

Standard Summary Project Fiche – IPA decentralised National programmes

1. Basic information

1.1 CRIS Number: TR2009/0315.01

1.2 Title: Structure and Capacity Improvement of Turkish Electricity Transmission Corporation (TEIAS)

1.3 ELARG Statistical code: 03.15 Energy

1.4 Location: Turkey

Implementing arrangements:

1.5 Implementing Agency:

The Implementing Agency for the project will be the Central Finance and Contracting Unit (CFCU).

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1.6 Beneficiary (including details of SPO):

The Beneficiary of the project is Turkish Electricity Transmission Corporation (TEIAS). Details of the SPO (Senior Programming Officer) of the Project are given below.

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Financing:

1.7 Overall cost (VAT excluded)¹: 2,005,500. - EURO

1.8 EU contribution: 1,804,950. - EURO

1.9 Final date for contracting: 2 years after the signature of the Financing Agreement

1.10 Final date for execution of contracts: 2 years after the last date of the contracting deadline

1.11 Final date for disbursements: 1 year after the end date for the execution of contracts.

2. Overall Objective and Project Purpose

2.1 Overall Objective:

To fully integrate the Turkish Electricity Market into the EU Internal Electricity Market.

2.2 Project purpose:

To improve the institutional structure and capacity of Turkish Electricity Transmission Corporation (TEIAS), by expanding its technical capacity to perform live working and to develop work safety and training activities and restructuring its organization by improving human resources policies and its IT structure.

2.3 Link with AP/NPAA / EP/ SAA

AP

- In the 2008 Accession Partnership Document (2008/157/EC), it is stated;
“3. PRIORITIES

3.1. Short Term Priorities:

Ability to assume the obligations of membership

Chapter 15: Energy

Continue alignment with, and implementation of, the acquis on the internal gas and electricity market and on cross-border exchanges in electricity, also with a view to possible membership of the Energy Community Treaty...”

NPAA

- In the 2008 NPAA, in the field of energy (Chapter 15), it is stated that alignment with and implementation of the acquis on the internal gas and electricity market and on cross-border exchanges in electricity, with a view to possible membership of the Energy Community Treaty will be continued.” (Priority 15.1)

Moreover in the 2008 NPAA, it is stated under Priority 15.4, that the administrative and regulatory structures needed for a functional and competitive energy market will be further strengthened and their independence will be ensured.

¹ The total cost of the project should be net of VAT and/or other taxes. Should this not be the case, the amount of VAT and the reasons why it should be considered eligible should be clearly indicated (see Section 7.6)

2.4 Link with MIPD:

In the Multi-annual Indicative Planning Document 2008-2010 for Turkey, it is implied under “Component I - Transition Assistance and Institution Building” title and “Objectives and Choices” subheading that, in addition to the priorities, Institution Building support may also be provided in some other areas of the acquis, and Energy (independence of regulatory authorities, third party access, cross border trade, promotion of energy efficiency and renewable, radioactive waste management) is listed among those areas.(page 19, paragraph 5)

2.5 Link with National Development Plan

It is stated in The Ninth Development Plan 2007-2013, which was approved by Turkish Grand National Assembly on 28 June 2006 with Law No: 877 that the necessary investments in the electricity transmission system will be carried out in a way to protect the security and reliability of the electricity system (paragraph 409).

With the improvement of the institutional structure and capacity of Turkish Electricity Transmission Corporation, the electricity system of Turkey will be more reliable and security of supply could be maximized, and moreover this would help the continuous electricity trade between Turkey and EU counterparts, especially taking into consideration the EU priority projects and the UCTE projects.

2.6 Link with national/sectoral investment plans

Not Applicable

3. Description of project

3.1 Background and justification:

In order to harmonize with EU legislation and diversify the electricity market’s structure, Turkish Government enacted the Turkish Electricity Market Law on 3 March 2001 (Law No. 4628). The Law concentrates mainly on defining the sector’s new structure and the status of the power sector actors, including restructuring and unbundling of utilities.

With the above mentioned Law, Turkish Electricity Transmission Corporation (TEIAS) was constituted on 1 October 2001, and as a state owned transmission company serving as the transmission system operator and the market operator with holding the ownership of all transmission assets, TEIAS became responsible in all state owned transmission facilities for: Preparing and executing the transmission investment plans; Operating, repairing and maintaining the national transmission system; Providing transmission services on a non-discriminatory basis; Guaranteeing system access rights; Preparing generation capacity adequacy forecasts; Operating the wholesale electricity market; Managing the procurement of ancillary services; Preparing the use of system tariffs; Carrying out the international interconnection studies; Drafting secondary and tertiary legislation related to its responsibility areas.

The restructuring process of TEIAS to ensure its adaptation to the continuously reforming market conditions is still ongoing. TEIAS, as the transmission system operator and market operator, is the backbone of the electricity market and has the main responsibility of providing services for a well functioning and uninterrupted transmission system in which an available infrastructure is established and dynamically upgraded and operation, maintenance and reparation services are provided in accordance with the instructions which are prepared by itself.

In addition, the interconnection of the Turkish power system with Union for Co-ordination of Transmission of Electricity (UCTE) power system is one of the main goals of Turkey since 1975. After the application of Greece Public Power Company (PPC), on behalf of former Turkish Electricity Generation and Transmission Corporation, TEAS (then TEIAS) to UCTE for membership and interconnection on March 21st, 2000, the UCTE Steering Committee took a decision on April 26th, 2000 to consider and evaluate all possibilities for the synchronous interconnection of the Turkish power system to the UCTE power system. Within this context, for the purpose of determining the technical conditions under which Turkish power system may be synchronized with the UCTE power system, a project titled “Complementary Technical Studies for the Synchronization of the Turkish power system with the UCTE power system” has been adopted and financially supported by the European Union throughout the Pre-Accession Financial Programme 2003, and this project is completed with success in 2007.

The above mentioned complementary technical studies have constituted the first phase of the integration process with UCTE power system by indicating the requirements for the establishment of adequate technical infrastructure in Turkish power system. In parallel to the determination of the technical conditions for the synchronized interconnection, improvement of the frequency control performance of the Turkish power system to the level required by the UCTE, was also necessary and constitutes the second phase for the commencement of synchronized parallel operation of the Turkish power system with the UCTE power system. Therefore, the project titled “Rehabilitation of the frequency control performance of Turkish Power System for Synchronous Operation with UCTE” has been adopted and offered within the 2007 Pre-Accession Financial Programme and the studies of this project are underway.

Furthermore, TEIAS, being the sole transmission system and market operator, has undertaken various studies for upgrading its operation and maintenance performance as per the EU Directives and the UCTE requirements. In this context, it has been decided to amend the Electricity Market Law to allow cross-border trading and investing. For this purpose, TEIAS proposed the project titled “The Improvement of the Conditions for the Functioning of Cross Border Electricity Trade in Turkey in Compliance with the Best Practice in EU” under 2006 Pre-Accession Financial Programming and the proposal was accepted. The project is being implemented presently under a Twinning Contract with the French counterpart RTE (Réseau de Transport d'Electricité).

Within the framework of the a/m Twinning Project, the operation and maintenance performance of TEIAS is being improved and necessary equipment are being identified and new provisions (as the rights for the eligible customers to choose their suppliers from outside of Turkey) to the existing Turkish electricity market legislation and the market operation and management structure are trying to be identified in order to include them for cross border trade of electricity as part of a regional electricity market.

In this context, TEIAS intends to improve its operation and maintenance capacity to perform especially live working, work safety and training facilities which constitute a serious part of the live working system as well as its organizational structure via adding new services, reviewing its human resources policies and rules and expanding its IT structure to keep up with the challenge of the new market developments, by giving

special consideration to the ongoing liberalization process in Turkish electricity market and its integration into the European internal electricity market.

Economic realities today, are forcing electricity system operators to ensure that transmission facilities remain in service each day of the year. Great care is attached to this issue as an uninterrupted functioning of transmission systems is targeted for both Turkish and European electricity markets. For this purpose, electricity system operators are increasingly turning to implement Live Working (LW) system. LW system enables the transmission system operators to keep the transmission facilities in service while works or maintenance tasks performed on the live system which is energized. Furthermore, LW system not only increases the reliability and availability of the transmission system, but also reduces the operation and maintenance costs of the operators.

However, it must be taken into consideration that LW is a very serious, difficult and hazardous activity. In other words, LW can be an economically advantageous implementation but it is also extremely hazardous, failure in this work may result serious injuries or even fatalities. Thus, proper precautions must be taken and those precautions must be strictly followed to ensure workers' safety and rigid adherence to protocols of LW is essential. It is obvious that, implementation of a hazardous system as LW must be performed in a very methodical manner with highly trained workers in a carefully planned and controlled environment. Additionally, it must be noted that, in case of healthy implementation of the LW system, it ensures safety of utility workers.

Live Working system can be implemented on the electricity systems which have the adequate design characteristics for this purpose. TEIAS does not have any experience in live working on the transmission system and respective equipment and documentation concerning LW. However, activities performed on LW issue within the scope of Twinning Project stated that Turkish electricity transmission system does have adequate design characteristics for performing Live Working activities on its system. The detailed studies and the required investments related to implementation of the LW system are planned to be conducted within this new project.

Methods of implementing LW must enable safe work at high transmission voltages. This means the establishment and implementation of LW system requires tight and very comprehensive training of relevant TEIAS personnel. Training of the teams, which will implement LW, is vital to promoting safety. Furthermore, to implement LW system on TEIAS network, relevant Turkish electricity legislation needs to be amended.

Comprehensive management systems to control all aspects of LW are required, including tool management and training of staff. Due to the hazardous structure of LW implementation, training capacity of the implementing utility of LW must be at a higher degree. Thus, upon establishing LW system to the TEIAS network, TEIAS also requires a new work safety and training policy in order to adapt new parameters of work safety and training rules at LW system. This will also include revising of the existing work safety and training policy. As a result, TEIAS will improve standards, know-how and skills of its organizational structure on the works safety and training issue in a global view within the corporation.

And it must be added that, TEIAS would like to implement this project in the light of the EU best practice patterns, not only for LW related activities, but also especially for HR and IT applications. It is vital to ensure work safety and improve training policies regarding LW system at implementing stage. However, developing policies on human resources (HR) is also important in order to evolve safe LW practices and standards, to cope with new configurations, to develop equipment and rules about LW.

With this respect, TEIAS will revise and improve its HR policies not only to ensure the satisfactory and efficient operation of the LW system, but also in the concept of improving its institutional capacity. By this project, TEIAS will undertake comparative studies about HR policies of both the EU Countries' electricity transmission companies and similar Turkish autonomous institutions or enterprises. TEIAS, by this project will determine and evaluate its workforce and undertake studies on the issues as personnel rights, career management and etc.

TEIAS will also consider the renovation of its organizational body within the context of the additional requirements resulting from this project and the new liberalization trends, which will result with expanding and developing the IT applications of TEIAS and establishing new units within TEIAS.

IT Department of TEIAS will be reorganized and improved on the basis of the requirements of its new organizational structure. Field of application of the IT works within TEIAS will be extended, concerning new applications of LW system and new organizational structure. And taking into consideration the evolution of the electricity market in the EU, software and hardware applications in the other European electricity transmission system operators will be taken into consideration and TEIAS's IT policies and applications will be revised in a compatible way so Turkish electricity system will be in synchronization with the European electricity system.

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

This project will provide a fresh impetus for the improvement of TEIAS's institutional structure and capacity. This would directly and positively effect the establishment of a competitive internal energy market, in compliance with the electricity directives. Furthermore, such integration will contribute to establishing a well functioning electricity transmission system and electricity market operation and management structure in Turkey. Therefore, during the implementation of the above mentioned projects it has become evident that TEIAS needs to improve its institutional structure and capacity.

Through the training activities of the project, a pool of well-informed, knowledgeable and experienced national staff and energy sector experts who can carry on future training activities on Live Working issues will be developed.

The connection of Turkish power system to the UCTE network, which is still underway, will ensure the integration of Turkish power system at first to the Southeast Europe Electricity market and then to the EU internal electricity market as it was also envisaged by the MoU on Regional Energy Market in Southeast Europe and its Integration into the European Internal Energy Market which was signed on November 15, 2004. Such integration will create the proper conditions for cross border electricity

trade and have impacts not only on the local electricity market but also on the entire EU internal electricity market. Furthermore, such integration will force the establishment of a well functioning electricity transmission system and electricity market operation and management structure in Turkey.

3.3 Results and measurable indicators:

Results	Measurable Indicators
<p>1- Live Working operations are started to be implemented at TEIAS network.</p>	<ul style="list-style-type: none"> • A test laboratory for LW works, for controlling and testing the tools used at Live Working activities, is founded within the project duration. • Tools required for Live Working operations are purchased. <p>(The requirements in order to found a laboratory and tools used for LW operations will be defined by the project activities, but the investments required will be met by TEIAS, not from the project budget)</p> <ul style="list-style-type: none"> • Two different LW teams, consisting of minimum 5 people for each team, (one team for operating on Overheadline, one team for operating on Substations) are constituted for operating LW activities at the end of the project.
<p>2- Work safety and training policies, the training program, the maintenance program for TEIAS are improved and the new work safety regulation for TEIAS is adopted.</p>	<ul style="list-style-type: none"> • TEIAS's Work Safety regulation is harmonized with the relevant EU standards within the project schedule. • New training policy, new training program and new training methodologies are imposed at the end of the project. • TEIAS personnel are started to be trained upon to the new training program. • Certificates given to the trainees, trained up to the new training programme.
<p>3- TEIAS's Personnel Status and Human Resources Policies and Rules are improved and a draft regulation concerning Human Resources of TEIAS</p>	<ul style="list-style-type: none"> • New personnel policy for TEIAS is adopted at the end of the project. • A draft Human Resources regulation is proposed to the related parties. (Energy

<p>is prepared.</p> <p>4- IT structure is improved and TEIAS's organizational structure is renewed.</p>	<p>Market Regulatory Agency-EMRA)</p> <ul style="list-style-type: none"> • Board decision is given for constituting new departments such as Customer Relations department at the end of the project • New policy and organization of IT department of TEIAS.
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3.4 Activities:

Activity 1: Establishment and Implementation of the Live Working (LW) System:

- 1.1 The kinds of Live Working operations that can be performed on TEIAS network will be determined.
- 1.2 Live Working tools will be determined and these tools will be purchased with their technical fiches (The required tools will be determined within the project but they will be purchased by TEIAS, not from the project budget).
- 1.3 Project Partner's Live Working operators' team on the work will be observed.
- 1.4 Legal and regulation documentation concerning the Live Working will be elaborated.
- 1.5 Assistance for setting up legal and regulation Unit/s within TEIAS, necessary to monitor the live working activity in Turkey
- 1.6 Training of operators' team and managers.
- 1.7 A test laboratory for Live Working tools will be set up and personnel will be trained to operate it (The required tools will be determined within the project but they will be purchased by TEIAS, not from the project budget).
- 1.8 An audit for the TEIAS LW team after a certain period (prob. 6 months) of the implementation of LW activity will be performed.

Activity 2: Development of Work Safety and Training Performance:

- 2.1 Risk evaluation methods regarding electricity transmission operation and maintenance activities will be identified.
- 2.2 Work safety techniques, material and training regarding electricity transmission lines and substations will be investigated.
- 2.3 Standards regarding work safety personnel and material and personal protective safety material used by electricity transmission operation and maintenance personnel will be improved and know-how and skills regarding periodical maintenance and controls will be improved.
- 2.4 Work safety training scope, attributes, program content and application modalities will be identified.
- 2.5 The training policies, the training program, the maintenance program, the training of trainer, the courses of training are going to be improved.
- 2.6 Fundamentals regarding communication with partners and prepared sheets about maneuvers in transmission operation and maintenance works will be identified.
- 2.7 TEIAS Work Safety regulation will be improved in accordance with directives and

regulations of the European Union.

Activity 3: Development of the Human Resources Policies and Rules:

3.1 Human Resources Policies and Rules of the Project Partner's Country's electricity transmission company will be investigated.

3.2 TEIAS Human Resources policies will be revised.

3.3 Personnel Status of TEIAS will be revised.

Activity 4: Renovation of TEIAS Organizational Structure:

4.1 Current structure of TEIAS will be identified.

4.2 New services to be added to TEIAS organizational structure will be determined.

4.3 IT structure of TEIAS will be improved in accordance with new organizational structure.

Number of study tours foreseen during the implementation of the above activities. Number of study tours, participants and the duration will be determined during the tendering phase. However the maximum budget allocated to the study tours can not exceed 140.000 Euros.

3.5 Conditionality and sequencing:

A test laboratory for Live Working tools will be set up, materials to be used at LW activities will be defined and purchased and personnel to operate these materials will be trained in the concept of the project related with the LW activity. This test laboratory will contain materials for testing and controlling tools, which will be used at LW activities. Tools to be used at Live Working activities and materials required for test laboratory will be determined within the project activities and these tools will be purchased with their technical fiches. The tools required for setting up this Laboratory and tools will be used at LW activities will be defined by the tasks performed within "Activity 1". (mainly 1.1 and 1.2). And it must be noted that, the tools and materials required to set up this Laboratory will be purchased by TEIAS. After the approval of this project, TEIAS will allocate a specific fixed budget from its 2010 investment programme for this project. Both physical and financial resources of TEIAS are adequate for setting up this laboratory.

3.6 Linked activities

There are a number of linked activities supported by the European Commission and the World Bank which are completed, planned or underway:

3.6.1 EU Activities

3.6.1.1 Completed Projects

The projects listed below were performed with the support of EU to some extent and are already completed.

- Feasibility And Evaluation Study of the Electricity Interconnection Greece–Turkey

In parallel with official application by Greece to UCTE (21st March 2000), the feasibility study on Greece-Turkey interconnection has been started for the parallel operation of Turkish power system with UCTE network via Balkan Pool, title purpose of as the Project of "Feasibility and Evaluation Study of the Electricity Interconnection Greece-Turkey".

The Objective of the Project was,

- To examine the economic and technical feasibility of a 400kV interconnection line between Greece and Turkey for parallel and synchronous operation of Turkish power system with the interconnected South-Eastern European electric power systems and then with UCTE after reconnection of 1st and 2nd Zone of UCTE,
 - To identify system configuration enabling the secure, stable and reliable exchange of bulk amounts and necessary reinforcements.
- “Complementary Technical Studies for the Synchronization of the Turkish Power System with the UCTE Power System” (TR 0303.03)

The project purpose was to determine the technical conditions under which the Turkish power system may be synchronized with the UCTE power system. The Project was supported within the 2003 Pre-Accession Financial Cooperation Programme between Turkey and the EU and had a budget of 1.500.000 €. This project has been finalized with success in 2007.

3.6.1.2 Projects in Progress

The projects listed below are being performed with the support of EU to some extent and are still in progress:

- Euro Mediterranean regional project “Euro Mediterranean Energy Forum - Support to the Ad Hoc Groups”

The project was financed through the MEDA Programme; for supporting the three Ad Hoc groups, namely Energy policy, Economic Analysis and Interconnections, which were created according to the action plan of the Euro Mediterranean Energy Forum, to achieve their objectives.

- Euro Mediterranean regional project “MEDRING”

The project aimed at the technical and economic assessment of the interconnection of the electricity transmission networks of the Mediterranean countries, and was financed through MEDA Programme.

- Southeast Europe Electricity Regulatory Forum (SEERF) Initiative of EU

The project objective is the creation of a regional electricity market in the South Eastern Europe by the year 2005 and its further integration to the Internal Electricity Market (IEM) of the EU. Turkey participates as a member state in the Southeast Electricity Regulatory Forum (SEERF) and signed the Memorandum of Understanding on 15 November 2002. The project is sponsored by EC and Stability Pact and is supported by UCTE, CEER and ETSO.

- Improvement of the Conditions for Cross Border Electricity Trade in Turkey in Compliance with the Best Practice in EU

The Project is a Twinning Project with 18 months duration is being adopted and financially supported by EU within the 2006 Pre-Accession Financial Cooperation Programme between Turkey and the EU. The purpose of the Project is to improve the conditions for the functioning of cross-border electricity trade in Turkey by removing technical, administrative and legislative obstacles. The Project consists of two tasks:

- “Improvement of the Operation and Maintenance Performance of Turkish Transmission System”. The purpose of this task is improving the technical performance of the Turkish transmission system regarding the existing infrastructure, operation and maintenance capabilities.
- “Development and/or Improvement of Legislative Framework and Administrative Capacity in Turkish Electricity Market Regarding the Cross

Border Electricity Trade”. This task’s purpose is making new arrangements on the existing Turkish electricity market legislation, market operation and management structure to reach an appropriate level of services to be ensured for the whole regional market participants regarding the cross border electricity trade.

- Rehabilitation of the frequency control performance of Turkish Power System for Synchronous Operation with UCTE

This project is a Direct Contract project implemented with UCTE. It was proposed by TEIAS in the context of the 2007 Pre Accession Financial Programme. Within this project, Turkish Power System is being prepared for future parallel operation with UCTE regarding power and frequency control, steady state and transient stability. This project is accepted and preliminary studies have been started.

3.6.2 World Bank Activities

The projects listed below are being performed with the support of World Bank:

- National Transmission Grid Project

The Project, which started in 2002 and is finalized in 2008, is financed from an IBRD loan of USD 230 million. It covers the restructuring of the sector and also the construction of transmission facilities; including the Turkish part of the 400kV Turkey-Greece interconnection line.

3.6.3 Internal Activities

The following projects were carried out by TEIAS in collaboration with TUBITAK-BILTEN (The Scientific and Technical Research Council of Turkey – Information Technologies and Electronics Research Institute):

- System Studies for interconnection of Turkish Electric System to The Balkan Countries and UCTE; completed.
- Study of Situation Determining for Primary Frequency Control and System Frequency Performance Tests, in 2002.
- Primary Frequency Control Performance Tests and the Statistical Analysis of Line Frequency, in 2003.

The TUBITAK-BILTEN project revealed that the frequency control performance of Turkish power system can be improved to the level required by UCTE through the realization of a more detailed and comprehensive study involving the optimization of the system as a whole and dynamic performance analysis for each unit of the selected power plants that will participate in frequency control operation.

3.7 Lessons learned

As Turkey was obliged in the accession process to EU to align her national legislation with relevant EU legislation and facilitate the establishment of well functioning regional energy market through well functioning transmission systems operating in compliance with UCTE rules and regulations, the studies on the synchronization of Turkish power system with UCTE power system were accelerated.

In this respect, as a preliminary step, the static and stability studies were commenced to ensure the determination of power exchange capacity and identification of the technical risks and counter-measures which carry critical importance to define the technical

conditions under which the Turkish power system may be synchronized. As mentioned above, the projects carried out by TEIAS indicated that the frequency control performance of Turkish power system can be improved to the level required by UCTE with the help of a more detailed and comprehensive study.

Therefore following the commencement of the process for the establishment of adequate technical infrastructure, studies were also necessary to improve the quality of the frequency control performance and eliminate possible negative impacts on the new interconnection. These two projects constitute two substantial pillars to enable Turkey to be safely interconnected to the UCTE system and an essential step on the way of achieving the full integration of the Turkish energy market into EU internal energy market. In this respect, in order to ensure a well functioning of both national and regional power systems, the project aiming to improve the operation and maintenance performance of the Turkish transmission system was envisaged. Besides, in order to benefit from the synchronous interconnection, the electricity market legislation is being modified to include necessary reference to cross border electricity trade.

Taking into consideration the projects, implemented or being implemented, concerning the synchronization of Turkish Power System with the UCTE power system, it is evaluated that TEIAS has to intensify its own vision on the Market and System Operation activities. These “business views” are necessary to design a structural body that could cope with the business expectation and also to realize the recommendations for a successful operation of the Turkish electricity market.

Within the activities of the Twinning Project, namely “Improvement of the Conditions for Cross Border Electricity Trade in Turkey in Compliance with the Best Practice in EU”, TEIAS’s experts have observed live working activities carried out by RTE and the company’s LW policies. Noting the similarity of system voltages, the working group evaluated that it is advisable to implement LW system in Turkey, like many European countries and North America. If this technology and training is received, LW system can be carried out on TEIAS system (substations and transmission lines). Even though TEIAS network (substations and transmission lines) existing structure of the transmission system is suitable and the legal infrastructure can be improved to be able to implement LW system in Turkey within the project duration.

This project is composed in order to be implemented by a Technical Assistance contract; because in Twinning Contracts only the participation of TEIAS’s Counterparts from the Member States are permitted, thereby participation of large number of electricity sector actors to the tendering process of this project can be obtained by a Technical Assistance contract. And this opportunity will help TEIAS to choose from a variety of offers.

4. Indicative Budget (amounts in EUR)

			SOURCES OF FUNDING										
			TOTAL EXP.RE	TOTAL PUBLIC EXP.RE	IPA COMMUNITY CONTRIBUTION		NATIONAL PUBLIC CONTRIBUTION					PRIVATE CONTRIBUTION	
ACTIVITIES	IB (1)	INV (1)	EUR (a)=(b)+(e)	EUR (b)=(c)+(d)	EUR (c)	% (2)	Total EUR (d)=(x)+(y)+(z)	% (2)	Central EUR (x)	Regional/Local EUR (y)	IFIs EUR (z)	EUR (e)	% (3)
Activity 1													
Service Contract 1.1	X	-	2,005,500	2,005,500	1,804,950	90	200,550	10					-
TOTAL IB			2,005,500	2,005,500	1,804,950	90	200,550	10					
TOTAL INV													
TOTAL PROJECT			2,005,500	2,005,500	1,804,950		200,550						

NOTE: DO NOT MIX IB AND INV IN THE SAME ACTIVITY ROW. USE SEPARATE ROW

Amounts net of VAT

(1) In the Activity row use "X" to identify whether IB or INV

(2) Expressed in % of the **Public** Expenditure (column (b))

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

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

Contracts	Start of Tendering	Signature of contract	Project Completion
Service Contract 1.1	2 nd quarter of 2010	1 st quarter of 2011	1 st quarter of 2013

Duration of the project is 24 months.

All projects should in principle be ready for tendering in the 1ST Quarter following the signature of the FA

6. Cross cutting issues

6.1 Equal Opportunity

Equal opportunity principles and practices in ensuring equitable gender participation in the project will be guaranteed. Male and female participation in the project will be based on the relevant standards of the EU. The main criteria for staff recruitment will be appropriate qualifications and experience in similar projects, not sex or age. Both men and women will have equal opportunities and salaries.

6.2 Environment

Not applicable

6.3 Minorities

According to the Turkish Constitutional System, the word “minorities” encompasses only groups of persons defined and recognized as such on the basis of multilateral or bilateral instruments to which Turkey is a party. This project has no negative impact on minority and vulnerable groups

6.4 Civil Society

Not Applicable

ANNEX 1: Logical framework matrix in standard format			Programme name and number:	“Structure and Capacity Improvement of Turkish Electricity Transmission Corporation (TEIAS)”
LOGFRAME PLANNING MATRIX			Contracting period expires: 2 years after the signature of the Financing Agreement	Disbursement period expires: 1 year after the end date for the execution of contracts.
<i>Project Number</i>			Total Budget: €2,005,500	EU contribution: €1,804,950
Overall objective	Objectively Verifiable Indicators	Sources of Verification		
The overall objective is to fully integrate the Turkish Electricity Market to the EU Internal Electricity Market.	<ul style="list-style-type: none"> Commercial and physical electricity exchanges take place between Turkey and EU Member States 	<ul style="list-style-type: none"> Progress Monitoring Reports prepared concerning Turkey Regular Reports prepared concerning Turkey 		
Project purpose	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks	
To improve the institutional structure and capacity of Turkish Electricity Transmission Corporation (TEIAS), by expanding its technical capacity to perform live working and to develop work safety and training activities and restructuring its organization by	<ul style="list-style-type: none"> %5 decline in the number of the failures in the TEIAS network in 2012, compared to baseline year 2009. %5 decline in the number of the job accidents occurred at TEIAS, between years 2009 and 2012. %5 decline in the number of the 	<ul style="list-style-type: none"> Annual reports of EMRA Annual reports of TEIAS Failure reports of TEIAS 		

improving human resources policies and its IT structure	accidents that take place on TEIAS's physical infrastructure in 2012, compared to baseline year 2009.		
Results	Objectively Verifiable Indicators	Sources of Verification	Assumptions
<p>1- Live Working operations are started to be implemented at TEIAS network.</p> <p>2- Work safety and training policies, the training program, and the maintenance program for TEIAS are improved and the new work safety regulation for TEIAS is</p>	<ul style="list-style-type: none"> • A test laboratory for LW works, for controlling and testing the tools used at Live Working activities, is founded within the project duration. • Tools required for Live Working operations are purchased within the project duration. <p>(The requirements in order to found a laboratory and tools used for LW operations will be defined with the project activities, but the investments required will be met by TEIAS, not from the project budget)</p> <ul style="list-style-type: none"> • Two different LW teams, consisting of minimum 5 people for each team, (one team for operating on Overheadline, one team for operating on Substations) are constituted for operating LW activities at the end of the project. <ul style="list-style-type: none"> • TEIAS's Work Safety regulation is harmonized with the EU directives at the end of the project. • TEIAS has adopted the new training policy and published a new training 	<ul style="list-style-type: none"> • Progress reports of the project. • Annual reports of EMRA • Annual Reports of TEIAS • Regular reports submitted by TEIAS within the project duration • Training Certificates <ul style="list-style-type: none"> • Annual Reports of TEIAS • Failure reports of TEIAS • Progress reports • Training Certificates • Renewed training documents 	<ul style="list-style-type: none"> • The necessary Live Working-related arrangements are done in the Turkish Legislation • Live Working preparation is finalized in Heavy Current Installations • The willingness of the trainees who attended the new training program

<p>adopted.</p> <p>3- TEIAS's Personnel Status and Human Resources Policies and Rules are improved and a draft regulation concerning Human Resources of TEIAS is prepared.</p> <p>4- TEIAS's organizational structure is renewed and IT structure is improved.</p>	<p>programme at the end of the project.</p> <ul style="list-style-type: none"> • Training methodologies of TEIAS are revised and trainees are trained upon to the new training program • New personnel policy for TEIAS is adopted at the end of the project. • A draft Human Resources regulation is proposed to the related parties. (Energy Market Regulatory Agency-EMRA) • Board decision is given for constituting new departments such as Customer Relations department at the end of the project • New policy and organization of IT department of TEIAS. 	<p>of TEIAS</p> <ul style="list-style-type: none"> • Annual Reports of TEIAS • Organizational chart of TEIAS • Annual Reports of TEIAS • Organizational chart of TEIAS 	
Activities	Means		Assumptions
<p>1. Establishment and Implementation of the Live Working (LW) System</p> <p>1.1 Determination of the kinds of Live Working operations that can be performed on TEIAS network</p> <p>1.2 Determination and Purchasing of Live Working tools with their technical fiches (The required tools will be</p>	<ul style="list-style-type: none"> • Service Contract (Technical Assistance) 	<p>€2,005,500</p>	<p>Risk: If purchase of the necessary tools by the beneficiary can not be realized on time, than the training activities foreseen under activity 1.7 can not be fulfilled</p>

<p>determined within the project but they will be purchased by TEIAS, not from the project budget)</p> <p>1.3 Exhibition of Project Partner's Live Working operators' team on the work</p> <p>1.4 Elaboration of legal and regulation documentations concerning the Live Working</p> <p>1.5 Assistance for setting up legal and regulation Unit/s within TEIAS, necessary to monitor the live working activity in Turkey.</p> <p>1.6 Operators team training and managers training</p> <p>1.7 Set up a test laboratory for Live Working tools and training to operate it (The required tools will be determined within the project but they will be purchased by TEIAS, not from the project budget)</p> <p>1.8 An audit for the TEIAS LW team after a certain period (prob. 6 months) of the implementation of LW activity.</p> <p>2. Development of Work Safety and Training Performance</p> <p>2.1 Identification of risk evaluation methods</p>			
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<p>regarding electricity transmission operation and maintenance activities</p> <p>2.2 Investigation of work safety techniques, material and training regarding electricity transmission lines and substations are investigated one by one.</p> <p>2.3 Improvement of standards regarding work safety personnel and material and personal protective safety material used by electricity transmission operation and maintenance; improvement of personnel and know-how and skills regarding periodical maintenance and controls.</p> <p>2.4 Identification of work safety trainings scope, attributes, program content and application modalities.</p> <p>2.5 Improvement of the training policy, the training program, the maintenance program, the training of trainer, the courses of training.</p> <p>2.6 Identification of fundamentals regarding communication with partners and prepared sheets about maneuvers operation and maintenance works.</p>			
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<p>2.7 Harmonization of TEIAS Work Safety regulation with directives and regulations of the European Union.</p> <p>3. Development of the Human Resources Policies and Rules</p> <p>3.1 Investigation of Human Resources Policies and Rules of the Project Partner's Country's electricity transmission company</p> <p>3.2 Revising TEIAS Human Resources policies</p> <p>3.3 Revising Personnel Status of TEIAS</p> <p>4. Renovation of TEIAS Organizational Structure</p> <p>4.1 Identification of current structure</p> <p>4.2 Identification of new services to be added</p> <p>4.3 Improvement of IT structure</p>			
			Pre-Condition: N/A