

January 30, 2007
Revised October 2, 2009

Action Plan by Karachi Electric Supply Corporation Ltd. (KESC)
- Environmental and Social Aspects -

Note:

Action Plan of January 30, 2007 was prepared as part of IFC's consideration of providing finance to KESC to support KESC's three year (July 2006 – June 2009) capital investment program, with an objective to achieve KESC's operation in accordance with the relevant Pakistan environmental, health and safety regulations and standards, IFC Performance Standards on Social and Environmental Sustainability, and the relevant IFC EHS Guidelines.

This Action Plan was revised in October 2009 based on the KESC's updated implementation status of the previously identified actions. Completed actions have been deleted and implementation schedules have been updated on ongoing actions. IFC will continue to monitor KESC's implementation of this revised Action Plan.

No.	Action	Implementation Schedule	Verified by:	Note
1	Follow up on the Social and Environmental Impact Assessment (SEIA), dated January 2007 for the Capacity Enhancement Project (Bin Qasim): Present the Environmental Management Plan and the Social Management Plan with concrete specifications	For construction phase: prior to start of the construction For operational phase: prior to start of commercial operation	Copies of the EMP and SMP for both construction and operational phases.	
2	Prepare SEIAs and conduct consultation for new investment projects (e.g. development of new transmission lines, development of new grid stations) which are subject to Pakistan EIA regulations	In accordance with the development schedule of the projects	Copies of (i) SEIAs prepared, (ii) minutes of the consultations held	
3	Conduct Environmental, Health and Safety (EHS) Audit for the Transmission and Distribution (T&D) Assets (or "EHS T&D Audit") to identify areas of concerns and propose corrective actions on the following fields: A. Hazardous waste management (such as PCBs, used oil, etc.) B. Health and safety management: - Minimum clearance distance from transmission lines / high voltage equipment - Appropriate fencing, appropriate safety signs - Reporting / awareness promotion C. Electromagnetic field management (e.g. compliance with ICNIRP Guidelines for	Audit to be completed by December 31, 2010. Quarterly report on implementation status to be submitted to IFC by: Dec 31, 2009 Mar 31, 2010 June 30, 2010 Sep 30, 2010	Copies of audit report / quarterly reports	

	occupational and general public exposure to EMF). D. Transmission lines right-of-way regulation compliance.			
4	Implement recommended corrective actions by the EHS T&D Audit	Implementation schedule to be discussed and agreed between KESC and IFC after completion of the EHS T&D Audit.		
5	Conduct asbestos audit for existing thermal power stations (except for Korangi Thermal Power Station of which audit was completed and the certificate dated December 14, 2006 has been obtained by KESC).	Asbestos audit to be completed by March 31, 2011	Copies of asbestos audit report	
6	Implement recommended corrective actions by ECTECH's Environmental Audit that was conducted for the generation assets in the area of ambient air quality, wastewater treatment, and noise. Actions include:			
	A. Conduct regular monitoring of ambient air quality around existing thermal power stations.	2009 and annually	Copy of the monitoring results to be included in the Annual Monitoring Reports	
	B. Conduct treatment of wastewater at existing thermal power stations or send wastewater to a collective treatment plant.	Completion date: March 31, 2011.	Copy of the progress report.	
7	Strengthen the Company's Environmental, Health and Safety, and Social Management System to ensure that the Company will conduct business in accordance with IFC's Performance Standards on Social and Environmental Sustainability (April 30, 2006). Actions proposed by KESC include:			
	A. Establishment of Health, Safety and Environment (HSE) Policy	Integrated HSE Policy to be established by June 30, 2010.	Copy of the Integrated HSE Policy.	Safety Policy was established on July 6, 2009.
	B. Preparation of HSE manuals	December 31, 2009.	Copy of the list of HSE manuals.	
	C. Establishment of cultural property protection policy / procedures	December 31, 2009.	Copies of the policy / procedures.	
8	Update and implement the Environmental Management Plan and Social Management Plan described in Section 7 of the Social and Environmental Impact Assessment (SEIAs) for the 220MW Korangi Capacity Enhancement Project and for the 575MW Bin Qasim Capacity Enhancement Project, including:			
	A. Air Emissions – Bin Qasim: Stack height has been kept at 45 meters, Dry Low NOx Combustor to achieve 9 ppm (at 15%O ₂) on gas, and water injection to achieve 42 ppm (at 15%O ₂) on non-gaseous	Operational phase EMP to be submitted prior to commercial operation of Bin Qasim Capacity	Copies of the operational phase EMP and relevant design specifications used for	Air Emissions – Korangi has been completed.

	fuels.	Enhancement Project.	construction of the plant.	
	B. Thermal Effluent – Bin Qasim: Design cooling water intake structure to minimize entrainment and impingement of marine organisms including limiting the through slot velocities of the screen to less than 0.5 feet per second.	Operational phase EMP to be submitted prior to commercial operation of Bin Qasim Capacity Enhancement Project.	Copies of the operational phase EMP and relevant design specifications used for construction of the plant.	Thermal Effluent – Korangi has been completed.
	C. Install wastewater treatment to ensure that liquid effluents from the expansion projects will meet the effluent limits provided in the Thermal Power: Guidelines for new Plants, World Bank Group Pollution Prevention and Abatement Handbook 1998 including: TSS 50 mg/l, Oil and grease 10 mg/l, Total residual chlorine 0.2 mg/l, Chromium (total) 0.5 mg/l, Copper 0.5 mg/l, Iron 1.0 mg/l, Zinc 1.0 mg/l, and pH 6-9.	Operational phase EMP to be submitted prior to commercial operation of Bin Qasim Capacity Enhancement Project.	Copies of the operational phase EMP and relevant design specifications used for construction of the plant.	Wastewater Treatment – Korangi Capacity Enhancement Project, to be confirmed by the final design specifications used for construction.
9	Make operable the Continuous Emission Monitoring System (CEMS) installed at Bin Qasim Thermal Power Station	March 31, 2011	CEMS monitoring results to be included in Annual Monitoring Reports	
10	Prepare and implement KESC's Community Development Plan for communities identified in the SEIAs of the Korangi Expansion Project and Bin Qasim Expansion Project	Ibrahim Hyderi Community Development Project to be completed by June 2010. Bin Qasim Community Development Project – development interventions to be initiated by January 2010. Completion date to be determined.	Copy of the completion report (Ibrahim Hyderi Community Development Project). Copy of the project design document for Bin Qasim Community Development Project.	