1. **Basic Information**
   1.1 CRIS Number: 2005/017-488.02.04
   1.2 Title: Reinforcing the regulatory supervision of the energy sector
   1.3 Sector: Energy
   1.4 Location: Poland

2. **Objectives**

   2.1 **Overall objective:**

   The aim of the project is to develop:
   - arrangements for effective full electricity market opening in July 2007.
   - appropriate level of the quality of electricity supplied to customers and proposals of adjustment of Polish regulations to the *acquis communautaire*.

   2.2 **Project purpose/immediate objective:**

   To assist the Regulatory Authority in preparations to fulfil the requirement to open electricity market to all customers (including households) as of 1 July 2007.

   To conduct the initial benchmarking on actual levels of quality of electricity supply at the customer delivery point.

   2.3 **Justification:**

   The Comprehensive Monitoring Report on Poland’s preparation for membership, chapter 14 states that: “the regulatory body, the Energy Regulatory Agency, whose task it is to oversee the gas and electricity markets has established, but the needs to be further strengthened…”

   Furthermore, according to the Monitoring Report, chapter 14: “…Poland must adopt the remaining implementation legislation regarding the internal energy market (…) open up the electricity and gas markets according agreed schedules…”, it means that real competition should appear at Polish energy market after transposition of the directives.

   The amended Polish Energy Law (entered into force on 3 May 2005) covered provisions of Directive 2003/54/EC and according to the requirements of the European Union law liberalization of Polish energy market has been fulfilled. In practice the level of Polish energy market liberalization is not satisfactory. The delay of implementation of the Directive caused that the gap between law and practice has been deepening. Additionally monitoring of the market and collecting the data will be difficult without specific tools. Hence it is necessary to work out suitable conditions for customer switching process, create a system of monitoring the quality of supply and a system of supervising behavior of market participants. According to the Annual Report on the implementation of the Gas and Electricity Internal Market (IV Benchmarking Report) the creation of competition in Polish energy market faces a number of obstacles therefore application of improved tools of monitoring and supervision are demanded.

3. **Description**

   3.1 **Background and justification:**
The President of the Energy Regulatory Office (ERO) is a central organ of government administration. The tasks and duties of the President of the ERO cover inter alia approval and control of tariffs of energy enterprises, control of quality of supply and customer service quality standards with respect to trade in electricity, resolving disputes related to grid access (TPA) and monitoring the market as well as behavior of the energy market participants. The President of the ERO acts according to the Energy Law Act and the Administrative Proceeding Code.

3.1.1. **Component 1:** The goal is to set up an appropriate legal and institutional framework which will enable efficient and smooth practical implementation of market opening according to EU standards. According to the data on market opening and development of consumers attitudes, published by the European Commission in its Annual Report on the Implementation of the Gas and Electricity Internal Market, (IV Benchmarking Report) Poland falls behind as compared to the most of EU Member States. There still exist institutional and economic barriers to the development of real competition in the power sector especially with respect to full market opening to small customers, including household ones.

Practical implementation of electricity market opening in Poland to customers has been facing major impediments since late 1998, the date of market opening to the largest industrial consumers. The most important barriers were related to incumbents’ behavior preventing new entrants from penetrating the market. The approaching deadline of market opening to household consumers (1 July 2007) requires acceleration of the preparedness process in terms of customer switching procedures, balancing mechanism arrangements, metering and billing policies. Due to the lack of legal unbundling of the network activities from trade in electricity in power distribution sector there is no real driving force stimulating the necessary market changes. Therefore, it is the Regulatory Authority that is expected to take the leadership in preparing the arrangements for the effective customer switching.

3.1.2. **Component 2:**
The second goal is to allow the Polish Regulator to supervise quality standards. According to the Polish energy law, energy enterprises are responsible for the quality of service, but in fact there is no system enabling the Polish regulator to control - in a permanent way - quality of service. There are no data regarding the quality of electricity supplied from the consumers’ side. The energy enterprises present data but as of now, it is almost impossible to verify all documents without data received from customers. Therefore the project will positively influence development of regulatory policy. Thanks to this system the Regulator will be able to collect data regarding the supply of electricity, whereas creation of monitoring system will positively influence the consumers’ education. Knowledge of the real quality of supply will be gained and made available to the consumers. This will play a major role in making the right and conscious choices by the consumers in terms of their supplier switching behavior. This way the ability to measure and verify the quality of supply will contribute to the development of Third Party Access rule in practice. Therefore, the level of consumer protection in particular in households is a crucial issue that has to be addressed.
with respect to market liberalization. This includes quality of electricity supplied to customers that according to the Energy law should be monitored by the Regulatory authority. So far the level of detail and depth of the regulatory supervision of electricity quality was insufficient due to lack of tools and means to establish an operational monitoring system consisting of measurement and analytical modules. Therefore the project will enable the Polish Energy Regulator (The President of the Energy Regulatory Office) to effectively collect and analyze stochastic (random) data thus providing an input to the necessary regulatory policy modifications and necessary legislative amendments. An independent research on quality of supply has not been conducted in Poland yet. Due to the information asymmetry the energy regulatory authority has no possibility to examine the service quality levels of electricity offered by the electricity suppliers without using the data provided by the suppliers. The monitoring system is aimed at increasing the Regulator’s knowledge and at narrowing the information asymmetry.

The quality indicators need proper type and number of equipment. The equipment currently available does not cover the minimum requirements needed to conduct an independent research on the quality of supply. According to the best knowledge of the staff of the ERO there is no possibility to obtain the equipment which provides in the same time information on all quality parameters measured and remotely transmits them to the data center. It is of crucial importance to develop a method of installing the equipment without knowledge of supplier and in an independent way excluding risk of consumer interference.

3.2 Linked activities:
Two projects were implemented in 2000: Twinning project 2000 (PL9707) Energy market regulation (PL/IB/2001/EY/01) was finished in 2004 (the project was connected with the liquid fuel stock systems) and project realized due to agreement among Danish Ministry of Economy and Business Affairs/the Danish Energy Authority and the Ministry of Economy and Labour of Poland - "Poland - Electricity and Gas Market Development Study and Practical Guidelines for Using EU Funds". ERO has been invited to participate in the projects as a potential beneficiary, but is not a formal party of the contracts.

3.3 Results:

Component 1:

- criteria, methods and principles for application of load profiles elaborated,
- methodology for balance settlements for small electricity consumers elaborated,
- metering and data transmission standards for effective customer switching elaborated,
- costs related to customer switching to be born by distribution companies estimated.

The mentioned results will allow to achieve a general result of the component:
- customer switching ratio increased
- household customers – at least 5% *per annum* on 30 June 2008,
- non-household customers – at least 15% *per annum* at the end of 2007.

Component 2:
- system collecting information on the level of electricity supply quality (for example: the amount of supply interruption, the duration of each interruption) implemented,
- report on identified levels of electricity supply quality at the customer delivery points prepared,

The results from above part of Transition Facility support will help in implementation of the electricity market Directive 2003/54/EC in the area of quality levels offered to consumers, especially the expected standards of quality and the compensation paid if the quality level offered is not met. The results should also support in preparing proposals of application of the collected quality data and elaborated analytical tools in regulation practice and proposals of the activities of the institutional structures in the area of legal adjustments according to the *acquis communautaire*.

3.4 Activities:

3.4.1 Component 1 – technical assistance

The contract will be realized through Technical Assistance, based on the best practice of the energy market participants. Experts, with working knowledge on measures applied in energy markets, preferably employed at institutions like TSOs, DSOs, power exchanges and energy regulators etc., will support the ERO to work out and put in practice some instruments enabling widespread application of the TPA rule. The final reports require the following activities:

- criteria, methods and principles for application of load profiles
  - setting the criteria to achieve typical consumption characteristics of certain customer groups
  - measurement of customer groups consumption
  - indication of load profile (number, what profile for which group) not preventing customers from switching

- methodology for balance settlements for small electricity consumers
  - indication of the barriers to switch a supplier by customers of low electricity consumption
  - a proposal of balance settlements favorable for customer switching

- metering and data transmission standards for effective customer switching elaborated
  - proposal of standard customer switching procedure, including billing and data exchange procedures
  - defining of standard metering equipment requirements
- costs related to customer switching to be born by distribution companies estimated
  - variant estimation of total costs related to customer switching, including organizational preparedness, technical and equipment needs, billing and metering, evaluation of load profiles
  - benchmarking report among network companies determining the standard unit cost of customer switching per customer, per MW, of connected capacity, per MWh of electricity consumed

A feasibility study containing analytical reports on cost estimation of replacement of metering systems of non-household customers will be the main part of the Transition Facility support.

3.4.2 Component 2 – technical assistance
The contract will be realized through Technical Assistance. 12 persons should be engaged in this project (3 engineers, 2 statistics, 2 economists, 2 computer analysts, 3 persons responsible for installation). Experts will support the ERO to conduct initial benchmarking of electricity supply quality. The following activities are needed:

- implementation of system collecting information on the level of electricity supply quality:
  - development, manufacturing and delivering - approximately of 1000 pieces - of the device measuring and transferring quality data of energy supply necessary for the initial benchmarking,
  - expertise on proper selection of representative group of electricity consumers connected to different electricity network companies; the sample of consumers will be chosen on the basis of network topology and the characteristics of energy consumption in order to avoid necessity of monitoring each of electricity consumers,
  - preparation of agreement between the chosen consumers and the unit installing the equipment, because the installation requires the acceptance of consumers,
  - installation of devices at chosen consumers’ wiring systems,
  - development of software necessary for data collecting and processing due to great number of figures required to conduct benchmarking,

learned:
- report on identified levels of electricity supply quality at the customer delivery points prepared
  - analysis conducted based on collected data included information on the level of electricity supply quality
  - evaluation of conclusions based on conducted analyses of collected data

3.5 Lessons learned:
The ERO had possibility to participate in the PHARE projects which do not have direct relation to the present project. The experiences gained, thanks to previous projects, by the staff of the ERO, show that external support and the knowledge of experts from different more experienced countries are very helpful in creating tools to research the development of the market. This gained knowledge may be a good starting point for the
advanced qualitative and quantitative analyses which are proposed to be performed within the present project.

4. **Institutional framework**

The Energy Regulatory Office will be responsible for the general project coordination and for its appropriate implementation. Neither the project itself nor the project results will lead to any institutional changes. The Energy Regulatory Office will become the owner of the entire equipment and tools.

5. **Detailed Budget:**

<table>
<thead>
<tr>
<th></th>
<th>€M</th>
<th>Transition Facility support</th>
<th>Co-financing</th>
<th>Total cost (TF plus co-financing)</th>
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<td>Investment Support</td>
<td>Institution Building</td>
<td>Total Transition Facility (I+IB)</td>
<td>National Public Funds (*)</td>
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<tr>
<td><strong>Total</strong></td>
<td>1.9</td>
<td>1.9</td>
<td>0.1</td>
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</tbody>
</table>

(*): contributions form National, Regional, Local, Municipal authorities, FIs loans to public entities, funds from public enterprises

(**): private funds, FIs loans to private entities

Contract 2 will be jointly co-financed.

In case of Joint Co-financing, where the final overall cost is lower than foreseen in the project fiche, the National Public and Transition Facility Co-financing, are reduced proportionally so as to maintain the agreed rate of co-financing. In case of Parallel Co-financing, where the final cost is lower than foreseen in the project fiche, it must be shown that the overall objectives of the project have been fully achieved.

6. **Implementation arrangements**

6.1 **Implementing Agency**

PAO: Tadeusz Kozek, Under-secretary of State at the Office of the Committee for European Integration, Aleje Ujazdowskie 9, 00-918 Warszawa; phone 48 22 455 52 41.

CFCU: Foundation Co-operation Fund, CFCU Director, ul. Górniośląska 4a, 00-400 Warsaw; phone: +4822 622-88-20, fax: +4822 622-75-65

The CFCU is responsible for handling tendering, contracting and payments of contracts on behalf of the President of the Energy Regulatory Office.

6.2 **Twinning**

N/A

6.3 **Non Standard Aspects**
6.4 Contracts
Contract 1: technical assistance – Transition Facility 600 000 € gross value
Contract 2: technical assistance – 1 400 000 € gross value (Transition Facility 1 300 000 € + 100 000 € Polish co-financing – joint co-financing)

7. Implementation schedule

7.1 Start of the tendering process
I Q 2006

7.2 Start of the project
III Q 2006

7.3 Project ending
I Q 2008

8. Sustainability
The President of the ERO has foreseen adequate staff and financial resources to maintain administrative function during realization of the projects.
The President of the ERO has foreseen coverage of costs for maintenance and up-date where necessary the equipment necessary to realize the project.

9. Conditionality and sequencing

9.1 n/a

9.2 Timeframe.
Contract 1:
Choice of experts
Preparing of reports
Estimation and acceptation of the reports
Contract 2:
The tender for developing and production.
Developing the device measuring the quality of energy supply and the method of data transmission
Manufacturing of devices
Proper selection of electricity consumers connected to the different electricity suppliers.
Installation of device at consumers wiring system.
Development of software to data collecting.

9.3 Most important milestones.
Contract 1
Choice of experts – I Q 2006
Preparing of reports – II – III Q 2006
Estimation and acceptation of the reports – IV Q 2006
Contract 2
Tender - I Q 2006
Purchase – III Q 2006
Installation and data collection – IV Q 2006 – IV Q 2007
Analysis – I Q 2008
Annex 1: Logframe matrix

<table>
<thead>
<tr>
<th>LOGFRAME PLANNING MATRIX FOR</th>
<th>Programme name and number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
<td></td>
</tr>
<tr>
<td>Reinforcing the regulatory supervision of the energy sector</td>
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<table>
<thead>
<tr>
<th>Contracting period expires</th>
<th>Disbursement period expires</th>
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<tr>
<td>IV quarter 2007</td>
<td>IV quarter 2008</td>
</tr>
<tr>
<td>Total budget</td>
<td>Transition Facility Budget</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall objective</th>
<th>Objectively Verifiable Indicators</th>
<th>Sources of Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>The aim of the project is to develop:</td>
<td>Customer switching ratio:</td>
<td>Data on customer switching collected and published by the Regulator in 1999-2005</td>
</tr>
<tr>
<td>• appropriate level monitoring of the quality of electricity supplied to customers and proposals of adjustment of Polish regulations to the acquis communautaire.</td>
<td>- household customers &gt; 5% per annum on 30 June 2008</td>
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<td>• arrangements for effective full electricity market opening in July 2007.</td>
<td>- non-household customers &gt; 15% per annum at the end of 2007</td>
<td></td>
</tr>
<tr>
<td>Actual levels of quality of electric supply at the delivery points – trend analyses.</td>
<td>Data on quality of energy supply.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Project purpose (Immediate Objectives)</th>
<th>Objectively Verifiable Indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
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<tbody>
<tr>
<td>Component 1: To assist the Regulatory Authority in preparations to fulfill the requirement to open the electricity market to small customers (including households) as of 1 July 2007. These preparations involve both the general structural issues like defining the necessary scope of restructuring of the distribution companies as well as addressing such specific issues as application of load profiles, balance settlements, metering, billing and customer information.</td>
<td>Customer switching ratio:</td>
<td>Data on customer switching collected and published by the Regulator in 1999-2005</td>
<td>Effective cooperation between central administration offices</td>
</tr>
<tr>
<td>- household customers &gt; 5% per annum on 30 June 2008</td>
<td>- non-household customers &gt; 15% per annum at the end of 2007</td>
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<tr>
<td>To conduct the initial benchmarking on actual levels of electricity supply quality at the customer delivery point.</td>
<td>Quality indicators determined on the basis of quality data periodically collected in the monitoring system.</td>
<td>Data on quality of electricity supply presented by distribution companies. Consumers’ opinion on quality of electricity supply gathered by the local branches of the ERO. Quality indicators published by the ERO as the result of the benchmarking.</td>
<td>Risk - the lack of cooperation between administration and energy consumers.</td>
</tr>
</tbody>
</table>
Component 1:
1. Criteria, methods and principles for application of load profiles elaborated.
2. Methodology for balance settlements for small electricity consumers elaborated.
4. Costs related to customer switching to be born by distribution companies estimated.

Component 2:
1. System collecting information on the level of electricity supply quality (for example: the amount of supply interruption, the duration of each interruption) implemented,
2. Report on identified levels of electricity supply quality at the customer delivery points prepared.

Customer switching ratio:
- household customers > 5% per annum on 30 June 2008
- non-household customers > 15% per annum at the end of 2007

Quality indicators determined on the basis of quality data periodically collected in the monitoring system
Periodical collection of the quality data transmitted from the delivery points of the representatives customers.
Number of analytical tools used in regulation practice by the President of the ERO.
Proposal for the Ministry of Economy and Labour concerning quality of electric supply.

Data on customer switching collected and published by the Regulator in 1999-2005
Data on quality of electricity supply presented by distribution companies.
Consumers’ opinion on quality of electricity supply gathered by the local branches of the ERO.
Quality indicators published by the ERO as the result of the benchmarking.

Activities | Objectively Verifiable Indicators | Sources of Verification | Assumptions |
---|---|---|---|
Component 1: | Technical assistance – contract 1
- setting the criteria to determine typical consumption characteristics of certain customer groups
- measurement of customer groups consumption
- indication of load profile (number, what profile for which group) not preventing customers from switching
Technical assistance – contract 2
There is no load profiles applied currently by distributors.
Required co-operation and involvement of market participants (network companies, traders, transmission system operator, customers representatives) and government Energy Policy Task Force

Component 2: | | | |
switching procedure, including billing and data exchange procedures;
- defining of standard metering equipment requirements;

4. variant estimation of total costs related to customer switching, including organizational preparedness, technical and equipment needs, billing and metering, evaluation of load profiles;
- benchmarking report among network companies determining the standard unit cost of customer switching per customer, per MW of connected capacity, per MWh of electricity consumed.

Component 2:
1. - development, manufacturing and delivering approximately of 1000 pieces of the device measuring and transferring quality data of energy supply necessary for the initial benchmarking,
- expertise on proper selection of representative group of electricity consumers connected to different electricity network companies, the characteristics of energy consumption and the capacity of network topology and the chosen consumers and the unit installing the equipment, because the installation requires the acceptance of consumers, installation of devices at chosen consumers' wiring systems,
- preparation of agreement between the chosen consumers and the unit installing the equipment, because the installation requires the acceptance of consumers, installation of devices at chosen consumers' wiring systems,
- installation of devices at chosen consumers' wiring systems,
- development of software necessary for data collecting and processing due to great number of figures required to conduct benchmarking.

There is lack of standard procedures, available to customers, applied by distributors.

Suitable project control and proper coordination between the institutions involved in implementation of the project.
- Evaluation of conclusions based on conducted analyses of collected data

**Timeframe:**
- The tender for developing and production.
- Developing the device measuring the quality of energy supply and the method of data transmission.
- Manufacturing of devices.
- Proper selection of electricity consumers connected to the different electricity suppliers.
- Installation of device at consumers' wiring system.
- Development of software to data collecting and processing.
- Data collection.
- Analysis and evaluation of collected data.

**Preconditions**
### Anexes 2-3: Implementation, contracting and disbursement schedules

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<th>Planning Period</th>
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<td>January 2006 –</td>
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#### Budget Allocation

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#### PLANOWANE (PLANNED)

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**Legenda:**

- **D** = design of sub-projects
- **C** = tendering and contracting
- **I** = contract implementation and payment
- **I** = contract implementation and payment
Annex 3: Needs assessments

There is no need for any external preparatory work. During the realization of the tasks covered by the Component 2 some preparatory work is included in the first stage of the realization. According to the best knowledge of the staff of the ERO the devices measuring wide range of quality parameters necessary for understanding the targets and actual levels of quality of supply performance and transmitting them to the data centre are not available on the market. But there is possibility to develop this device using typical measuring devices available on the market. Application of typical GSM service will enable to collect and process the data from had chosen consumers. The adapted methods and the tools, used in individual cases till now, will be implemented to the statistical samples of consumers chosen from the whole population. The number of manufactured devices should help to keep the cost on the justified level.