

## 2009 Project Fiche 12 Kosovo – IPA centralised programmes

### 1. Basic information

- 1.1 CRIS Number:** 2009/021-145  
**1.2 Title:** Support to Transport and Energy  
**1.3 ELARG Statistical code:** 03.15  
**1.4 Location:** Kosovo (UNSCR 1244)

#### Implementing arrangements:

- 1.5 Contracting Authority (EC):** European Commission Liaison Office in Kosovo  
**1.6 Implementing Agency:** N/A  
**1.7 Beneficiary (including details of project manager):**

Project activity/component	Beneficiary institution	Contact point responsible for project/activity coordination
Support for Kosovo's integration in the Energy and Transport Community of SEE	<ul style="list-style-type: none"><li>• Transmission System and Market Operator KOSTT</li><li>• Ministry of Energy and Mining (MEM)</li><li>• Ministry of Transport and Communications (MTC)</li></ul>	<ul style="list-style-type: none"><li>• Director of Department for Project Management &amp; Engineering, KOSTT</li><li>• Director of Energy Department, MEM</li><li>• Permanent Secretary in MTC</li></ul>

#### **Financing:**

- 1.8 Overall cost:** EUR 15.0 million.  
**1.9 EU contribution:** EUR 15.0 million.

#### **1.10 Final date for contracting**

Three years following the date of conclusion of the Financing Agreement.

#### **1.11 Final date for execution of contracts**

Two years after the final date for contracting.

#### **1.12 Final date for disbursements:**

One year after the final date for the execution of contracts.

### 2. Overall Objective and Project Purpose

#### **2.1 Overall Objective:**

The overall objective is to foster economic development in Kosovo by integrating the energy and transport networks in the regional energy and transport markets in compliance with the Energy and Transport Community Treaties for SEE.

## **2.2 Project purpose:**

The purpose of the project is to support Kosovo authorities in the implementation of energy and transport reforms and to improve the security of the electricity transmission system in line with the requirements of the energy and transport treaties.

## **2.3 Link with: European Partnership (and its action plan); SAp/STM**

The European Partnership Action Plan (EPAP) for 2008 requires for strengthening the regional cooperation and requires active participation in the regional initiatives as well as close regional cooperation in the field of the law enforcement (EPAP 2.1.3 Regional Issues and International Obligations).

The EPAP requires for enhancing transport policies in compliance with requirements of the SEE Transport Observatory SEETO and for upgrading the transport infrastructure according to European standards. In the mid-term frame the EPAP requires for implementing the multi modal transport strategy and action plans for all transport modes (EPAP 2.3.2 Sectoral Policies d).

The EPAP priority for Energy sector policies is making progress on meeting commitments under the Energy Community Treaty related to upgrading the electricity transmission system and participation in the regional mechanism for energy market operation. The Treaty obliges the contracting parties including Kosovo to implement the Generally Applicable Standards<sup>1</sup> of the European Community including requirements of the UCTE<sup>2</sup> related to the technical operation of the transmission network operators.

In October 2008 with the decision of the Prime Minister the Working Group for Infrastructure has been established with the purpose of coordinating and monitoring the implementation of EPAP actions for environment, energy and transport.

In STM meetings on Energy and Transport held in September 2008 it was emphasised the need to enhance and harmonise the legal and regulatory framework with *acquis*, and to strengthen the institutional capacity for implementation of investments.

EC Progress Report for Kosovo 2008 highlights the need for increasing the stability of electricity supply and upgrading infrastructure conform the standards set under the Energy Community Treaty. In transport sector the report acknowledges the need for strengthening the capacity to implement investments in infrastructure in particular in railways sector.

## **2.4 Link with the Multi-Annual Indicative Planning Document (MIPD) 2009-2011**

The priorities set under Economic Criteria in MIPD 2009-2011 for Kosovo include the improvement of infrastructure in energy and transport as the corner stone for future economic growth. The priorities for European integration in MIPD relate to supporting the development of strategies and policies compatible with European Standards in transport and energy fields.

The expected results set in MIPD are: an improvement of the security of energy supply through strengthening the transmission network, both internally and in Kosovo's connections to neighbouring countries, and assistance for Kosovo's participation in regional co-operation mechanisms (the Energy Community Treaty). The assistance should be provided on building the capacity for strategic planning infrastructure development including compliance with relevant regulations for environmental impact assessment.

The MIPD objectives and priorities for Kosovo are harmonised with the MIPD multi-beneficiary 2009-2011.

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<sup>1</sup>As a part of the Treaty establishing the Energy Community (Title II – The Extension of the *acquis communautaire*, Chapter VI – Compliance with generally applicable standards of the European Community), Articles 21-23

<sup>2</sup>UCTE - Union for Coordination of the Transmission of Electricity

## **2.5 Link with National Development Plan**

The project links to the priorities identified in the mid-term expenditure framework (MTEF 2009-2011)

The objective of MTEF 2009-2011 for energy sector is to support the implementation of Kosovo Energy Strategy by providing investments for upgrading the electricity transmission network in compliance with the international technical standards, to ensure reliability and security of supply.

The objective of MTEF 2009-2011 for transport sector aims at supporting the road and railway infrastructure upgrade and implementation of reforms in line with multi-annual planning of the SEETO (under the MOU for developing the core regional transport network)

## **2.6 Link with national/ sectoral investment plans**

The Energy Strategy 2005-2015 requires for implementing the commitments arising from the SEE Energy Community Treaty. A key strategic objective is the upgrade of the electricity transmission network to improve the quality of supply and the security of the network as a prerequisite for integration in the regional energy market. Actions to include these objectives include reducing constraints and losses by adding additional transmission capacity.

The regional multi-annual plan (MAP) developed by SEETO includes a set of soft measures for policy reforms that signatory parties are required to implement. The policy reforms are necessary to ensure the efficient operation of existing and improved infrastructures to maximise the long term benefits. The two key areas of reform are in railways and road sub-sectors and concern the common network statement and road safety improvement. (MAP 2008-2012).

The development of a multi-modal transport strategy and forecasting system for Kosovo will be finalised in March 2009.

## **3. Description of project**

### **3.1 Background and justification:**

#### *Energy*

The Kosovo power system is characterised with an annual electricity demand growth of about 8% and unreliable supply due to insufficient generation capacity and insufficient capacity to transmit the electricity to the end users.

Inefficient and/or wasteful consumption of electricity is also a problem. Over 60% of electricity demand is for household consumption. Electricity is the main source for heating used by households as there are not many alternatives, there are only three district heating companies in three cities of Kosovo (Prishtinë/Priština, Gjakovë/Đakovica and Mitrovicë/Mitrovica ) that supply only about 5% of heating demand in the mentioned cities. The demand is expected to grow further with the privatisation of Socially Owned Enterprises (SOE) and with private sector development. The privatised SOE “Ferronickel” consumes up to 100MW which is about 15% of total power generation in Kosovo.

In 2008 there is some progress achieved on improving the level of payment for electricity bills however the system losses remain high. The lack of investment in the electricity network (in both transmission and distribution) affects the quality and security of supply in many areas of Kosovo, which impacts negatively the revenue collection.

Since 2006 the transmission system operation (TSO) and market operation (MO) is performed by the independent operator KOSTT<sup>3</sup>. Based on the law on Electricity KOSTT has obtained two

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<sup>3</sup> KOSTT –Kosovo Transmission System and Market Operator

licenses issued by the Energy Regulatory Office (ERO) for transmission system operation and for market operation. KOSTT has developed the grid code and technical standards compliant to Generally Acceptable Standards (GAS) as required under the Energy Community Treaty.

The transmission network operation faces constraints due to lack of transmission capacity at voltage level 110kV which impacts the supply of electricity within the Kosovo territory. In addition the high voltage (HV) equipments in the transmission substations that are crucial for ensuring the operational security are old and unreliable. The need for replacing the old HV equipment has been indentified in several technical studies<sup>4</sup>. With the KCB<sup>5</sup> funding KOSTT has made some investments to improve the security in some substations.

However the investment needed to upgrade the transmission network in terms of capacity and security are very costly and in mid term can not be covered from KOSTT revenues. On the other hand the transmission network upgrade up to the level of European technical standards<sup>6</sup> is a requirement deriving from the Energy Community Treaty for integration in the regional energy market. In addition the KOSTT's technical codes and standards which are in compliance with European technical standards require for improving the standards of operation in the substations and in the network to ensure security and reliability of supply.

The Investment and Development Program (IDP 2007-2013) of KOSTT identifies the investment needs to increase the transmission capacity and reduce bottle necks and to improve the security of network operation as a whole.

The two ongoing projects identified in the IDP for construction of two big substations Peja 3 (co-funded KfW and KCB) and Ferizaj2 (co-funded under IPA 2008) will significantly improve the security of supply in the western part and south-east part of Kosovo. The IPA 2009 project is a complementary action towards increasing the network stability and security and consequently improving the quality of supply.

The market operation function is still at an early stage of development. The market rules have been developed by KOSTT and approved by ERO and are implemented in two phases starting with a transitional phase and moving to full implementation phase. This two phase approach is decided mainly because the full market rules pre-suppose a surplus of production over demand, which is currently not the case in Kosovo.

For the implementation of full market rules as planned from 2011 onwards, and for fulfilling the UCTE requirements KOSTT has to install IT systems to support the implementation of market rules and to enable a functional market operation. The IT systems are designed to support the energy data management, the allocation of interconnection transmission capacities, the balancing mechanism and demand forecasting system, which are necessary for planning and trading in the market.

Currently the financial sustainability of KOSTT depends on the transmission tariff set by the Energy Regulator. KOSTT is member of SETSO (South East European Transmission System Operators), but is not yet participating in the inter-TSO compensating mechanism (ITC mechanism) and in the Congestion Management (CM) mechanism which would contribute to increased income from electricity transit and CM through the Kosovo network.

### *Transport*

In 2004 the SEE region including Kosovo<sup>7</sup> signed the MOU with the purpose of developing a core regional transport network. In 2007 the scope of MOU was extended to include the

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<sup>4</sup> ESTAP I study funded by World Bank, Technical Study on the existing transmission network conditions-EC funded study under CARDS 2005

<sup>5</sup> Kosovo Consolidated Budget

<sup>6</sup> Technical standards have been defined under the frame of Energy Community Treaty therefore the compliance is mandatory for signatory parties

<sup>7</sup> Kosovo under UNSCR 1244/1999, the MOU was signed by UNMIK

development of a regional railway transport area. The development of the regional transport network is based on a multi annual planning (MAP) developed by the SEE Transport Observatory (SEETO). The scope of the MOU and the five years plan MAP provide the measures and actions to be implemented by signatory parties with regards to infrastructure development and policy reforms.

The MOU is expected to be replaced in 2009 with a legally binding Treaty establishing the SEE Transport Community.

The primary legislation that governs the transport sector in Kosovo includes the law on roads, law on road transport, law on road safety, and law on railways. The secondary legislation is being developed but the compliance with *acquis* has to be ensured.

Although there is some progress in development of the roads infrastructure in the area of trans-European transport networks and on developing the legislation, the institutional capacity to implement the reforms and investments remains weak.

A transport planning unit (TPU) has been established in the Ministry of Transport and Communications in 2007. The ongoing project funded under CARDS 2006 is supporting the development of multi-modal transport strategy and is building the capacity of TPU. The TPU is still lacking resources required to perform its duties related to transport forecasts updating and planning investment projects based on a multi-criteria analysis and on budget availability. There is a need for continuous support to the transport planning unit in MTC to update traffic forecasts in the transport model and update investment planning in transport modes.

The Law on road traffic safety requires for developing and implementing a road safety charter and long-term action plan. The soft measures planned in the SEETO's plan include measures on road safety auditing. The law on roads transport requires for developing and implementing a multi-annual action plan for freight and passengers transport. The public transport sector requires more efficient regulation. There is a need for institutional support in the implementation of primary legislation and approximation with *acquis*. Support is also required on building the capacity for preparing for concession big investment projects.

Introducing a competitive market in railways sector is a challenge for the relevant institutions and railways company. The Law on railways establishes the railway regulator and requires for creating a stable regulatory framework that will attract investments and will enable a functional and transparent market.

### **3.2 Assessment of project impact, catalytic effect, sustainability and cross border impact**

The project will have an impact on energy supply by improving the technical conditions of electricity transmission system. Activity 1 of the project will increase the capacity of transmission capacity which will enable a more reliable electricity supply for consumers. This activity will improve the supply of eligible consumers mainly industrial but also households. Activity 1 includes also replacement of existing high voltage equipment in a transmission substation which will have an impact on the operational security and security of supply. A reliable power supply is a precondition for encouraging private sector development and investments in Kosovo. The improved operational reliability of the substation Prizren 2 will impact on improved power exchanges with the Albanian power system through 220kV interconnection.

Project Activity 2 will support the implementation of reforms in road and railways sector which will contribute to improved transport services and integration in the regional transport network. This activity will enhance the legal and regulatory framework as a prerequisite for attracting investments for developing transport infrastructure.

The Energy Community Treaty and the Transport Community of SEE are intended to increase cross border energy trade and transport of freight and passengers by creating a single market covering the Member States and South Eastern Europe.

### **3.3 Results and measurable indicators:**

#### *Results for Activity 1:*

- a. Improved quality of supply (voltage profile) in the 110kV network
- b. Increased safety in operation at Substation Prizren/Prizren 2 and improved power supply
- c. Increased transparency of energy data for all market players

#### *Results for Activity 2:*

- a. Legal and regulatory framework is improved and compliant with the forthcoming Transport Community Treaty commitments and the *acquis*
- b. Policies for the implementation of a multi-modal transport strategy are developed and thus in compliance with the ongoing Transport Community Treaty<sup>8</sup> provisions
- c. Infrastructure Manager (IM) and Train Operation are established and operational

#### *Measurable indicators for Activity 1:*

- a. 25% increase of transformation capacity in Prizren/Prizren 2 substation
- b. 5-12% increase of voltage profile in 110kV nodes.
- c. The UCTE security criteria (N-1 criteria) is fulfilled in Prizren/Prizren 2 substation
- d. The value of energy losses and undelivered energy reduced by approx EUR 2 million/year
- e. The number of faults during the operation is minimised
- f. Reliable power exchange with Albanian system
- g. Energy settlement process is performed on time and accurately
- h. Increased number of traders and trading statistics
- i. The number of auctions performed for allocation of interconnection capacities

#### *Measurable indicators for Activity 2:*

- a. Regulatory procedures for railways sector are approved by the railway regulator
- b. The secondary legislation implementing the primary legislation (law on road safety, law on road transport, law on roads and law on railways) is completed
- c. Action plans developed under SEETO plan are implemented
- d. Number of projects prepared for multi modal transport
- e. Number of investment projects identified for concession
- f. The permit and safety certificate are issued to infrastructure manager
- g. Number of licenses issued for train operation
- h. Network statement for train operation is developed and approved by the railway regulator
- i. Safety measures developed by IM are approved by the regulator

### **3.4 Activities:**

The project will be implemented in two activities.

Activity 1 includes actions for upgrading the electricity transmission grid and for establishing the IT infrastructure for market operation.

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<sup>8</sup> The Transport Community treaty is still under negotiations and is expected to be signed by end 2009

Activity 2 includes actions to support the responsible institutions in transport sector including the railways company in the implementation of the MOU for regional transport network and forthcoming Treaty on Transport for SEE.

### **Activity 1 - Support on upgrading power transmission system to meet the Energy Community technical standards**

Activity 1 of the project includes three complementary sub activities:

- ***Action 1.1 Increasing transformation capacity in Prizren/Prizren 2 substation***

Based on the law on electricity, KOSTT has adopted the technical codes which provide the technical standards for maintenance and operation of the high voltage equipment. The technical codes including the grid code requires for compliance with UCTE criteria for security (N-1 criteria).

The action addresses the problem of insufficient transformation capacity in transmission substations (220/110kV) and supports KOSTT on moving forward with implementation of UCTE requirements. The action includes supply and installation of a new power transformer in Prizreni/Prizren 2 Sub Station substation which replaces two existing smaller transformers.

The two existing autotransformers 150MVA each, at Prizren/Prizren 2 SS 200/110kV are overloaded beyond their rated parameters during the peak load period. This leads to power reduction at the Prizren, Gjakova, Klina and Suhareka region. Furthermore, the Prizreni/Prizren 2 SS, as one of the main nodes of Kosovo's transmission system, does not meet the Grid Code requirement regarding the N-1 security criteria. That means in case of outage of a single 220/110kV transformer, the entire system would be exposed to an unacceptable high risk of overload, leading to consequent damages to the primary plants of the SS and will provoke cascade tripping of the circuits and consequently the loss of supply.

The main purpose of the first activity is to install a new power transformer with the capacity of 150MVA at the existing Prizren/Prizren SS 2, including the installation of two transformer bays of 220kV and 110kV with all necessary protection and control equipment needed. According to the actual situation at the substation with 2x150MVA power transformers in operation, the (N-1) criteria related to the transformation capacity is 300 MVA only. Adding the third proposed transformer, the (N-1) criteria related to the transformation capacity will be improved to 345MVA which is one of main ENTSO-E (or ex UCTE) grid code requirements. This will significantly improve the security and reliability of supply during the peak loads. In addition, the parallel operation of only two transformers can create a problem for the reliable power supply to the consumers during the planned maintenance of the transformers and the related bays.

The supply and installation of the transformer is a high priority identified in the KOSTT's Investment and Development Plan (IDP).

This action is based on technical analysis performed as part of ESTAP<sup>9</sup> I study and system planning analysis performed by KOSTT.

- Based on computer simulations done by KOSTT the project (action 1.1) will contribute to reduction of energy losses by 4,800MWh (calculated at EUR 30/1MWh in total is EUR 144000). In addition the total amount of energy undelivered to costumers because of bottle necks in transformation capacity is 2100MWh. This energy, if calculated at EUR 400/1MWh which is the lowest price in the region, has the value of EUR 840000/year. In total the financial loss for KOSTT is EUR 984,000 million/year caused due to insufficient transformation capacity at Prizreni/Prizren 2 substation. If we consider the demand grow

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<sup>9</sup> ESTAP I technical study funded under a World Bank agreement in 2002

in the next future period, the cost benefit will be higher. **Action 1.2. Replacement of high voltage equipment in Prizren 2 transmission substation**

Substation Prizreni2 (220/110kV) is an important node in the transmission network and it is connected at 220kV level to Gllgoc/Glogovac1 switchyard (Drenica/Skenderaj region) and to Fierza substation in Albania.

The High Voltage (HV) equipments installed at Prizren/Prizren 2 substation are very old and have exceeded the design lifetime period. The statistics indicate that most of the faults recorded in the substation in the last few years result from unreliable operation of the HV equipment. System planning studies carried out by KOSTT specialists have shown that the calculated short circuit levels exceed the breaker ratings in the substation. A circuit breaker is not reliable if the calculated short-circuit level at a bus bar exceeds 80% of the rating of adjacent circuit breaker. The HV equipment does not only put at risk the reliability and security of supply but also places other transmission equipment at a high risk of damage.

This action includes design, supply and replacement of HV equipment in Prizren/Prizren2 substation. It is based on a number of recommendations deriving from previous technical studies and KOSTT's system analysis. The ESTAP I study (2002) considers the replacement of HV equipment in transmission substation as a critical factor for safe operation. Due to financial constraints KOSTT was not able to carry out the replacement of equipment in all substations. Currently the replacement of HV equipment is ongoing in Kosovo A substation.

The Generally Applicable Standards (GAS) of the European Community which are applied in KOSTT technical standards require high security and efficiency in the transmission system operation

- The Transmission Network Development (TND) Plan 2007-2013 prepared by KOSTT gives high priority to replacement of HV equipment in Prizren/Prizren 2 substation.

**Action 1.3. Supply of IT systems for energy market operation**

Kosovo's power sector is undergoing the process of reforms in compliance with acquis (EC Directive 2003/54/EC and Regulation 1228/2003/EC) as required by the Energy Community Treaty for the SEE.

Based on the Law on Electricity, KOSTT has obtained a market operation license issued by the Energy Regulator. KOSTT has developed a new market structure and market rules.

As required in the market rules, KOSTT in the capacity of the Market Operator has signed the Framework Agreement with all licensed market participants for access to the Kosovo electricity market: 10 wholesale suppliers including traders, KEK Public Supplier, Distribution Network Operator and two Independent Generators.

The market rules are implemented in two phases starting with a transitional phase and moving to full implementation of market rules. This two phase approach is decided mainly because the full market rules pre-suppose a surplus of production over demand, which is currently not the case in Kosovo.

The full market rules implementation and fulfilling the requirement of UCTE (policy 4), KOSTT has to install IT systems to support the implementation of market rules and to ensure the market operation. The transitional market rules are in implementation since April 2007 whereas the full Market Rules will be implemented starting in 2011.

KOSTT has an obligation to implement requirements such as: energy and financial data management and auditing, data publication and transparency, auditable platform for interconnection capacity allocation, facilitate trading through its proposed mechanisms, etc. Implementation of this action will support KOSTT in its future integration in regional and European mechanisms.



KOSTT is actively participating in the all developments within the SEE region to contribute in the establishing all mechanisms that facilitate the implementation of the electricity free competitive market. This requires IT system with appropriate software platforms that could operate in the interface with software platforms that are in the phase of development in the carrying out the Coordinated Congestion Management, Regional Balancing Mechanism, and Market of Ancillary Services and the Common Electricity Market.

This action will supply and install a complete set of IT systems – both hardware and software to support the increasing responsibilities imposed on the market operator (KOSTT) following the evolution of the market rules. The new IT systems will include the following:

- The Energy Data Management – as the main component that collects, processes, manages and archives all the energy data necessary for settlement process, including invoicing component;
- The Interconnector Capacity Allocation – component that manages the overall process of allocating interconnection transmission capacities.
- The Data Warehouse/Reporting - component that receives and formats for analysis, reporting and publishing
- The Balancing Mechanism - component to manage trading in this mechanism
- Day-ahead market - component to manage trading in this mechanism
- Demand Forecasting system - produces the day-ahead forecast based on metered data and other factors
- Contract Notification – collects the data and information on bilateral and centralised trade among the market participants

The IT platform for Market Operator activities would enable and facilitate:

- better management of electricity market activities
- efficient management of all energy, capacity and commercial data related to electricity market
- settlement & invoicing
- transparency and audit-ability
- trading activities (organized & centralized electricity trade, balancing, auctioning of transmission capacity)
- competition and easier detection of non-market behavior (theoretically lower wholesale electricity prices)
- efficient management of market opening/customer switching
- reporting and publication
- proper decision making

The IT platform is very important for MO in fulfilling legal and regulatory requirements, particularly in terms of performing efficient, transparent and auditable settlement process. It provides an added value on each of above-indicated bullet point. It is important to stress that, KOSTT is and will remain a regulated company (regulated revenues), therefore efficiency on its operation is directly an added value to the market, participants and ultimately to the final customers.

## **Action 1.4 Supervision of upgrade projects in transmission network**

This action includes services for the supervision of Activity 1 actions' implementation. The services include technical assistance for the ECLO and beneficiary KOSTT on performing the following:

- Overseeing the overall performance program of the implementing parties (contractors) for actions included in Activity 1
- Assist during the design phase on assessing and/or approving the design submitted by the implementing party
- Check the quality of the equipment and systems supplied to ensure compliance with relevant technical standards and check the corresponding invoice claims
- Check and approve the testing procedures and witness the site acceptance tests as well as the commissioning of installations
- Assist on handling fault or defect claims in the supplies and systems during the defect liability period.

## **Activity 2: Support in the implementation of Transport Community Treaty**

Kosovo participates in the implementation of MOU for the development of the core regional transport network in SEE. The multi annual plan (MAP) developed by the Transport Observatory-SEETO requires signatory parties to implement soft measures which include policy reform and developing sound regulatory framework and efficient institutions. In this context a regional project began in June 2008 to support the SEE parties in two key areas of reforms: railways and road safety auditing. This project will deliver the following outputs: a regulatory manual for a harmonised infrastructure charging regime, a draft harmonised Network Statement and a draft regional plan to improve regional railway operations including: passenger border controls on moving trains and introduction of Electronic Data Interchange (EDI) for freight operations, and an action plan for greater integration of railway border crossing policies.

In the area of road safety auditing (RSA) the regional project will prepare a draft short term Road Safety Strategy, a proposal for law and regulations to implement mandatory RSA, a draft Road Safety Manual, a draft RSA Agreement and an action plan.

Activity 2 will support the Kosovo authorities in the implementation of the outputs delivered by the regional project.

As required by the law on railways the railways regulator will be supported on establishing and implementing a regulatory framework which will enable establishment of a competitive market in railways sector. The railway regulator will be supported on creating conditions for third party access to infrastructure, on issuing/reviewing licenses issued for train operators, on issuing/reviewing the permit issued to the infrastructure manager, and on approving the safety rules and issuing safety certificates. The regulator will be supported on setting up a methodology for calculating the use of infrastructure charges and other charges as required by the Law on Railways and Treaty on Transport Community.

The action will support the unbundled entities: the railways infrastructure manager and the train operation. Support will be provided on developing safety rules, on developing applications for obtaining license from the regulator. An investment program will be developed for the infrastructure manager and assistance will be provided on identifying projects that would be attractive for private investor and/or IFIs. Assistance will be provided on developing a network statement that will be in compliance with SEETO guidelines for the regional railways transport

development. The action includes a training component for upgrading the technical skills in railways for train operation and for infrastructure upgrade.

The action will support the Ministry of Transport and Communication (MTC) on the implementation of the Law on road safety, on developing and implementing a road safety charter and long-term action plan. The action will support the MTC on improving the regulation of road transport and on developing policies for improving road transport and urban transport. It will also support the transport planning unit and other departments of the MTC on developing effective policies to implement the multi-modal transport strategy and on preparing investment projects for concession.

The action will support the implementation of reforms in the Kosovo transport sector in compliance with Treaty requirements and Kosovo transport strategy. The action includes:

- Strengthening the legal and regulatory framework in compliance with provisions of the Transport Community Treaty and institutional support in the implementation.
- Support on developing/enhancing policies to implement the multi-modal transport strategy including environmental and social related issues
- Technical assistance on preparing proposals for infrastructure projects at the regional Infrastructure Project Facility (IPF) and capacity building on the preparation of concessions for large infrastructure projects
- Technical assistance to support the operations in railways infrastructure and train operation in compliance with regulatory requirements for establishing a market and for providing equal access in railways infrastructure.

The action will address priorities for the sector as defined and as required under the Transport Community Treaty which is currently under negotiations.

### ***Contracting arrangements***

#### **Activity 1: Support to power transmission system to meet the Energy Community technical standards**

The three actions under Activity 1 require three supply contracts for actions 1.1, 1.2 and 1.3. Technical specifications for the Supply Contracts will be prepared under the Support measure facility IPA 2008. The tendering for the three actions will commence in Q4 of 2009.

One service contract is required for Action 1.4 for the supervision of dismantling works of existing equipment, and supervision of installation works performed under action 1, 2 and 3, and for the quality check of the supplies purchased. This contract should run in parallel with other actions under Activity 1.

#### **Activity 2: Support in the implementation of Transport Community Treaty**

Activity 2 will be implemented through one Service Contract. The terms of references will be prepared by the ECLC Task Manager. Tendering will commence in Q4 2009.

### ***Project management and administration***

The European Commission Liaison Office to Kosovo will manage the procurement, implementation, quality control, reporting and coordination with other donors of the development assistance and of the financial and technical cooperation related to the actions described in this project fiche, taking remedial actions if and when needed.

The Contractors and Team Leaders engaged through the contracts for this project will have the authority to run the project activities on a day-to-day basis under the supervision of the Commission Office. The Contractor's/Consultant's primary responsibility shall be to ensure that

the project produces the required outputs, to the required standards of quality and within the specified constraints of time and cost. The team leader and others will also address cross-cutting issues. A detailed description of the works and duties of the team leaders and key experts will be elaborated in the Technical Specifications and Terms of Reference, in line with this project fiche.

Project Steering Committees will be responsible for the overall direction of the project and comprise of representatives from the beneficiary institutions and the Commission Office.

Monitoring will be performed centrally by the Commission. The project may be evaluated at the interim or ex-post stages under the supervision of Commission's Evaluation Unit. The project may be audited by Court of Auditors - in line with the standard European Commission procedures.

### 3.5 Conditionality and sequencing:

- A letter of commitment for allocation of EUR 2million under KCB for the year 2009 is submitted by the Minister of Economy and Finance (MEF) to the Minister of Energy and Mining or from KOSTT own budget for the implementation of the "Metering Database" project.
- A letter of commitment for allocation of EUR1.6 million under KCB in 2009 (as per MTEF 2009-2011) submitted by the Minister of Economy and Finance (MEF) to the Minister of Transport and Communications for the Humanitarian Transport project
- Government's commitment to implement the requirements of the Energy Community Treaty and Transport Community Treaty, this includes consultation with EC on review of legislation before adoption
- Government's commitment to ensure the operational and financial independence of the regulators
- KOSTT provides advice and any information required during the preparation of technical specifications and during the project implementation.

### 3.6 Linked activities

EC funded linked activities:

Name of project (Amount EUR million)	Start End	Activities/Results
KOSTT (EUR 14 million under CARDS, EUR 2.1 million under IPA 2007 and EUR 7.5million under IPA 2008)	2002-2006	<ul style="list-style-type: none"> <li>▪ High voltage metering system (CARDS 2000)</li> <li>▪ Local Scada (System for Control and Data Acquisition) for Kosovo B substation (CARDS 2001)</li> <li>▪ Supply of power transformers for Kos A and Kos B substations (CARDS 2001)</li> <li>▪ Technical assistance for the establishment of the KOSTT (CARDS 2005)</li> <li>▪ Replacement of relay protection in Kos B and Pristina 4 substation and control system in Pristina 4 (CARDS 2006)</li> <li>▪ Construction of Ferizaj/Uroševac 2 substation (IPA 2008)</li> <li>▪ Assistance to KOSTT (IPA 2007)</li> </ul>
Institutional Support to the Energy Regulatory Office (EUR 1.9 million under CARDS and EUR 1.0 million under IPA 2007)	Feb2005-Sep 2007	Technical support provided to ERO to develop and implement energy regulatory frameworks, market rules, mechanisms and procedures for the establishment of a competitive energy market in Kosovo.

Institutional Support to the Ministry of Energy and Mining (EUR 2.1 million under CARDS and EUR 1.0 million under IPA 2007)	Apr2005-May 2008	Institutional capacity Support to the MEM to: formulate an Energy Strategy; and to prepare secondary legislation; programme for energy efficiency and renewable; fulfilling Energy Community Treaty requirements.
KEK Incorporation (EUR 3 million, CARDS 2004)	2005	Incorporation of KEK and district heating companies, unbundling and full separation of transmission function
Feasibility studies and assessments (EUR 2 million, CARDS)	Jan 2007-Aug 2007	Feasibility study for lignite fired power plant in Kosovo and related transmission (in support of the LPTAP project funded by the World Bank); Assessment Study on Renewable Energy Resources; Options Analysis Study for investment in the new power plant and coal mine; and studies for pollution mitigation measures in the Kosovo B power plant.
Implementation of a multi-modal transport strategy (EUR 1 million CARDS 2006)	May 2007-March 2009	Developing a multi-modal transport strategy and action plans for roads infrastructure, road transport, and railways. Capacity building for the transport planning unit in MTC.
Reconstruction of bridges (EUR 8 million IPA 2007)	Dec 2008-2009	Renovation of five bridges in route 6 Pristina- Skopje between Kacanik/Kaçanik and Hani I Elezit (General Kanković/Blace border).

Other donors' projects supporting energy sector are:

- USAID provides support under the project 'Kosovo Economic Development Initiative' in the process of privatisation of public owned enterprises including KEK. This program includes support to MEM and the Project Steering Committee for developing a new power plant Kosovo C project (the name of the project has recently changed to 'new Kosovo project'). USAID is also providing management advisors in the power company KEK aiming at improving the performance of networks and supply, and on improving billing and collection. A task of this project is the preparation of the strategy for privatising the distribution and supply divisions of KEK.
- KfW is supporting KOSTT on improving the transmission infrastructure. In 2008 a grant agreement was signed for construction of a new transmission substation Peja 3 (400/110kV) and for construction of a 400kV transmission line to Albania. These projects will contribute to the security of supply in Kosovo and to the overall regional grid reliability. In addition KfW is an implementing partner of the EC funded horizontal programme for Energy Efficiency Finance Facility which includes Kosovo.
- The World Bank is providing technical assistance to the Ministry of Energy and Mining (Lignite Power Technical Assistance Project-LPTAP project), and to KOSTT. The project supports the development of new generation capacities in Kosovo. World Bank has supported the establishment of KOSTT (ESTAP III project), has designed the organisational scheme and has developed the technical codes. Under the LPTAP project the World Bank is supporting the preparation of the feasibility study for a new hydropower station HP Zhur in Kosovo (300MW), and on developing a strategy for investments in energy efficiency and renewable energy sources. The World Bank is active in transport by supplying traffic counters supporting the MTC on undertaking roads design auditing.

Donor	Projects	Start End
KfW	Construction of a new transmission substation Peja3. EUR 15.25 million (incl. EUR 4.75 million KCB co-funding).	Mid 2008-2009

	Refurbishment of a coal excavator for opening the new mine for existing power plants (EUR 8 million)	Oct 2008- Dec 2010
	Construction of a new 400kV interconnection line Kosovo-Albania (under a grant agreement EUR 12.5million)	2009-2010
	Regional fund for investments in energy efficiency and renewable energy sources (under EC funded Energy Efficiency Finance Facility)	2007-2011
USAID	Follow on Economic Development activity (under procurement)- includes support to MEM and ERO Network and Supply Project-KEK	Aug 2007- Aug 2009 Jan 2007- 2010
World Bank	Lignite Power Technical Assistance Project (LPTAP) \$8,5 million Support to transport sector	July 2007-July 2009 2007-2008

### 3.7 Lessons learned

- *Continuity and complementarity:* As the energy sector is highly capital-intensive it is vital that reforms are coupled with investments in the sector to ensure a greater impact in realising the objectives for the sector. It is also important to ensure that economic benefits are realised from a regional, as opposed to a purely national market perspective.
- *Coordination:* Close consultation among the many stakeholders in the energy sector and a collaborative approach are essential to ensure that all these stakeholders are fully informed, and support the reforms to be carried out.
- *Ownership:* the involvement of beneficiaries as counterparts in projects is crucial for ‘ownership’ of projects. This project helps Kosovo Institutions in implementing energy and transport reforms and builds further the capacity for the sustainable development and its integration in the Energy Community and Transport Community in SEE.

#### 4. Indicative Budget (amounts in EUR million)

			SOURCES OF FUNDING									
			TOTAL EXP.RE	IPA COMMUNITY CONTRIBUTION		NATIONAL CONTRIBUTION					PRIVATE CONTRIBUTION	
ACTIVITIES	IB (1)	INV (1)	EUR (a)=(b)+(c)+(d)	EUR (b)	%(2)	Total EUR (c)=(x)+(y)+(z)	% (2)	Central EUR (x)	Regional/ Local EUR (y)	IFIs EUR (z)	EUR (d)	% (2)
Activity 1			13.0	13.0	100							
contract 1.1		x	3.5	3.5	100	-						-
contract 1.2		x	6.5	6.5	100	-						-
contract 1.3		x	2.0	2.0	100	-						-
contract 1.4	x		1.0	1.0	100	-						-
Activity 2			2.0	2.0	100							
contract 2.1	x		2.0	2.0	100	-						-
.....												
TOTAL IB			3.0	3.0	100	-						-
TOTAL INV			12.0	12.0	100	-						-
<b>TOTAL PROJECT</b>			<b>15.0</b>	<b>15.0</b>	<b>100</b>							

**Note:**

Amounts net of VAT(1) In the Activity row "X" is used to identify whether IB or INV

(2) Expressed in % of the **Total** Expenditure (column (a))

## 5. Indicative Implementation Schedule (periods broken down per quarter)

Contracts	Start of Tendering (tender launch)	Signature of contract	Project Completion
<b>Activity 1</b>			
Contract 1.1 (Supply contract)	Q4 2009	Q2 2010	Q2 2013*
Contract 1.2 (Supply contract)	Q4 2009	Q2 2010	Q4 2013*
Contract 1.3 (Supply contract)	Q4 2009	Q2 2010	Q2 2012*
Contract 1.4 (Service contract)	Q4 2009	Q2 2010	Q4 2013
<b>Activity 2</b> Contract 2.1 (Service)	Q4 2009	Q2 2010	Q2 2012

\* including 12 months Defect Liability Period

## 6. Cross cutting issues

**6.1 Civil society** (including employers' organisations, trade unions, professional organisations as well as non-governmental organisations, etc)

The project will ensure involvement of the civil society in particular the railways trade union in the preparation of policies and programs for implementation of the multi-modal transport strategy. The social dimension mainstreaming and social dialogue will be part of the program for implementation of reforms in the transport sector.

### 6.2 Environmental considerations

Environmental impact assessment will be part of design phase for the actions included in Activity 1. Environmental action plans with measures to be undertaken by the implementing parties and beneficiaries will also be prepared for each project activity.

This project will promote mainstreaming environmental issues in the programs and projects that will implement the multi-modal transport strategy. Policies and regulations to be prepared under Activity 2 will include environmental considerations and will impose implementation of environmental remedy measures to be implemented by the beneficiaries.

Following the provisions of the Energy Community Treaty and forthcoming Transport Community Treaty the project will address all requirements related to acquis on environment and will build the institutional capacity for the implementation.

### 6.3 Equal opportunities and non discrimination of women, minority and vulnerable groups

The project will promote participation of women, minority and vulnerable groups in beneficiary organisations and will identify the effects/impacts/opportunities on and for them.

The project will aim at improving electricity supply which will provide benefits for all social categories. The project will also aim at improving transport services for all categories and in particular will address the needs of minorities and other vulnerable groups. Equal opportunity will be ensured in the management structures of the project and in project components in particular in the training component of activity 2. The gender



officers in the Ministries will be involved during the design of terms of references for the project activities.

The team of experts involved in the project must possess relevant skills to ensure effective mainstreaming of gender equality and minorities inclusion/participation.

**6.4 Good governance** will be fostered through the introduction of monitoring, evaluation and control mechanisms in the relevant beneficiary organisations for the implementation of programs and projects.

## **ANNEXES**

**Annex 1      Log frame**

**Annex 2      Amounts contracted and Disbursed per Quarter over the full duration of Programme**

**Annex 3      Description of Institutional Framework**

**Annex 4      Reference to laws, regulations and strategic documents:**

**Annex 5      Details per EU funded contract (\*) where applicable:**

## ANNEX 1: Logical framework matrix in standard format

<b>Project Title</b>		Programme name and number <b>Support to Transport and Energy</b>	
<b>Sector: Energy</b>		<b>Contracting period expires</b> three years after the date of conclusion of the Financing Agreement between the European Commission and the Kosovo Authorities	<b>Disbursement period expires</b> one year after the final date for the execution of contracts
		<b>Total budget:</b> EUR 15.0 million	<b>IPA budget:</b> EUR 15.0 million
<b>Overall objective</b>	<b>Objectively verifiable indicators</b>	<b>Sources of Verification</b>	
The overall objective is to foster economic development in Kosovo by integrating the energy and transport networks in the regional energy and transport markets in compliance with the Energy and Transport Community Treaties for SEE.	Requirements of the Energy Community Treaty and Transport Community Treaty are implemented Improved supply of electricity The construction of routes 6 and 7 and railway link 10 has progressed Increased traffic flows in and out of Kosovo Improved level of transport services for freight and passengers	Monitoring reports prepared by the Energy Community Secretariat (for the European Commission and Ministerial Council of the Energy Community). EC progress reports on Kosovo Governments report on implementation of EU Partnership/ Action Plan for Energy SOK statistics	
<b>Project purpose</b>	<b>Objectively verifiable indicators</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
The purpose of the project is to support Kosovo authorities in the implementation of energy and transport reforms and to improve the security of the electricity transmission system in line with the requirements of the energy and transport treaties.	KOSTT's compliance with UCTE criteria Compliance with adoptable provisions of EC Directive 2003/54/EC and Regulation 1228/2003/EC in providing the Third Party Access(TPA) Relevant actions in EPAP are implemented Compliance with license requirements for transmission system operator and market operator Legal and regulatory framework for transport modes are completed	Detailed monitoring reports on the Road Maps/ Actions Plans, prepared by the Energy Community Secretariat MESP reports on environmental improvements  SETSO reports and EnC Secretariat on the implementation of coordinated auctions and congestion management  SEETO reports on the implementation of transport policy reforms in SEE	There is commitment of the beneficiaries to implement road maps /acquis for energy and transport  Beneficiaries allocate sufficient resources to implement reforms  Government's commitment to ensure the independence of regulators
<b>Results:</b>	<b>Objectively verifiable indicators</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
<p><i>Results for Activity 1:</i></p> <p>a) Improved quality of supply (voltage profile) in the 110kV network</p> <p>b) Increased safety in operation at Substation Prizren/Prizren 2 and improved power supply</p> <p>c) Increased transparency of energy data for all market players</p> <p><i>Results for Activity 2:</i></p> <p>a) Legal and regulatory framework s improved in compliance with acquis</p> <p>b) Policies and programs for the implementation of multi-modal transport strategy are developed in compliance with Treaty provisions</p> <p>c) Infrastructure Manager (IM) and Train Operation are established and operational</p>	<p><i>Measurable indicators for Activity 1:</i></p> <p>15% increase of transformation capacity in Prizren 2 substation</p> <p>5-12% increase of voltage profile in 110kV nods.</p> <p>The UCTE security criteria (N-1 criteria) is fulfilled in Prizren 2 substation</p> <p>The value of energy losses and undelivered energy reduced by over EUR 2 million/year</p> <p>The number of faults during the operation is minimised</p> <p>Reliable power exchange with Albanian system</p> <p>Energy settlement process is performed on time and accurately</p> <p>Increased number of traders and trading statistics</p> <p>The number of auctions performed for allocation of interconnection capacities</p> <p><i>Measurable indicators for Activity 2:</i></p> <p>Regulatory procedures and rules are approved by the railway regulator</p> <p>SEETO action plans are implemented</p>	<p>KOSTT's reports on Voltage profile analysis</p> <p>KOSTT reports on electricity dispatch</p> <p>Regular monitoring reports produced by KOSTT departments for planning and development</p> <p>Progress reports of the Contractor and supervising engineer</p> <p>Regulatory license compliance monitoring reports</p> <p>Reports on the train operation</p> <p>Railways safety reports are approved by the regulator</p> <p>Environmental and social impact assessment reports</p>	<p>KOSTT implements other investments as per investment and development program</p> <p>KOSTT participates in the regional mechanisms</p> <p>Political support for the regulators on enforcing the regulatory framework</p> <p>Continues Inter-ministerial coordination to support the project implementation</p> <p>Kosovo Railways staff are motivated to learn and implement the regulatory requirements</p> <p>The Government accepts to implement the recommendations provided by the project implementers</p>

	<p>Programs and action plans for multi modal transport are completed and mainstream the environmental and social issues</p> <p>The regulator has issued the permit to railway infrastructure manager for maintenance and operation</p> <p>Number of licenses issued for train operation</p> <p>Network statement for train operation is developed and approved by the railway regulator</p> <p>Safety measures developed by IM are approved by the regulator</p>		
<b>Activities</b>	<b>Means</b>	<b>Costs</b>	<b>Assumptions</b>
<p><b>Activity 1 Support on upgrading power transmission system to meet the Energy Community technical standards</b></p> <p><b>Activity 2 Support in the implementation of Transport Community Treaty</b></p>	<p>Three supply contracts and one service contract</p> <p>One service contracts</p>	<p><b>EUR 13.0 million for Activity 1</b></p> <p><b>EUR 2.0 million for Activity 2</b></p>	<p>Beneficiaries allocate sufficient staff to the project activities</p> <p>KOSTT provides advice and information or the preparation of technical specifications for Act 1</p> <p>Railways company is committed to support the project activities</p> <p>Railways regulator is operational and functional</p> <p>The Transport Planning Unit (TPU) has the capacity to support the strategy and policy development in MTC</p> <p>Good Cooperation between project stakeholders and Consultant</p>

### Pre conditions:

- Government's commitment to finance the Metering Database in KOSTT EUR 2 million in 2009
- Government's commitment to finance the project for Humanitarian Transport EUR1.6 million in 2009
- Government's commitment to ensure professional members in the Board of KOSTT, Railways and Regulators
- Government's support to ensure financial and operational independence of regulators
- Government's commitment to further build the transport planning capacity and to attract professional staff in the Transport Planning Unit

**ANNEX 2: Indicative planning of the amounts (in EUR million) contracted and disbursed by quarter for the project (cumulated)**

	2010				2011				2012				2013			
<b>Contracted</b>	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Contract 1.1		3.5														
Contract 1.2		6.5														
Contract 1.3		2.0														
Contract 1.4		1.0														
Contract 2		2.0														
<b>Cumulated Total</b>		<b>15.0</b>														
<b>Disbursed</b>																
Contract 1.1			2.1								1.05				0.35	
Contract 1.2			3.9					1.95				0.65				
Contract 1.3			1.2				0.6				0.2					
Contract 1.4			0.2		0.2		0.2		0.2			0.1			0.1	
Contract 2			0.4		0.4		0.4		0.4		0.3	0.1				
<b>Cumulated Total</b>			<b>7.8</b>		<b>8.4</b>		<b>9.6</b>	<b>11.55</b>	<b>12.15</b>		<b>13.7</b>	<b>14.55</b>			<b>15</b>	

### **ANNEX 3: Description of Institutional Framework**

In the energy sector operates a power corporation KEK which is a joint stock company with four core functions: coal mining, power generation, distribution and supply. The power transmission function was unbundled in 2005 and an independent transmission system and market operator (KOSTT) was operationally established in July 2006.

Three laws were promulgated by UNMIK in June 2004, the Law on Energy, Law on Electricity and Law on Energy Regulator which established the Energy Regulatory Office (ERO). In Dec 2004 a new Ministry of Energy and Mines (MEM) was established responsible for developing strategies and policies for energy and mining sector development, whereas ERO develops the regulatory framework to enable the creation of a competitive and transparent energy market.

The Ministry of Transport and Communications (MTC) was established in 2001 and is responsible for developing strategies and policies for the transport sector (roads infrastructure, roads transport, railways, and civil aviation) and for post and telecommunications.

The transport sector is governed by the following laws: Law on roads, law on roads transport, law on traffic safety, law on railways and law on civil aviation.

The development and maintenance of the roads infrastructure is performed by the department of Roads in MTC. The MTC has started building the road infrastructure for regional routes 6 and 7 which connect Skopje-Prishtinë/Priština-Podgorica and Durres-Pristina/Priština-Nis. In 2008 the Government committed about EUR130 million for construction of core network and other local roads jointly with municipalities.

The policies and regulation of roads transport is also performed by the Ministry. The possibility of establishing a separate roads transport regulation agency is being considered.

The regulation of railways sector and civil aviation is under the responsibilities of the newly established independent regulatory agencies, whereas the strategy and policies for these sub-sectors are developed by the department of railways and civil aviation in the Ministry MTC.

The operational establishment of the railways regulatory authority is supported through technical assistance under IPA 2007.

As required by the Law on Railways the infrastructure manager and the train operation should be performed in two separate entities. The railways infrastructure is very old and requires big capital investments. The railways link from north (Leshak/Lješak) to south (Hani i Elezit/Đeneral Janković) in the border with FYROM is included in the core regional network. A feasibility study for reconstruction of this link will be funded under regional IPA through Investment Project Facility (IPF). The Railways Company participates in the regional Working Group on Railways which is coordinating the activities to implement the MOU on developing a regional railways transport area.

## **ANNEX 4: Reference to laws, regulations and strategic documents**

Reference list of relevant laws and regulations:

- Law on Energy, June 2004
- Law on Electricity, June 2004
- Law on Energy Regulator, June 2004
- Energy Community Treaty, 2005
- EC Directive 2003/54/EC and Regulation 1228/2003/EC in providing the Third Party Access
- KOSTT's grid code, technical standards for equipment, market rules, license for transmission system operation, license for market operation
- MOU on developing the core regional transport network
- SEETO multi-annual plan MAP 2008-2012
- Law on Spatial Planning (2003/4)
- Law on Environmental Protection (2003/9)
- Law on Road traffic safety
- Law on roads transport
- Law on railways

### **Reference to AP /NPAA / EP / SAA**

- European Partnership Action Plan (EPAP 2008)  
EPAP 2.1.3 Regional Issues and International Obligations  
EPAP 2.3.2 Sectoral Policies
- Union for Coordination of Transmission of Electricity (UCTE) Operation Handbook ([http://www.ucte.org/ohb/cur\\_status.asp](http://www.ucte.org/ohb/cur_status.asp))
- STM meeting conclusions on Energy and Transport Sector held in September 2008

### **Reference to MIPD**

The project links to MIDP 2009-2011 section 2.2.3.1 which emphasises the need for capacity building and Kosovo's gradual approximation of legislation, along with implementing measures, in the context of European standards

The project links to MIPD priorities and objectives identified for socio-economic requirement (MIPD 2.2.2.3) for improving good governance, institutional capacity building, and infrastructure development in the energy and transport area.

### **Reference to National Development Plan**

The strategic objectives for development of energy sector include the upgrade of power transmission network that will enable Transmission Network integration in the regional energy market.

The objective of MTEF 2009-2011 for energy sector is to support the implementation of Kosovo Energy Strategy by providing investments for upgrading the electricity transmission network in compliance with the international technical standards, to ensure reliability and security of supply.

The objective of MTEF 2009-2011 for transport sector aims at supporting the road and railway infrastructure upgrade and implementation of reforms in line with multi-annual planning of the SEETO (under the MOU for developing the core regional transport network).

### **Reference to national / sectoral investment plans**

The project links to the following sectoral strategies and plans:

- Kosovo Energy Strategy 2005-2015
- Energy Strategy Implementation programme 2006-2008
- Kosovo Transmission Network Investment and Development Programme 2007-2013
- Multi-modal transport strategy
- Action plans for roads infrastructure, roads transport, railways



## **ANNEX 5: Details per EU funded contract (\*) where applicable:**

### **Activity 1 Support on upgrading power transmission system to meet the Energy Community technical standards**

- **Action 1.1 (Supply contract)**

This action includes supply of a power transformer and its installation in a high voltage substation Prizren 2.

The technical specifications and tender dossier will be prepared under Support measure facility in 2009. The action 1.1 includes:

- 1) Design of the power transformer
- 2) Manufacturing and factory testing
- 3) Dismantling of the existing transformer
- 4) Supply and installation of the new transformer
- 5) Site acceptance testing and provisional acceptance
- 6) Final acceptance after the defect liability period

- **Action 1.2 (Supply Contract)**

This action includes replacement of high voltage equipments in Prizren/Prizren 2 transmission substation.

The technical specifications and tender dossier will be prepared under Support measure facility in 2009. The action includes:

- 1) Design of the high voltage equipment
- 2) Manufacturing and factory testing
- 3) Dismantling of the existing equipment in the switchyard and their transport to a location as per KOSTT's instruction
- 4) Supply, installation and connection/integration of the new equipment in the switchyard and control room
- 5) Site acceptance testing and provisional acceptance
- 6) Final acceptance after the defect liability period

- **Action 1.3 (Supply Contract)**

This action includes supply of IT system both hardware and software to support the implementation of market rules and the market operation. The action includes:

- 1) Conceptual and detailed design of IT system for hardware and software
- 2) Supply of IT equipment and software
- 3) Installation, integration and testing
- 4) Software training for operators
- 5) Final acceptance after defect liability period

- **Action 1.4 (Service Contract)**

Tasks in this action include:

- 1) Supervise activities under Action 1.1, 1.2 and 1.3 implemented by contractors
  - 2) Review and approve the design
  - 3) Check the quality of supplies, check test procedures and reports
  - 4) Check and approve invoice claims
  - 5) Supervise the site tests
  - 6) Provide assistance on handling fault/defect reporting during the DLP
- **Reference list of feasibility study** for the *constructing works* part of the contract as well as a section on investment criteria
    - Survey of the Present State of the Transmission Network and its Investment Requirements, EC funded study in 2006
    - Project impact on Kosovo transmission network, KOSTT 2008
    - Transmission Network Investment and Development Programme 2007-2012
    - Project justification based on system planning analysis done by KOSTT in 2008
  - **Investment criteria** (applicable to all infrastructure contracts and constructing works):

**Rate of return**

Action 1.1

The following analysis derives from the KOSTT computer simulations (PSS/E) of demand in 2008 and losses incurred due to lack of transformation capacity.

Reduction of energy losses are calculated to be around 4,800MWh at a price of EUR 30/1MWh which in total is EUR 144,000.

The total amount of energy undelivered to costumers because of bottle necks in transformation capacity is 2,100MWh. This energy is calculated at EUR 400/1MWh which is the lowest price in the region so the total value of undelivered energy is estimated at EUR 840,000/year.

In total the financial loss for KOSTT is EUR 984,000 million/year caused due to insufficient transformation capacity at Prizreni/Prizren 2 substation. If we consider the demand grow in the next future period, the cost benefit will be higher. Subsequently the project for supply, installation and commissioning of the new transformer estimated at EUR 3.5 million will be paid back in less than 3 years.

Action 1.2

Based on the system planning analysis conducted by KOSTT specialists the total losses that the transmission system faces due to unreliable operation of primary high voltage equipment in Prizren2 substation include: the undelivered energy to KOSTT costumers in case of failure in the operation of a 110kV or 220kV transmission lines, unplanned need for emergency power import in case of a failure in Prizren2 substation, the operation maintenance cost which is higher for the old equipment. In total this cost is calculated at approximately EUR 1 million/year, which means that the payback period of the investment can be estimated to be around 5 years. But if the failures of the high voltage equipment in the substation are more frequent (which is likely due to the age of equipment and maintenance backlog from 90s) then the total losses exceed EUR 1 million/year.

- **Co financing:** The Kosovo Consolidated Budget (KCB) or KOSTT shall allocate EUR 2 million for implementation of the project 'Metering Database' in KOSTT. In

addition under KCB a budget of EUR 1.6 million shall be allocated for the Humanitarian transport project.

- **Ownership of assets** (current and after project completion)  
The owner of assets is KOSTT, the Kosovo Transmission System and Market Operator.

## **Activity 2 Support in the implementation of Transport Community Treaty (Service Contract)**

Tasks included in Activity 2 are:

- 1) Review and amendment of existing legislation and develop new legislation and regulations in line with acquis
- 2) Develop/enhance policies and programs to implement the multi-modal transport strategy in line with regional developments (SEETO action plans) and Kosovo legislation and development strategies
- 3) Build the capacity for preparing concessions for infrastructure investment projects
- 4) Support the railways regulator on strengthening the railways regulatory framework and build the capacity for implementing it
- 5) Provide technical assistance to railways infrastructure manager on obtaining permission, obtaining safety certificate and meeting other regulatory requirements
- 6) Provide assistance to the train operations entity on obtaining license, develop market rules and network statement for train operators, and on meeting regulatory requirements.
- 7) Provide training to improve the technical staff skills on train operation and infrastructure safety, development and maintenance
- 8) Provide assistance to institutions in preparing reports and position papers as may be required by the Transport Community Treaty