

**DRAFT ENVIRONMENTAL AND SOCIAL REVIEW SUMMARY (ESRS)  
UNITED ASHUGANJ ENERGY LIMITED (PROJECT # 33479)**

**Project Description**

United Ashuganj Energy Limited (“UAEL” or the “company”), a subsidiary of United Enterprises (“sponsor” or “United Group”), has established a 195 MW combined cycle gas fired reciprocating engine power plant within Ashuganj Power Station (APS) complex (the “project”). Construction on the project began in **October 2014** and the project was commissioned in May 2015; its operations and maintenance (O&M) is being carried out by United Engineering & Power Services Ltd (UEPSL), another subsidiary company of United Enterprises. IFC is considering extending a project loan to the company including an equity investment in UAEL.

The APS complex is located on the banks of Meghna River in the Sonaram Mouza of Ashuganj Upazila, Brahmanbaria District, about 90 km North East of Dhaka in Bangladesh. The APS complex has a number of existing gas fueled power generating units with a total de-rated generation capacity of 1070 MW including the project. Further, there are also four more combined cycle gas turbine (CCGT) power plants with a total capacity of 1,525 MW currently under construction or proposed in the near future within the APS complex. However, 128 MW of existing operating power plants within the APS complex will be retired upon commissioning of the under construction or proposed CCGT plants.

The project includes the main plant, which is comprised of 20 gas reciprocating engine generators (9.73 MW each), 20 waste heat recovery boilers (WHRB) and one steam turbine-generator (16.1MW). The reciprocating engines use lean burn technology for low NOx emissions. The engines are housed within an acoustically treated building. Each of the 20 engines has a 30 m high stack. Natural gas for the UAEL power plant is being supplied by Bakhrabad Gas Distribution Company Limited (BGDCL) from the Gas Transmission Company Limited’s pipeline which is also located within APS Complex about one km from the UAEL project site. The gas is being supplied through a dedicated 10 inch high-pressure buried pipeline, approximately one km in length laid along internal roads within APS complex to the gas Regulating and Metering Station (RMS) on the project site. The power generated by the project is being evacuated to the existing APS subs station located about 0.9 km from the project site, which required construction of four transmission towers, all located within the APS complex. Other significant components of the project include raw water intake and effluent outfall, generator switch gear, water treatment plant (reverse osmosis process for demineralization), sewage pipelines, storm water lines, **fire prevention, detection, control and fighting systems, water storage tanks including for firefighting system (which are currently being installed)**, stores and hazardous materials storage facilities.

Once through condenser cooling and closed circuit cooling system are in place. Groundwater at 10 m<sup>3</sup>/h from a deep tube-well is being used for the closed cooling system. For the once through (condenser cooling system), 6000 m<sup>3</sup>/h water is being pumped from Meghna river, which is about 400 m from the project boundary. The water pumping station is 55 m into the stream from the river bank and no barrage is provided. The condenser cooling water, mixed with boiler blow down, is discharged into a common channel that carries condenser cooling water from the other existing power plants in APS complex to the Meghna River. The condenser cooling water to be discharged

is at 7 degree Celsius above intake water temperature/temperature of the receiving river water. The power plant is situated on a plot measuring 6.43 acres within the APS complex, which is owned by APS and has been leased to UAEL.

### **Overview of IFC's Scope of Review**

IFC's review consisted of appraising technical, environmental, and social information submitted by the sponsors and the company including: environment impact assessment (EIA) and Social Impact Assessment (SIA) for the project; Environmental and Social (E&S) compliance review dated May 2015 by the Lenders' E&S Advisor; and environmental permits. The review also included: discussions with the Sponsor, the company's management team, EPC and O&M contractors' senior managers, consultations with affected communities and visit to the Project site on January 6-8, 2015.

IFC's review considered EHS risks and impacts in development and operation of the plant, environmental and social management plans for this project and gaps, if any, between these plans and IFC requirements. Measures included in the management plans and, where necessary, corrective measures intended to close these gaps within a reasonable period of time, are summarized in the paragraphs that follow and in the agreed Environmental and Social Action Plan (ESAP) disclosed along with this review summary. Through implementation of these management plans and the ESAP, the plant is expected to be operated in accordance with Performance Standards objectives.

### **Identified Applicable Performance Standards**

While all Performance Standards are applicable to this project, IFC's environmental and social due diligence indicates that the project will have impacts which must be managed in a manner consistent with the following Performance Standards (PSs):

- PS 1: Assessment and Management of Environmental and Social Risks and Impacts;
- PS 2: Labor and Working Conditions;
- PS 3: Resource Efficiency and Pollution Prevention; and
- PS 4: Community Health, Safety and Security.

While all Performance Standards (PSs) are applicable to this project, IFC's project due diligence determined that the project construction and operation is not expected to result in risks and impacts contemplated under: PS 5: Land Acquisition and Involuntary Resettlement as the land for the project is owned by APS and leased to UAEL, there was no physical nor economic displacement on account of this land take nor on account of impacts on ecosystem services; PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources as the Project site is within APS complex, impacting modified habitat and no material adverse impacts on biodiversity and natural resources is expected; PS7: Indigenous Peoples as no tribal land is being acquired for the development of the Project and no diversions, material degradation or adverse impact is expected on land resources on which indigenous peoples are dependent; and PS8: Cultural Heritage as the project is inside the premises of APS complex, which does not have culturally important sites, and is not an area of known historical or cultural significance.

If IFC's investment proceeds, IFC will periodically review the Project's ongoing compliance with the Performance Standards

### **Environmental and Social Categorization Rationale**

The project is located within an existing power generation complex, no displacement is expected on account of the project and the scale of the project is about 8% of the total existing and under-construction power generation capacity within the APS complex. The incremental cumulative impact, taking into account all of the proposed development within the complex, is expected to remain within acceptable levels. Further, the contribution of the project to this incremental cumulative impact is very small. This is a Category A project as a moderate number of specific environmental and social risks and/or impacts may result which are: limited in scale; not unprecedented; and which can be avoided or mitigated by adhering to generally recognized performance standards, guidelines or design criteria.

*PS1 -- Assessment and Management of Social and Environmental Risks and Impacts*

### **Policy**

UAEL will develop and implement an environment, health and safety management system (EHSMS) that conforms to ISO 14001 and OHSAS 18001 standards, with IFC Performance Standards appropriately incorporated (refer ESAP action #1). The company shall, as part of this EHSMS, develop and implement an EHS Policy that is consistent with the principles of IFC Performance Standards. Further, the company shall ensure that the policies are prominently displayed within the project site and communicated to the staff. UAEL will ensure that United Engineering & Power Services Ltd (UEPSL), the O&M contractor, implements and adheres to its EHS Policy and EHSMS (refer ESAP action #1).

### **Identification of Risks and Impacts**

The company commissioned a third party consulting firm Adroit Environment Consultants Ltd (AECL) to undertake an Environmental Impact Assessment and Social Impact Assessment (EIA and SIA) for the project in April 2014 to comply with the national requirements for such projects, and to obtain a site clearance from the regulators. Prior to commencement of operations, the company has also obtained applicable environmental clearances.

Further, based on the findings of a third party review of the EIA and SIA, the company required its consultant to update the EIA and SIA in March 2015. Baseline surveys had been carried out in 2014 and subsequently air quality monitoring data from the existing APS power plant for the year 2014 was also collected and used to strengthen baseline information. Cumulative impacts have been assessed for air quality and thermal discharge taking into account 1300 MW of CCGT power plants for which data was available. In assessing cumulative impacts, it has been assumed that retiring 146 MW of old plant will offset incremental air quality and thermal discharge impacts from the 225 MW proposed new CCGT.

Meghna River and its flood plain is a host to multiple fish, mammal, reptile, amphibian and avian species. However, the only IUCN red list threatened species reported in Meghna river are *Chitra indica* - Narrow Headed Softshell Turtle (IUCN – Endangered, Bangladesh national classification – Critically Endangered), and *Hardella thurjii* – Crowned River turtle (IUCN-Vulnerable). Both these species are found in all the major rivers in Bangladesh besides being found in rivers in India, Pakistan and Nepal. Part of the Meghna river habitat is historically modified due to 56.4 m<sup>3</sup>/s thermal discharge from existing operating plants within APS complex. The project has added another 1.67 m<sup>3</sup>/s (another 3%) of thermal discharge into the existing discharge stream. The total thermal discharge (existing plants and project related thermal discharge) is less than 3% of the lowest recorded flow (since 1998) in Meghna River. Further, the other proposed new 1300 MW developments within APS complex are expected to add another 25 m<sup>3</sup>/s (another 44%) of thermal discharge to the existing discharge stream. Taken together, the entire thermal discharge 83.1 m<sup>3</sup>/s (both existing and proposed new) is 4.3% of the lowest recorded flow of 2050 m<sup>3</sup>/s in Meghna River. In light of this, material impact on Meghna River habitat is not expected on account of the project and incremental cumulative impact due to the other proposed projects within APS complex may be expected to remain limited and within acceptable levels.

The cooling water requirement to be abstracted from Meghna river is 1.67 m<sup>3</sup>/s (about 6000 m<sup>3</sup>/h). The velocity at the inlet point is designed to be within the WBG EHS Guideline limit to prevent entrapment of fish. Further, to prevent impingement and entrainment of fish, barrier screens are installed. A common intake is proposed for all of the proposed CCGT plants within APS complex to draw about 25 m<sup>3</sup>/s of raw water from the river.

In view of the fact that plant operation has commenced, the company has agreed a corrective action plan based on the Lenders' E&S Advisors (third party) review findings to ensure that the project is operated in accordance with the national requirements and the IFC Performance Standards.

## **Management Programs**

UAEL will prepare and implement an Environmental and Social Management and Monitoring Plan (ESMMP) for the power plant covering the O&M phase of the project within two months (refer ESAP action#2). Mitigation and monitoring measures to be included in the ESMMP shall be in accordance with project regulatory approval conditions, IFC Performance Standards and applicable provisions of WBG EHS Guidelines. The ESMMP will focus on the following key issues: emissions to air; ambient noise; ambient air quality; water consumption; wastewater quality, treatment and disposal; thermal discharge into river environment; hazardous material and waste handling, storage and disposal; occupational health and safety; fire prevention, detection and control; emergency preparedness and response; and community health, safety and security. Further, the company will prepare a decommissioning plan in accordance with Good International Industry Practice (GIIP), prior to commencement of any decommissioning related activities.

The company will establish and implement an Environment, Occupational Health and Safety (EHS) Management System (EHSMS) that is in line with ISO 14001 and OHSAS 18001 standards by August 2016 (refer ESAP action #1), with IFC Performance Standards appropriately incorporated. The EHSMS will include: (a) an Environment, Occupational Health and Safety Policy aligned with the PSs; (b) procedures for ongoing screening, scoping, assessment and

management of environment, health, safety and social risks and impacts; (c) stakeholder mapping and consultation process; (d) organization structure; (e) roles and responsibility allocation; (f) procedures for environment, occupational health and safety (EHS) training of employees and contract workers; (g) internal and external communication procedures; (h) procedures for recording, investigation, reporting and corrective action in relation to EHS incidents including those involving contractors' workers; (i) emergency preparedness and response management; (j) periodic monitoring of EHS performance; (k) periodic internal and external EHS audit process; and (l) procedures for management review of EHSMS effectiveness and implementation of measures for system upgrade. The EHSMS will include appropriate procedures to ensure that the O&M contractor, UEPSL, undertakes the plant O&M in accordance with UAEL's policies and procedures. In accordance with the provisions of the EHSMS, the company will put in place an appropriate EHS organization. Further, UAEL will require the O&M contractor to deploy appropriately qualified EHS staff, to manage EHS aspects on an ongoing basis. The company will as a part of the EHSMS develop and implement a comprehensive employee training program.

### **Emergency Preparedness and Response**

The company has prepared the outline of an Emergency Response Plan and it refers to emergencies such as fire, electrical shock, explosion, food poisoning or other medical emergencies, flood, earthquake, cyclones, storms, sabotage and war. UAEL will, within 2 months (refer ESAP action #.5) undertake HAZOP studies and risk assessments including domino effects arising out of incidents in its own operations and also arising out of incidents in neighboring facilities. Based on the HAZOP and risk assessment, develop and implement an updated Emergency Preparedness and Response Plan covering all emergencies, appoint a suitably qualified emergency coordinator, and undertake awareness training including drills for building awareness on emergency response. The project site is situated at an elevation of 8.80 m above sea level. The elevation of the highest recorded flood in this area is 8.20 m above sea level. The company will assess the impact of climate change based on the historical data of water level and meteorology on the project site. Based on the assessment and as per ESAP item #6, the company will develop appropriate mitigation measures if required.

### **Monitoring and Review**

The ESIA report provides an outline environmental and social management and monitoring plan (ESMMP) for the project with location, parameter and frequency of monitoring. As part of the ESMMP, the company will put in place detailed procedures, including: reporting requirements for the O&M contractor; periodic site audits jointly with the O&M contractor; review and documentation of the O&M contractor's compliance with national and lender requirements, and periodic EHSS audit recommendations. The company will put in place procedures to ensure that corrective actions based on the findings of the EHSS audit are implemented in a timely manner. These procedures will be eventually incorporated into the monitoring and review program that will be developed as part of the EHSMS.

*PS2 – Labor and Working Conditions*

UAEL employs 125-150 (please insert/provide exact number) personnel under different categories; skilled, semi-skilled and unskilled. While some of them will be on the direct payroll of the company the others will be engaged through medium/long term contractors [QUESTION FOR THE COMPANY: what will be the split of the permanent and contractor employees in operations phase].

UAEL's Human Resource (HR) systems and practices are laid out in the "Service Rules and Regulations" which describe the company's policies and standard terms of employment on aspects including working hours, overtime and leave entitlements, possession of identity cards, protecting the workforce (e.g. no employment of persons below the age of 18), non-discrimination; probation periods, promotion/performance management, resignation timeframes, reasons for employment termination, dress codes, workers code of conduct, employee training, and, employment benefits such as medical, scholarships, transportation etc. Conditions of employment as well as wages and benefits are communicated to employees through employment letters and in the induction briefing given to employees at the time of joining. Currently the HR system and practices of the company are geared to meet the statutory requirements. The HR department (together with administration, security and environment) reports to the plant head.

UAEL currently does not have a workers union or an alternate platform to discuss and collectively negotiate worker rights and benefits. However, the company management reported its willingness and inclination to accept the formation of a legally formed union(s). The existing service rules and regulations have no provisions or defined processes for looking at employee complaints and grievances. Similarly, treatment of contract workers or workers employed through third parties and involved in plant operations are not detailed in the service rules.

The company will (refer ESAP action #3) strengthen and update its HR policies and practices to align itself with PS 2 requirements. This will include development of additional policies and procedures particularly related to contract workers and cover among other aspects (a) development and implementation of a formal contractor oversight procedure to ensure ongoing legal compliance; (b) strengthening contractual agreements to include relevant social safeguards; (c) regular monitoring and (d) documentation of compliance and performance with respect to statutory as well as PS requirements. UAEL will also develop and implement a worker grievance management system including procedures enabling employees and contract workers to access the grievance mechanism (to include collection of anonymous complaints, time bound closure of concerns/complaints, feedback to aggrieved workers/employees, documentation, analysis and reporting to senior management). The company will communicate the new system to all workers.

### *PS3 – Resource Efficiency and Pollution Prevention*

The project is in operation and construction is nearly complete. The environmental aspects and impacts from these residual construction activities can be controlled to acceptable levels through application of standard construction environmental controls.

## Resource Efficiency & GHG Emissions

The project uses natural gas and reciprocating engines in combined cycle, giving it an electrical efficiency of 47.2% compared with 42% for a reciprocating engine simple cycle arrangement. The CO<sub>2</sub> emissions are lower with gas fired combined cycle reciprocating engines (455gCO<sub>2</sub>/kWh) compared with simple cycle (511 gCO<sub>2</sub>/kWh). Greenhouse gas emissions are expected to be about 455gCO<sub>2</sub>/kWh. Total direct annual greenhouse gas emissions from the project will be 674,920 tCO<sub>2e</sub>. During the O&M phase, the company will set energy and resource efficiency goals as part of its EHSMS.

## Water

The plant consumes 10 m<sup>3</sup>/h of groundwater as makeup water for the closed circuit (boiler feed and engine cooling system) and 6000 m<sup>3</sup>/h of surface water from Meghna River for the once through condenser cooling system. The closed circuit water is subject to reverse osmosis (RO) treatment but the condenser cooling water is not treated other than addition of biocides. The plant draws 6000 m<sup>3</sup>/h (1.67 m<sup>3</sup>/s) of once through cooling water from the Meghna River, which is approximately 0.08% of the lowest recorded flow of 2050 m<sup>3</sup>/s in Meghna River since 1998. The cumulative water requirement taking into account the total 1300 MW developments underway within APS complex has been assessed at about 90,000 m<sup>3</sup>/h, which is not expected to exceed 1.2% of the lowest recorded flow of Meghna river flow. The company will ensure that drinking water made available on project premises meets Government of Bangladesh potable water standards or WHO drinking water norms.

## Air Emissions and Ambient Air Quality

The project is a gas based power project so oxides of nitrogen (NO<sub>x</sub>) are the key emission to air. The ambient air quality baseline data indicates that baseline concentrations of particulate matter less than 2.5 micron size (PM<sub>2.5</sub>), particulate matter less than 10 micron size (PM<sub>10</sub>), NO<sub>x</sub>, sulphur di-oxide (SO<sub>2</sub>) and carbon monoxide (CO) are all within the Bangladesh National Ambient Air Quality Standards. However, baseline concentrations of suspended particulate matter (SPM) in the vicinity of the project site exceed the national standards. Accordingly, the air shed while non-degraded for NO<sub>x</sub> and SO<sub>2</sub> has been considered degraded for particulate matter. The plant is not expected to have any material PM and SO<sub>2</sub> emissions and consequently is not expected to impact particulate matter and SO<sub>2</sub> in the ambient air. Dispersion modeling for NO<sub>2</sub> has been undertaken taking into account cumulative air quality impacts from three other gas based thermal power plants that are proposed to be built within APS complex. The modeling indicates that the project-related and cumulative incremental ground level concentration of NO<sub>2</sub> will meet the World Bank Group EHS Guidelines. The predicted annual average and one-hour average incremental ground level concentrations (GLC) of NO<sub>2</sub> from the project is 3-5 µg/m<sup>3</sup> and 100-140 µg/m<sup>3</sup> respectively. The modelling results further indicate that the annual average and one-hour average cumulative incremental GLCs of NO<sub>2</sub> due to the project and the three proposed plants will be [5-8 µg/m<sup>3</sup>] and [100 -148] µg/m<sup>3</sup> respectively. The ambient NO<sub>x</sub> levels, taking into account the cumulative air quality impact, are predicted to remain within national standards. The project is designed to meet the WBG EHS Guideline NO<sub>x</sub> emission limits through use of a lean burn process. The company

will, in accordance with the requirements under ESAP action #2, ensure that a continuous air quality monitoring station is put in place.

## **Wastewater Treatment**

Effluents from project include thermal discharges (once through condenser cooling), wastewater (RO reject) effluents, and sanitary wastewater. The existing power plants in the APS complex discharge 56.4 m<sup>3</sup>/s of hot water into Meghna river, at 7 degree Celsius above ambient river water temperature. The project uses 1.67 m<sup>3</sup>/s (or 6000 m<sup>3</sup>/hr) of river water as once through cooling water, which is then disposed of into the existing thermal discharge stream of the plants that are under operation within APS complex. The project's thermal discharge is not expected to result in material incremental impact on the Meghna river environment as it is about 3% of the existing thermal discharge and the total thermal discharge is less than 3% of the lowest recorded flow in Meghna River. 0.001 m<sup>3</sup>/s of RO reject from the closed circuit wastewater will be also be mixed with the plant's condenser cooling waste water for disposal into the river. The company will also ensure that the residual chlorine in the condenser cooling water remains below 0.2 mg/l. Oil contaminated waste water will be generated periodically and will be tankered off to a hazardous waste treatment and disposal site. Sanitary wastewater will be disposed to the existing septic tanks of the APS complex. The storm water/surface drainage will be discharged to Meghna River. Areas that have potential for oil contamination are generally within the building or within containment, with limited scope for storm runoff. Oil contaminated wastewater will be disposed through authorized hazardous waste management agencies. The company will ensure that the wastewater being disposed of meets WBG EHS Guidelines (refer ESAP action #4). The four proposed/under construction CCGT plants are also designed with once through condenser cooling system and are cumulatively expected to generate about 25 m<sup>3</sup>/s of thermal discharge with a temperature about 7 degree Celsius above ambient river water temperature. This wastewater will also be discharged into the same discharge channel that carries the thermal discharge stream from the existing power plants. While there will be incremental impact due to the increased thermal discharge from the proposed new developments, it is expected to remain within acceptable levels as: (a) the volumetric increase in the thermal discharge is about 46% of the existing discharge; (b) the total thermal discharge (existing and proposed new) is about 4.3% of the lowest recorded flow in the river, so rapid dilution may be expected; (c) at the point of contact with the river, the receiving water body is already modified due to historical thermal discharge; and (d) a 700 m long open channel is proposed for conveying the thermal discharge from the new CCGT plants to enable some cooling before mixing with the existing thermal discharge stream.

## **Noise**

The building housing the engines has been provided with acoustic treatment and stacks have silencers, to ensure that the noise level immediately outside the engine building does not exceed 70 dB(A). While night time noise levels at the project boundary meet both national and WBG EHS guidelines for industrial areas, cumulative noise levels during the day exceed both national and WBG EHS Guideline levels as the site is within the APS complex with several operating power plants. The nearest sensitive receptors to the project site are residences outside the APS complex which are 200 m from the project boundary. The noise modeling for the plant predicts that the project's incremental noise impact at these sensitive receptors will be below 3 dB (A). There is



also an employee colony within the APS complex, which is in the process of being vacated by APS management and is expected to be completely vacated within the next 1-2 years as the various plants become operational. Noise will be monitored on a regular basis both at the closest residences and at the employee colony site and additional remedial measures will be introduced if exceedances are recorded.

### **Hazardous Materials**

The primary hazardous waste during operations include: reverse osmosis plant spent filter media and membranes; oil filters; batteries; used oil/paint/chemical drums and carbuoys; oil contaminated water or spills from oil storage areas; used oil generated in maintenance; oily rags/oil or oil contaminated scrap from maintenance activity; and used transformer oil.

The company will segregate and store all waste in a designated area with impermeable surface and sufficient containment capacity where necessary - i.e. for hazardous wastes/liquids - and will maintain records of all hazardous waste generated and disposed. A reputable waste management contractor hired by the company will collect the waste periodically from the plant and dispose of it in line with the national laws and World Bank Group EHS guidelines (refer ESAP action #4). Some of the reusable waste/scrap may be sold/ handed over by the company to scrap dealers. Further, the company will implement procedures to assure itself that the hazardous waste treatment and disposal facilities remain compliant with the national laws and good international industry practices.

#### *PS4 - Community Health, Safety and Security*

UAEL's infrastructure and equipment use is in line with good international industry practices. The project includes usage of hazardous materials such as the gas, lubricating oils, pre-treatment and operational and maintenance chemicals that have the potential to present a hazard to surrounding communities located in the vicinity of the plant (up to one km away). The company has prepared the outline of an Emergency Response Plan and it refers to emergencies such as fire, electrical shock, explosion, food poisoning or other medical emergencies, flood, earthquake, cyclones, storms, sabotage and war. The company will, as a priority and as per ESAP action #, update and implement Emergency Preparedness and Response Plan in line with the recommendations made in PS1.

The plant operations will result in cumulative addition to the traffic movements in the area. UAEL will manage traffic related issues during operations phase by implementing measures like speed control, appropriate provisions for safe movement of vehicles and deployment of traffic marshals at the site.

The company employs unarmed security guards to safeguard and protect its equipment and assets. The security guards are engaged through a registered agency and managed by a security officer engaged by the company. The company will implement formal procedures related to screening of security guards' past records, security personnel objectives and permissible actions, training in

avoidance of abusive conduct, recording and investigating security incidents; investigation of bona fide complaints against security personnel and disciplinary actions. A grievance mechanism for aggrieved members of community or employees in the event of a violation of the code for security personnel will also be defined and included in the grievance redress and handling system (refer ESAP action #7).

### **Client's Community Engagement:**

The UAEL project is located inside Ashuganj Power plant complex and Ashuganj Power Station Company Ltd land at Ashuganj, Brahmanbaria, Bangladesh. The nearest habitation is the APS employee colony located within 500 mts of the project site. There are some commercial establishments (mostly shops) and common property resources like schools, mosque situated within one kms vicinity of the projects site. The Ashuganj fertilizer factory is located within one kms of project site. Employment in these power plants/factories and linked opportunities is the predominant source of income in the immediate vicinity of the project. UAEL reportedly enjoys a harmonious relationship with nearby communities, as documented in the SIA report, which documents the support and goodwill that the project enjoys amongst different stakeholders in the vicinity of the plant. The engagement activities undertaken by UAEL have been documented in the SIA. These include meetings and discussions with different stakeholders, including Union Parishad, NGOs, school committee and teachers, and more than 100 members of the community (including females) in the immediate vicinity of the project. Five formal consultation meetings involving various stakeholders have been organized in the recent past (December 2013 to June 2014) apart from informal consultations and community meetings. These consultation meetings were advertised in two national daily newspapers in both Bengali and English languages. The outcome of these consultations suggest that the communities/stakeholders are aware of the project and see it as a positive development in the area leading to increased employment and business opportunities. Expectations with respect to community benefits in terms of local infrastructure development (roads), improved health care and educational facilities etc have been expressed and documented in these meetings.

UAEL, in response to community demands and expectations, plans to implement community development activities focusing on health, education and sanitation, and livelihood support. The company also plans to support the maintenance and improvements of common property resources like the mosque, access roads etc. UAEL will develop and implement a plan for ongoing community/stakeholder engagement (refer ESAP action #7). It will also put in place a mechanism for grievance handling and redress including process and procedures for collection, collation and timely resolution (including successful closure) of complaints and grievances within 15 days of its receipt (refer ESAP action #7). The details of this community/stakeholder grievance redress mechanism will be shared with the communities. The implementation of these would be monitored both internally as well as externally.

*UAEL will disclose this ESRS at its website: <http://...> , as well as locally at the following addresses:*

**Xxxx**

**XXXXX**

**XXXX**

*Any queries and/or comments about the project may be directed to:*

**XXX**

**XXX**

### Environmental and Social Action Plan (ESAP)

No.	Description	Proposed Timeline
1	UAEL will develop an environment, health and safety management system (EHSMS) in line with ISO 14001 and OHSAS 18001 standards, and incorporating IFC Performance Standards. It will ensure that United Engineering & Power Services Ltd (UEPSL), the O&M contractor, implements and adheres to this EHSMS.	August 2016
2	UAEL will prepare and ensure implementation (through UEPSL, its O&M contractor) an Environmental and Social Management and Monitoring Plan (ESMMP) for the power plant (including O&M phase) covering among other aspects emissions to air; ambient noise; ambient air quality; water consumption; wastewater quality, treatment and disposal; thermal discharge into river environment;	August 2015 (Condition of Disbursement)
3	UAEL will strengthen and update its Human Resource (HR) policies and practices, especially elements linked to contractor management and worker grievance management, to comply with statutory as well as PS2 requirements;	August 2015 (Condition of Disbursement)
4	UAEL will implement procedures to ensure treatment of waste water and hazardous waste in accordance with statutory requirements and applicable WBG EHS Guidelines;	August 2015 (Condition of Disbursement)
5	UAEL will update and implement the project Emergency Preparedness and Response Plan based on HAZOP studies and risk assessments including domino effects arising out of incidents in its own operations and also arising out of incidents in neighboring facilities	July 2015
6	UAEL will assess the impact of climate change based on the historical data of water level and meteorology on the project site. Based on the assessment, UAEL will develop and implement appropriate mitigation measures.	August 2015 (Condition of Disbursement)
7	UAEL will develop and implement a stakeholder engagement plan, including a community grievance redress mechanism, in accordance with PS 1 requirements	August 2015