant to achieving the project purposes will be involved. The adviser will have sound theoretical and practical experience related to energy market liberalisation. Ensuring overall co-ordination of the project, the adviser will assist in completing the technical specifications and help in carrying out the training programmes as well. More specifically, the PAA will co-ordinate the following activities:

• Assist in drafting of the enacting clauses of the Energy Act concerning electricity sector
  o Tariff and price regulation (Tariff regulation of grid access; System charges; Captive market price regulation).
  o Grid codes and Business Conduct Rules.
  o Regulation of international trading (Licensing and monitoring of export-import and transit; Congestion management; Gradual liberalisation of international trade; Reciprocity based market protection),
  o Supervision of the market operator,
  o Supply Quality and Consumers Satisfaction

• Assist in drafting of the enacting clauses of the Energy Act concerning the gas sector:
o Licensing (activity licensing, grid code licensing, international trade)
  o Tariff and price regulation (System charges, access charges, captive market price regulation)
  o Development of subsections of market model in details
  o Rules of network development
  o Rules of access to network (production, transmission, distribution)

• Consumer protection, market monitoring and quality of public services:
  o Preparation of service quality standards for grid companies and the measures must be taken to protect consumers with a view to the Stockholm Council Meeting in March 2001 and analysing the experience of the Member States.
  o Preparation of market monitoring methods
  o The description of the system and the preparation of tendering of an on-line measure-, data and information system analysing the information originating from licensees

• Preparation of studies for selected areas of the market liberalisation process.
• A training programme on regulatory economics, on legal aspects of market liberalisation, on technical aspects of congestion management and on technical aspects of export-import monitoring will be worked out including background materials and manuals. Similarly, training will be organised at a power exchange in a suitable Member state.
• Workshops, consultation, study tours and training programmes will be organised in all three market liberalisation topics to learn the practice of energy market regulation.

Twinning for Component 2: Renewable Energy Utilisation, Energy Statistics

The related institutions are the Energy Centre and the Ministry of Economic Affairs. Other partner institutions relevant to achieving the project purposes will also be involved. A pre-accession adviser (PAA) will be assigned to the Energy Centre for 12 months.

The following activities are involved:
• Prepare a strategy, procedure, and methodology for the renewable energy utilisation and the adoption of the related EU directives. Propose a system for extending and harmonising public funds to support investment and R&D of renewable energy producers.
• Organise study tours of Hungarian experts to Member States to learn about renewable energy programmes. Study topics will be EU practices of strategy and programme development, implementation, and funding methods.
• Organise pilot training course in Hungary, draft a training manual to implement the methodology and train in the procedures of future renewable energy utilisation programmes.
• Develop a database on renewable energy utilisation projects connected to the government supported application system. Provide operator training.
• Advise on the guarantee of origin and the system covered by the Directive Proposal on the promotion of electricity from renewable energy sources in
the internal electricity market. Organise the training of Hungarian experts in
selected EU countries.

- Assist in the preparation of a complex and coherent indicator system to ana-
lyse and evaluate the programmes on energy efficiency and renewable energy
utilisation. Organise a workshop to explore the Hungarian and EU experi-
ences, and the interests and suggestions of the different experts and affected
organisations.

- Assist in the further harmonisation of the Hungarian energy statistics taking
into account the required harmonisation with the EU systems. Organise the
required training. The different actors of the energy statistics system have to
be involved. High level collaboration and operating data exchange is to be
developed among the affected Hungarian institutions. Effective communica-
tion and co-operation with international organisations must be introduced.

**Guaranteed results (benchmarks) of the twinning programmes**

*Energy Market Liberalisation*

- Technical capacity of the Ministry of Economic Affairs and Hungarian En-
ergy Office ensured to achieve the legal basis for electricity and gas market
liberalisation including, for example, supervision of system and market op-
erator, grid codes and business conduct rules, and electricity trading code

- Enacting clause of the energy act in the fields of electricity and gas drafted

- Staff of institutions trained that are dealing with the liberalisation of the
Hungarian energy market including electricity and gas, and the protection of
energy consumers

- All studies completed concerning specific areas of the market liberalisation,
for instance, on the licensing, tariff, and price regulation methods in EU
member states and their possible use in Hungary

*Renewable Energy Utilisation, Energy Statistics*

- Strategy, procedure and methodology for increasing the use of renewable en-
ergy sources completed

- Proposal for extending and harmonising governmental funds in order to sup-
port investment and R&D of renewable energy producers completed

- Database of renewable energy utilisation projects established

- The Green Certificate system drafted

- Energy efficiency indicator system completed, tested and operating

- Energy statistics system revised to completely harmonise with the EU sys-
tems

- Training manuals and training organised for renewable energy utilisation, op-
erating the energy statistics system.

**3.4.2. Equipment Supply:**

Supplies include computer hardware and software items for monitoring the
energy market liberalisation and renewable energy utilisation, as well as for the
energy statistics systems. A Needs assessment for the Equipment for the
Hungarian Energy Office (Component 1) and an indicative equipment list for the
Ministry of Economics and the Energy Centre (Component 2) are included in
annex 6.

*Energy market liberalisation*
The smooth functioning of the liberalised electricity and gas markets will depend on solving a number of high-volume data collection and analysing issues. The data processing solutions will include a data information analysing system based on the data collection of licensees and selected consumers. Another part of the system will be a data capture system and a central analysing terminal/system. The development of a web-solution for the communication among the actors of the liberalised energy markets is the third element of the system that will involve independent system operator, traders, power stations, distributors, exporters/importer.

The following major parts of the activities of the HEO will need further data collection, analysis and development of communication structures in order to fulfil the regulatory function in a liberalised market:

- First priority functions:
  - Monitoring and enforcing public service quality standards
  - Monitoring and enforcement of regulated, non-discriminatory grid access
  - Supervision of the energy market

- Further priorities:
  - Monitoring of safety of supply of energy capacity availability
  - Availability and safety of the transmission and distribution systems
  - Statistical monitoring of prices
  - Monitoring of operation of stranded cost mitigation transitional regime
  - Monitoring of energy policy implementation (structure of energy sources)
  - Environmental based general analysis of energy industry data
  - Hardware, software and system development of HEO for information analysis
  - Electronic monitoring for administrative cases
  - Computer based monitoring for new power plant licensing and for transparency
  - Transparency of the activities of the HEO

All procured equipment will become the property of the Hungarian Energy Office.

**Renewable energy utilisation and energy statistics**

The data processing capacities of the Ministry of Economic Affairs and the Energy Centre will be strengthened for three main tasks:

- Preparing and operating the database of the renewable energy utilisation projects
- Introducing the complex energy efficiency indicator system
- The onward development of the national energy statistics system.

A new database server with the appropriate database operating system, Internet applications, statistical data processing and analysing software, and a number of PCs have to be installed. The procured equipment will come into the ownership of the Ministry of Economic Affairs and the Energy Centre, respectively.

4. **Institutional Framework:**
The Hungarian Energy Office (HEO) is responsible for the supervision of the operation of license holders, for licensing of generation, transmission and supply of electricity and control of quality and safety of electricity supply. The responsibility of HEO is to carry out the tasks listed in Component 1 of the twinning, taking fully into account the drafts, comments and proposals of economic-administrative partners. In Component 2 of twinning the HEO will cooperate in the field of renewable energy as well. The HEO will be fully responsible for the preparation and implementation of the equipment Component 1.

Tasks of the Ministry of Economic Affairs include the preparation of an energy policy and its implementation, where the promotion of energy efficiency and the use of renewable energy sources play a significant role. The Energy Department of Ministry of Economic Affairs is responsible for the professional and administrative tasks of this project implementation.

The Energy Centre, acting as support institution of the Ministry of Economic Affairs, takes part in the implementation of specific energy efficiency related projects financed by Hungary and the EU, provides energy statistical data collection and processing services under the National Statistical Data Collection Programme for its Founder, as well as produces energy efficiency analyses and impact assessments. The Energy Centre, as national level energy efficiency agency has long term co-operation with the different actors of the Hungarian energy efficiency market: business sector, financing institutions, NGO-s, ESCO-s, scientific associations etc. The many-sided operating co-operation (ministry, agency as well as the business and civil spheres) makes possible to achieve the harmonisation between the activities of this project and the actions of the market actors and also to involve additional financial sources. The Energy Department of Ministry of Economic Affairs is responsible for the professional and administrative tasks of this project implementation.

A pre-accession adviser (PAA) of the twinning in Component 2 will be assigned to the Energy Centre. The procured equipment in supply concerning the renewable energy utilisation and energy statistics will come into the ownership of the Ministry of Economic Affairs and the Energy Centre, respectively.

A project steering committee will be created to monitor project activities and ensure co-ordination among the different actor. The SC will be chaired by the SPO and include HEO, Energy Centre, CFCU, NAC, EC Delegation. Other relevant bodies can be invited as appropriate.
The following senior officers will be nominated to the SC:

**Dr. Miklós Poós**  
Energy Department of the Ministry of Economic Affairs  
Address: 1051 Budapest Vigadó u. 6.  
Phone: (36-1)-235-4508  
Fax: (36-1)-235-443  
E-mail: miklos.poos@gmv.gov.hu

**Mr. Balázs Medgyesy**  
Energy Centre  
Address: 1087 Budapest Könyves Kálmán Krt. 76  
Phone: (36-1)-333-1304  
Fax: (36-1)-303-906  
E-mail: balazs.medgyesy@energycentre.hu

**Mr. Péter Kaderják**  
Hungarian Energy Office  
Address: 1087 Budapest Köztársaság tér 7  
Phone: (36-1) 334 70 92  
Fax: (36-1) 334 88 37  
E-mail: kaderjakp@eh.gov.hu

The Hungarian Competition Office (HCO), the General Inspectorate of Consumer Protection (GICP) and the Independent System Operator (ISO) will co-operate with HEO in the field of market liberalisation and quality standards. ISO was legally unbundled on January 1, 2001 and will function according to the new Electricity Act. HEO monitors trade (pool) and foreign trade fields in co-operation with the ISO (previous Transmission system operator). The HCO is responsible for the monitoring and regulation of mergers in the energy market. HEO and GICP will co-operate in order to solve the consumer protection problems related to the energy market.

The GICP and the HEO will co-operate on the field of consumer protection. The special knowledge of the experts of the HEO is necessary to solve the energy market related consumer protection problems.

Concerning renewable energy, a close co-operation will be ensured with the Ministry of Environmental Protection and the Ministry of Agriculture and Regional Development. The Central Statistical Office and all ministries interested in the energy statistics will be systematically involved in the statistics component of the project.

### 5. Detailed Budget (€ Million)

<table>
<thead>
<tr>
<th>Contract</th>
<th>Investment (I)</th>
<th>Institution Building (IB)</th>
<th>Total Phare (I+IB)</th>
<th>Recipient</th>
<th>IFI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Twinning Component 1.</td>
<td>0.7</td>
<td>0.15</td>
<td>-</td>
<td>0.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Twinning Component 2.</td>
<td>0.5</td>
<td>0.10</td>
<td>-</td>
<td>0.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Supplies *) Component 1.</td>
<td>1.04</td>
<td>1.45</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Component 2.</td>
<td>0.26</td>
<td>0.35</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1.30</strong></td>
<td><strong>1.2</strong></td>
<td><strong>2.50</strong></td>
<td><strong>0.75</strong></td>
<td><strong>-</strong></td>
<td><strong>3.25</strong></td>
</tr>
</tbody>
</table>

The Government co-financing for the twinning component is an estimated indicative amount and will not be part of the twinning covenant budget. It provides an indication
of the resources in cash or kind that the beneficiaries will have to mobilise to cover the necessary counterpart costs arising from the implementation of the twinning.

The investment component will be jointly co-financed between Phare and Government resources. The Phare amount is binding as a maximum amount available for the project. The ratio between the Phare and national amount is also binding and has to be applied to the final contract price.

6. Implementation Arrangements

6.1 Implementing Agency:

PAO: Ms. Judit Rózsa, director
CFCU, Hungarian State Treasury 1052 Budapest, Deák Ferenc u. 5.
Phone: (36-1) 327-3652 Fax: (36-1) 327-3572
E-mail: jrozsa.cfcu@sdi.hu

SPO: Mr László Szebeni,
Ministry of Economic Affairs, EU and Phare Department
Address: 1051 Budapest Vigadó u. 6. Phone: (36-1) 235-4556
Fax: (36-1) 235-4699
E-mail: laszlo.szebeni@gmv.gov.hu

A project steering committee will be created to monitor project activities and ensure co-ordination among the different actor. The SC will be chaired by the SPO and include HEO, Energy Centre, CFCU, NAC, EC Delegation. Other relevant bodies can be invited as appropriate.

6.2 Twinning:

The beneficiary institutions will be the Energy Department of the Ministry of Economic Affairs, the Energy Centre, and the Hungarian Energy Office.

The contracting authority and financial management of the twinning component will be the responsibility of the CFCU.

6.3. Non-standard aspects:

The Practical Guide for Phare, ISPA and SAPARD Contract procedures and the Twinning Manual will be strictly followed.

6.4. Contracts:

The programme shall be implemented through two twinning covenants (respectively € 0.7 million and € 0.5 million) and one supply contract (€ 1.8 million).
7. Implementation Schedule:

<table>
<thead>
<tr>
<th>Component</th>
<th>Start of Tendering</th>
<th>Start of Project Activity</th>
<th>Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twinning 1, 2</td>
<td>April 2001</td>
<td>January 2002</td>
<td>December 2002</td>
</tr>
</tbody>
</table>

8. Equal Opportunity

All participating Hungarian institutions are equal opportunity employers. No discrimination of whatever nature will be applied.

9. Environment

The project has no discernible negative effect on the environment. The implementation of the renewable energy part of the project will contribute to a reduction of the greenhouse gas and other emissions.

10. Rates of return: Not applicable

11. Investment Criteria:

Not applicable

12. Conditionality and Sequencing

12.1 Conditionalities

- The beneficiaries will provide the necessary working environment for PAAs including appropriate office facilities.
- Full technical specification will be available by Mid April 2001 and full tender dossier by the time the Financing Memorandum will be signed.

12.2 Sequencing

Planned time sequencing of primary and secondary legislation:

- Electricity Act (category of primary legislation) approval before end of 2001. Planned schedule of market opening: from 2002 25 % from 2003 35 % rest to be determined later.
- Gas Act (category of primary legislation) approval in end of 2001 or early 2002
- Start of twinning activities: January 2002
- Related secondary legislation for electricity market (approx. 15): preparation and approval in the course of 2002.
Annexes to Project Fiche

1. Logical framework matrix
2. Detailed Implementation Chart
3. Contracting and Disbursement Schedule
4. List of relevant Laws and Regulations
5. Reference to relevant Government Strategic Plans and Studies
6. Equipment: Needs assessment and indicative equipment list
**LOGFRAME PLANNING MATRIX FOR**

**Project**

Support to the Adoption and Implementation of the *Acquis* in the Energy Sector

<table>
<thead>
<tr>
<th>Overall objective</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption and effective implementation of the of the Directives concerning energy market liberalisation (in particular electricity and gas), energy efficiency and renewable energy.</td>
<td>Decreasing electricity and gas prices, and increasing use of renewable energy</td>
<td>Ministry of Economic Affairs reports</td>
<td></td>
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</tbody>
</table>

**Project purpose**

<table>
<thead>
<tr>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hungarian legislation concerning energy market liberalisation, energy efficiency, and renewable energy compliant with the <em>Acquis</em> in place, and application of the legislation is competently monitored.</td>
<td>Energy market surveillance reveals no major fraudulent distortions of the market of electricity and gas.</td>
<td>Energy market free of excessive external shocks.</td>
</tr>
<tr>
<td>Strategies, procedures, and methods for increasing the use of renewable energy sources adopted and are competently applied.</td>
<td>Energy systems losses decrease to technically justifiable levels.</td>
<td>Favourable technical and financial conditions for carrying out renewable energy programmes maintained.</td>
</tr>
<tr>
<td>Harmonisation of energy statistics with the EUROSTAT and International Energy Agency (IEA) systems completed.</td>
<td>Production of renewable energy grows as forecasted in Government Decision 1107/1999 (X.8.)</td>
<td>Remainder of the <em>Energy Acquis</em> implemented.</td>
</tr>
</tbody>
</table>

**Results**

<table>
<thead>
<tr>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hungarian legislation for energy market liberalisation prepared for approval by the competent authorities; Ministry of Economy and HEO possess market data necessary to fulfil its surveillance tasks.</td>
<td>Legal documents concerning the topics listed in section 3.1 and Annex 6</td>
<td>Legal harmonisation of energy sector will be pursued following the present time schedule.</td>
</tr>
<tr>
<td>Strategies, procedures, and methods for increasing the use of renewable energy sources prepared; HEC database on renewable energy utilisation projects fully operational</td>
<td>Strategy documents on renewable energy use</td>
<td>Trained officers are retained for HEO and HEC operations.</td>
</tr>
<tr>
<td>Statistical systems specified in section 3.1 fully operational</td>
<td>Performance tests of the statistical systems successfully completed</td>
<td>Adequate provision from State budget for HEO and HEC operations.</td>
</tr>
<tr>
<td>All equipment listed in Annex 4 delivered and fully operational</td>
<td>HEO and HEC experts graduated from the training programme</td>
<td></td>
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**Activities**

<table>
<thead>
<tr>
<th>Means</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare enacting clauses of the Energy Act concerning the electricity and gas sectors</td>
<td>Co-financing available as and when required</td>
</tr>
<tr>
<td>Study selected areas of the market liberalisation process.</td>
<td></td>
</tr>
<tr>
<td>Prepare strategies, procedures, and methodology for renewable energy utilisation and adoption of related EU Directives</td>
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<td>Organise study tours, pilot training courses and workshops</td>
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<tr>
<td>Develop database on renewable energy utilisation projects</td>
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<tr>
<td>Assist in preparing a complex and coherent indicator system to analyse and evaluate the programmes on energy efficiency and renewable energy utilisation</td>
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<tr>
<td>Assist in harmonising the energy statistics system with EU norms</td>
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<td>Procure the equipment specified in Annex 4.</td>
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**Preconditions**

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<tr>
<td>Appropriately staffed units in the Ministry of Economy, HEO, and HEC available for the technical management of the project</td>
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</tr>
<tr>
<td>Project Steering Committee in place for the effective participation in the various players specified in section 4.</td>
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<tr>
<td>High quality twinning covenant ready on schedule</td>
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<tr>
<td>High quality technical specification of the required equipment ready on schedule.</td>
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</table>
## Annex 2

### Support to the Adoption and Implementation of the Acquis in the Energy Sector

**Project Number:** HU0102-06

#### Detailed Implementation Chart

<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>2 3 4 5 6</td>
<td>7 8 9 10 11 12</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>Twinning 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Twinning 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply</td>
<td></td>
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</tbody>
</table>

Design, Tendering, Implementation
CUMULATIVE CONTRACTING AND DISBURSEMENT SCHEDULE
(€ Million)

<table>
<thead>
<tr>
<th>DATE</th>
<th>2001</th>
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List of relevant laws and regulations

Laws and regulations of the EU

Energy Market Liberalisation


97/646/EC: Commission Decision of 25 September 1997 concerning the appointment of new members and the renewal of the terms of office of the members of the committee of experts on the transit of electricity between grids set up under Decision 92/167/EEC


Energy Efficiency and Renewable Energy Utilisation


294A1231(52) Final Act of the Conference on the European Energy Charter


96/737/EC: Council Decision of 16 December 1996 concerning a multiannual programme for the promotion of energy efficiency in the Community - SAVE II


Energy Statistics

Council Regulation (EC) No 736/96 of 22 April 1996 on notifying the Commission of investment projects of interest to the Community in the petroleum, natural gas and electricity sectors

Council Regulation (EC) No 2964/95 of 20 December 1995 introducing registration for crude oil imports and deliveries in the Community


1999/280/EC: Council Decision of 22 April 1999 regarding a Community procedure for information and consultation on crude oil supply costs and the consumer prices of petroleum products


Laws and regulation of Hungary

Energy Market Liberalisation

New draft Act on Electric Energy
(Act XLVIII of 1994 on the production, transmission and distribution of electricity)

Act XLI of 1994 on Gas Supply

Energy Efficiency, Renewable Energy Utilisation


Decree No. 1/1998 (I.12.) IKIM of the Minister of Industry, Trade and Tourism on Energy Labelling of Household Electric Refrigerators, Freezers and their Combinations,

Decree No. 77/1999 (XII.22) GM of the Minister of Economic Affairs on the indication by labelling and standard product information of the consumption of energy of household washing machines

Decree No. 78/1999 (XII.22) GM of the Minister of Economic Affairs on the indication by labelling and standard product information of the consumption of energy of household electric tumble dryers

Government Decree No. 97/1999 (VI.25) Korm. on the conditions and means of Hungary’s participation in the energy efficiency programme of the Community “Save II”

Decision No. 1025/1999 (II.26) Korm. of Government on the 1999 Energy Saving Credit Program

Energy Statistics

Act II of 1993 on the Security Stockpiling of Imported Crude Oil and Petroleum Products
SUPPORT TO THE ADOPTION AND IMPLEMENTATION OF THE ACQUIS IN THE ENERGY SECTOR

Project Number: HU01XX

Reference to relevant Government Strategic Plans and Studies


Government Decision 1107/1999 (X.8.) on the Energy Conservation Programme and Action Plan up to 2010

Energy Market Opening Programme (launched in January 2000) (included in Government Decision 1107/1999 (X.8.))

National Renewable Energy Programme (under development at the time of submitting this proposal)

2. The following documents are available at the Energy Department, and the EU and Phare Department of the Ministry of Economic Affairs:

Energy market liberalisation:

“Preparing HEO to complete regulatory tasks expected to change after the liberalisation of the electricity and gas markets (in the framework of PHARE aided institution development program)” written by HEO January, 2001


Gas market liberalisation project financed by the Public Private Infrastructure Advisory Facility (PPIAF) of the World Bank supporting EMOP, completed in August, 2000.

Ongoing project of "Assistance in the implementation of the Hungarian EMOP", financed by PPIAF of the World Bank.

Energy efficiency related studies (with no direct connection to renewable energy utilisation)


HU9103-05-02 Regional Energy Concept for Baranya County, Final Report, ETSU, September, 1995

HU9103-05-03 District Heating Pilot Projects, Monitoring Study, Technical University of Budapest, August, 1996

HU9103-06 Management Assistance and Training programme for the Hungarian Energy Sector, Final Report, British Gas, June, 1996


HU9402-06 Energy Efficiency Awareness Campaign, Final Report, Scottish Development Overseas, September, 1995

HU9512-02 Energy Efficiency in Municipalities, Final Report, EGI/GEA, December, 1999

HU9512-03 Local/Regional Energy Advice Centres, Final Reports of the Seven Centres, December, 1999

Energy statistics

HU9103-03 Definition Energy Statistics Hungary, Final Report, NOVEM, September, 1994
HU9103-03 Energy Statistics in Hungary, Final Report, CEREN, October, 1996
Support to the Adoption and Implementation of the Acquis in the Energy Sector

Annex 6

Needs assessment and indicative equipment list

Needs Assessment
(With reference to 3.1. and 3.4.2. of the Fiche)

Energy Market liberalisation (Component 1)

The main task is: to develop the Office’s capabilities through
- data collection
- data processing
- hardware and software development
- organisational changes within the office

Detailed tasks:
• monitoring available capacity and security of supply (I. priority)
• implementation of energy-political aspects (fuel structure) (II. priority)
• overall information analysis regarding the energy industry and environment protection (II. priority)
• supervision of the energy market (I. priority)
• safety and availability of the transmission and distribution system (I. priority)
• monitoring of regulated access to grid (I. priority)
• monitoring of quality of supply (I. priority)
• establishment and operation of price-recording statistical system (I. priority)
• monitoring of stranded costs development and elaboration of allocation mechanism (I. priority)
• system organisation necessary to analyse data and information, hardware and software development within the Office (I. priority)
• increase of Office’s efficiency, development of computer-based file management and file follow-up system (II. priority)
• computer-based tracking, monitoring of new power plant licensing for transparency (II. priority)
• increase transparency of the Office’s activities (preparation and maintenance of a multi-lingual homepage) (II. priority)

Electricity 1. Monitoring available capacity and security of supply

To monitor the conditions of securing capacity balance the following information shall be necessary:
— information from MAVIR (system operator):
  = 5-year, yearly, weekly, daily consumer demand forecast (public + competitive market segment), continuous, updated data
  = capacity data
  = follow-up of cross-border capacities
  = transit agreements of the transmission grid
  = hourly consumer demand forecast for the day and available Hungarian and foreign (cross-border) capacities
  = an ongoing calculation and monitoring of consumer demands

— District Control Centres of Distribution Companies, Regional Dispatch Centres (DCCs, RDsC):
  = analysing the balance between power plant capacities
  = a reliable data transfer capacity between MAVIR, RDCs and DCCs
  = a small-size monitoring system within the Office
  = in-house (within the Office) network (LAN), and an analysing-evaluating software packages
  = software for analysing information regarding sensitivity to price in respect of consumer demand

Electricity 2. Implementation of aspects of energy policy (fuel structure)

Fuel stocking, fuel usage, demand forecasting and fuel prices shall be continuously monitored, with:
— Information of fuel stocking of power plants.
— Analysis of fuel usage on the basis of expected consumer demand
— Ongoing monitoring of domestic and international fuel price

Electricity 3. Overall information analysis concerning the energy industry and the environment
Weekly, monthly and yearly information for monitoring and evaluating the total volume of pollutants according to the legal regulation.

**Electricity 4. Supervision of the energy market**

Ensuring supply for public and eligible consumers by establishing a double market segment and need for continuously monitoring liquidity in the small-size and small-volume domestic market and for providing information to analyse the chances and practices for abuse of market power through

- ongoing monitoring of supply and demand
- supervising the „market” of ancillary services to be organised by MAVIR
- monitoring of costs of purchasing ancillary services in order to determine the system operation fee
- ongoing monitoring of the operation of the organised electricity market
- information of bilateral agreements
- analysis and summarising evaluation of the contracts of the public wholesaler

**Electricity 5. Security and availability of the transmission and distribution system**

Data regarding disconnections or failures shall be collected and analysed. The Office has introduced indices measuring safety of distribution, which indices are collected and analysed for each distribution company.

In order to work from the same data base, the Office shall parallely collect and evaluate part of the information from the internal data-collection system of the grid company and the distribution companies respectively.

To implement these, it is absolutely necessary to analyse those below:

- monitoring of failures to check verifiability of quality indices generated on the basis of this
- average number of supply outages
- average duration of time of network outages
- restoration of supply when outage was not planned
- **general reliability of overhead lines: number of outages per 100 km**
- **general reliability of cable networks**

**Electricity 6. Monitoring of regulated access to grid**

Separating legally the transmission and distribution company (licensee) from the trader, supplier and system operator. Regulated access to the grid, congestions, refusals of contracts by the system operator or distribution companies shall be monitored and checked by the Office on a regular basis through access to data and information

**Electricity 7. Monitoring of quality of supply**

The Office shall supervise the quality of supply laying special emphasis on the public segment.

- ongoing monitoring of Call Centres of public suppliers
- phone line (hot-line) to the call centres
- on-line connection with the low-voltage networks’ failure reporting system of public suppliers
- monitoring of voltage-level at the end of distribution lines
- respond to residential consumer demand
- connecting new consumers
- response to a written request from a residential consumer
- fast access to supplier
- responses given to customer enquiries
- establishing an in-house operation centre

**Electricity 8. Computer-based tracking, monitoring of new power plant licensing for the sake of transparency**

The Office needs to try multiple-stage procedures for new power plant establishment. A calculable, fast, transparent licensing procedure shall be worked out in order to assure security to investors and comfort to those living near new power plant establishments.

The indicative Equipment list drawn on the basis of the following needs analysis is the following:
<table>
<thead>
<tr>
<th>Items</th>
<th>No.</th>
</tr>
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<tbody>
<tr>
<td>Servers, working stations and accessories,</td>
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</tr>
<tr>
<td>Data processing PCs, peripheries, software</td>
<td>6</td>
</tr>
<tr>
<td>Hardware units for data receive, interface handling</td>
<td></td>
</tr>
<tr>
<td>Building up communication lines, fibre glass transmission networks</td>
<td></td>
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<tr>
<td>Data processing software</td>
<td></td>
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<tr>
<td>Intranet data processing software</td>
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<tr>
<td>Measurement data collection systems, hardware</td>
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<tr>
<td>Measurement data collection systems,, hardware</td>
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<tr>
<td>Special development-oriented systems</td>
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</table>

The detailed equipment list and Technical specification will be available in April, 2001.

**Renewable energy utilisation (Component 2)**

The data processing capacities of the Ministry of Economic Affairs and the Energy Centre will be strengthened for three main tasks taking account the following main priorities:

- Monitoring the renewable energy utilisation projects in the frame of the National Energy Efficiency Programme
- Development and management of the complex energy efficiency indicator system
- Development and operation of the reliable national energy statistical system harmonised with the EU requirements

Complex systems will be developed in order to support all main activities: the information collection, data capturing, data processing and analysis. Taking into consideration the special requirements of the tasks tailor made systems will be implemented consequently installation and configuration are important parts of the component.

A new database server computer with the appropriate database operating system, web server with Internet applications, statistical data processing and analysing software, and a number of PCs have to be installed.

The preliminary list of the procurement with the estimated prices is as follows:

**Equipment related to the activity of the Energy Centre:**

- Database Server ~ 45,000 €
- Database Management Software ~ 80,000 €
- Web server ~ 30,000 €
- Statistical Software ~ 25,000 €
- Firewall ~ 10,000 €
- Workstations, Database Client SW~ 50,000 €
- Installation, configuration, accessories, testing, training ~ 40,000 €
- TOTAL ~ 280,000 €

**Equipment related to the activity of the Ministry of Economic Affairs:**

- Laptops; Workstations; Computer projector; Colour and black and white printers
- Scanner; CD writer, DVD reader, Memory upgrade; Fax cards
- in TOTAL VALUE of ~ 70,000 €