

INTEGRATED SAFEGUARDS DATA SHEET

IDENTIFICATION / CONCEPT STAGE

Report No.: ISDSC13010

Date ISDS Prepared/Updated: 28-May-2015

I. BASIC INFORMATION

A. Basic Project Data

Country:	Turkey	Project ID:	P155510
Project Name:	Renewable Energy Integration Technical Assistance Project		
Team Leader(s):	Mikul Bhatia		
Estimated Date of Approval:	30-Sep-2015		
Managing Unit:	GEE03	Lending Instrument:	Lending Instrument
Sector(s):	General energy sector (100%)		
Theme(s):	Climate change (50%), Other environment and natural resources management (50%)		
Financing (in USD Million)			
Total Project Cost:	1	Total Bank Financing:	0
Financing Gap:	0		
Financing Source			Amount
Clean Technology Fund			1
Environment Category:	C - Not Required		

B. Project Development Objective(s)

To assist Turkey in enhancing capacity for transmission planning as well as grid management in anticipation of increased share of renewable energy in the generation mix.

C. Project Description

The project involves capacity enhancement in the areas of : (i) Indicative Generation and Transmission Scenario Planning, and (ii) SCADA Based Smart-grid systems.

Component -1: Capacity enhancement for transmission planning under a range of indicative generationcapacity expansion scenarios.

This component would strengthen the transmission planning capabilities at TEIAS in wake of increased penetration of renewable energy – especially wind energy over the medium-long term. The component involves four steps:

a) Early training on transmission planning tools: This training would provide an update on the

various generation and transmission planning tools available in the market, while providing deeper insights into some tools as an example. The training would be conducted at the World Bank office in Washington DC.

b) Review of planning issues and planning tools: Reviewing the methodology, available planning tools, data requirements and training needs for comprehensive development of planning capacity in TEIAS.

c) Procurement of planning tool: Select and procure a new planning tool that best meets TEIAS's requirements.

d) Training of TEIAS staff for using the new planning tools: Create capacity within TEIAS to handle the new planning tools as well as strengthen their capability to address the more complex planning aspects arising from the introduction of greater amounts of renewable energy, as well as private sector led capacity increase. The training activity would also support the use of the planning tool for the next planning cycle and design studies to develop a renewable energy integration strategy for the 100 GW capacity augmentation plan. This design studies would be an in-house activity conducted by TEIAS staff. It would involve:

- (i) Development of planning datasets based on available and new data
- (ii) Specification of planning problem and scenarios
- (iii) Planning analysis for Renewable Energy Integration for 20 GW Wind Scenario and for Long Term Generation Augmentation in Turkey.

Component-2: Capacity enhancement for SCADA based Smart grid system.

Availability and performance of SCADA/EMS System have crucial importance for reliable operation of Turkish Power System. Upgrade of SCADA/EMS system at TEIAS has been taken-up under the APL-6 and REIP projects. It involves upgrade of the hardware and software of 11 existing control centers under the TEIAS SCADA/EMS System and addition of new functions to this system. Strengthening of the SCADA/EMS System as a result of this upgrade project shall also improve capability for integration of large amount of renewable energy resources to Turkish Power System. For effective use of the SCADA and EMS functionalities, TEIAS operators and engineers who are in charge of operation of the Turkish Power System, especially new staff needs training. TEIAS engineers who are responsible for technical support to operational staff and first level maintenance of SCADA/EMS System hardware and software need training. Moreover, works related to extension of the system such as preparation of databases and displays for addition of new substations and power plants to this system as well as works related modifications of the databases and displays as well as in parallel with the changes and additions to the power system shall be responsibility of TEIAS engineers. Training courses shall also cover new functions such as functions related to Wind Energy Desk for wind energy resources to be implemented at NCC and ENCC within the scope of this project.

D. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The project would be conducted broadly at the TEIAS office in Ankara, Turkey.

E. Borrower's Institutional Capacity for Safeguard Policies

F. Environmental and Social Safeguards Specialists on the Team

Esra Arikan (GENDR)

Zeynep Durnev Darendeliler (OPSOR)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/ BP 4.01	No	The technical assistance activity is focused on improved planning capabilities to address power system security concerns arising from increased share of renewable energy (wind) in the generation mix. It involves the selection and procurement of new software tools for assessing different generation capacity scenarios and for transmission planning based on the same. It would involve training on the software, including technical support to TEIAS staff during one exercise of assessing generation capacity scenarios and transmission planning analysis. While the direct linkages of this activity with environmental and social safeguards are limited, the safeguard specialists on the Bank team would engage with the TEIAS on the broader safeguards aspects involved in the transmission planning process.
Natural Habitats OP/BP 4.04	No	
Forests OP/BP 4.36	No	
Pest Management OP 4.09	No	
Physical Cultural Resources OP/ BP 4.11	No	
Indigenous Peoples OP/BP 4.10	No	
Involuntary Resettlement OP/BP 4.12	No	
Safety of Dams OP/BP 4.37	No	
Projects on International Waterways OP/BP 7.50	No	
Projects in Disputed Areas OP/BP 7.60	No	

III. SAFEGUARD PREPARATION PLAN

Appraisal stage ISDS required?: No

IV. APPROVALS

Team Leader(s):	Name: Mikul Bhatia
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<i>Approved By:</i>		
Safeguards Advisor:	Name: Qays Hamad (SA)	Date: 30-May-2015
Practice Manager/ Manager:	Name: Ranjit J. Lamech (PMGR)	Date: 01-Jun-2015

¹ Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.