Environmental and Social Review Summary
Sheberghan Gas-to-Power Project

Country: Afghanistan
Project Name: Sheberghan Gas-to-Power Project

Project Number: P166405

Environmental Category: B

Project Description

1. **The proposed Project entails the development, financing, design, construction and operation of a 40MW green-field gas-to-power plant as an Independent Power Producer (IPP) on a Build Own Operate (BOO) basis.** It will be implemented by Bayat Power Electricity Services Distributor Company ("Project Company"), a Special Purpose Company established by Bayat Group. As a whole, the Bayat Group has been operating in Afghanistan for 17 years, and owns and operates several enterprises in Afghanistan, among them cellular telephony, oil and gas exploration, and production. The Project Company identified both a reputable firm which supplied the single 40MW gas turbine needed for the plant and a contractor for its operation and maintenance (O&M). Installation of the gas turbine and related site construction works are almost complete with an envisaged commercial operations date of mid-September 2019.

2. **The power plant under the proposed Project will be located 20 km east of Sheberghan, and approximately 1 km west of the amine treatment plant (operated by Afghan Gas Enterprise) at the Yatimtaq gas field in northwestern Afghanistan**. The specific plot of land, on which the project site is situated, is Government owned, and has been leased to the Project Company under a lease agreement signed on 31 July 2018 with a tenure of five years. Due to its location, the power plant will supply power to Jawzjan (Sheberghan is its center), Faryarb, Sar-i-pul and other parts of the provinces in the Balkh region. It is consistent with the 2013 Power Sector Master Plan, which identifies this as the least cost option for increased domestic energy generation (up to 150 MW of installed capacity by means of gas-fired power plants).

3. **Given the proposed Project is implemented by the Project Company, the World Bank Performance Standards are applicable according to OP4.03.** The Project Company has been set up in a manner that ensures it will meet the compliance, legal and regulatory requirements of both the Government of the Islamic Republic of Afghanistan and the World Bank Performance Standards. In particular, the Project Company has established an Environmental and Social Management System (ESMS) that includes policies, procedures and personnel responsible for implementing and monitoring identified safeguards measures.

Key Issues

4. The project site is located over 10 km from residential communities, within an industrial area; and situated on non-agriculturally productive land. It is neither in close proximity to ecological,

historical, religious or culturally sensitive areas.

5. **The project activities are expected to cause the following key impacts during construction and operation phases of the proposed Project:** (i) human health impacts from combustion emissions and dust, (ii) localized ambient air quality degradation, (iii) construction site health and safety risks resulting in injury or death, and (iv) construction and operation site health and safety risks resulting in impairment of long-term health impacts, (v) natural resource impact at municipal disposal site from disposition of solid or hazardous wastes, (vi) labor influx and associated risks as labor from outside of the project's area of influence has been engaged. The Gender Based Violence (GBV) risk is rated low.

6. Because the aforementioned impacts are site-specific, limited in number, are of mostly temporary nature and can be readily managed through tangible mitigation measures, the proposed Project has been categorized as Environmental Assessment Category B.

7. The following Performance Standards apply to the proposed Project:

- Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts;
- Performance Standard 2: Labor and Working Conditions;
- Performance Standard 3: Resource Efficiency and Pollution Prevention;
- Performance Standard 4: Community Health, Safety, and Security; and
- Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

8. Performance Standards 5, 7, and 8 do not apply to this proposed Project. As mentioned in paragraph 3, the plot of land, on which the project site is situated, is Government owned, and has been leased to the Project Company for the five-year project lifespan. The proposed Project will therefore not involve any land acquisition, displacement of people or adverse impacts on livelihoods. It is neither anticipated to adversely impact indigenous peoples, and/or cultural heritage.

Key Information Sources

9. This Environmental and Social Review Summary (ESRS) has been prepared on the basis of the findings set out in the Environmental and Social Impact Assessment (ESIA) that has been prepared by the Project Company through an independent consulting firm. During its preparation, the ESIA was consulted with relevant stakeholders in the project area and separate consultations were conducted to validate and receive specific feedback on its findings. The ESIA also includes a site-specific Environmental and Social Management Plan (ESMP) and associated plans (see paragraph 10). The Project Company has established an ESMS that includes policies, procedures and has personnel responsible for implementing the project.

10. The World Bank team reviewed the following key documents:

- The ESIA;

- The site-specific ESMP and associated plans (Stakeholder Engagement Plan (SEP), labor influx management plan, camp management plan, and Grievance Redress Mechanism, (GRM)); and
- The ESMS as set up by the Project Company.

11. Based on the findings of the above mentioned documents and the World Bank team's due diligence, the proposed Project is expected to comply with World Bank Performance Standards and relevant WBG Environmental, Health, and Safety Guidelines (EHSGs).

PS1: Assessment and Management of Environmental and Social Risks and Impacts

12. The Performance Standard 1 (PS1) is applicable as the proposed activities are determined to cause social and environmental risks and impacts, as well as health and safety risks during construction and operation stages of the proposed Project.

The Project Company (through an independent consulting firm) has prepared an ESIA and ESMP which have been consulted among relevant stakeholders and have been reviewed by the World Bank team. Together, this safeguards' documentation identifies, assesses and proposes measures for management of environmental and social risks and impacts associated with the proposed Project. The ESIA was disclosed in-county on the Project Company's website (https://bayatpower.com/index.php/environmental-stewardship/) and hard copies were delivered by the Project Company to the provincial authorities, the Afghanistan Gas Enterprise office in Sheberghan as well as to the Da Afghanistan Breshna Sherkat (Afghanistan's power utility) office in Kabul, on September 10, 2019. Disclosure of the ESIA, the ESRS as well as the Environmental and Social Action Plan (ESAP) on the World Bank website is equally scheduled for September 10, 2019.

13. **Environmental risks and impacts:** The most significant environmental impact of the proposed Project are expected during its operational phase and to primarily concern the physical environment. The proposed Project's impacts on air quality is discussed in the ESIA under air emissions and ambient air quality. Baseline monitoring data are provided in this respect and will air dispersion modelling will be conducted in addition.

14. **Social risks and impacts:** The potential social risks and impacts are considered minor as no land acquisition and resettlement is required. Other social safeguards impacts are expected to be associated with labor influx, i.e. Gender-Based Violence (GBV), Workplace Sexual Harassment (WSH) and/or employment related disputes. According to the ESIA findings, managing these may pose the biggest challenge for the Project Company since around 70 workers from outside of the project's area have been engaged.

15. The ESIA provides a summary of the ESMS established by the Project Company to manage mitigation plans for those environmental and social risks and impacts identified. To ensure compliance with Afghan legislation and World Bank requirements, the Project Company developed, implemented and maintained a Construction Environmental and Social Management Plan (CESMP), including several associated plans (see paragraph 18), recruited qualified environmental and social (E&S) specialists as well as an OHSAS 18001:2007 certified Occupational

Health and Safety (OHS) specialist.

16. The Project Company equally developed an Operational Environmental and Social Management Plan (OESMP) consistent with the ESIA, local regulation and requirements under the applicable World Bank Performance Standards. As indicated in Item No. 1 , the Project Company is also to ensure that its O&M contractor develop, implement and maintain several plans related to the OESMP. These supplemental measures concern the following: a waste management plan (hazardous and non-hazardous waste), a health & safety plan including provisions for emergency preparedness and response, spill prevention and control, as well as a monitoring plan for the operational phase.

17. Supplementing the CESMP and OESMP, the Project Company developed and implemented a suite of mitigation measures: an environmental and social management policy, detailed security measures and procedures for construction and operation phases, a health and safety manual, a human and resource management policy & procedures, a traffic control management plan; a labor influx management plan, a camp management plan; as well as a framework monitoring plan including contractor management.

Organizational Capacity and Competency

18. The Project Company has set up a dedicated Environmental and Social Management Unit (ESMU) consisting of E&S and OHS experts who are responsible to provide training, support services, guidance and monitoring throughout the five-year lifetime of the project. Being housed within the Project Company's, the ESMU is expected to play a key role in effective implementation of the ESMPs, through close coordination with both the Project Company's management and supervision of contractors. The latter maintain full-time on-site environmental, social and occupational, health, safety oversight personnel as part of their contractual obligations which is documented both in the CESMP and the OESMP.

Emergency Preparedness and Response

19. While the Project Company already has a suite of emergency preparedness, response management and incident investigation procedures in place at a corporate level, it has to equally ensure that its O&M contractor develops and maintains emergency preparedness and response plans (EPRPs) for the operation phase. This has been included under Item No. 1 of the ESAP.

Monitoring and Review

20. As equally agreed under Item No. 2 of the ESAP, the Project Company will establish procedures to monitor the effectiveness of the mitigation measures in coordination with the O&M contractor. The latter are required to provide EHS monitoring data to the Project Company which in turn will report to both regulators as required and to its management.

21. The Project Company hired an independent auditor which reviewed the CESMP's effectiveness quarterly during construction phase. During operations, these external audits will be carried out annually. The ESMU has supported and will support these audits by responding to information requests and assisting in coordination and scheduling of site visits, if tasked to do so.

PS2: Labor and Working Conditions

22. As per the ESIA, it is mainly local workforce from the region (primarily residents of Sheberghan and nearby villages) that are employed during the construction phase. At its peak, labor forces will comprise about 70 skilled; semi-skilled and daily wage workers. Indirect job opportunities through primary supply workers will be generated for drivers, cleaners, etc.

23. The key risk associated with labor include: (i) employment and working conditions (i.e. possibility of lack of formal work contracts, lack of disability/life insurance, lack of adherence to official work hours, child laborers issue, lack of equal pay for equal work for men and women and discrimination in recruitment and employment); (ii) lack of an effective complaint handling system to address workplace and labor related concerns during construction and operation phases; and (iii) lack of adequate facilities at labor camp (access to potable water, sanitation and other facilities). To address these risks, the CESMP includes a labor management plan and age verification through the respective national Identity cards (or Tazkira). As further detailed below, the Project Company also established an effective Grievance Redress Mechanism accessible by workers/employees.

24. The Project Company recognizes the multi-faceted benefits of employing workers from surrounding villages in terms of public acceptance, social inclusion and security. It has therefore continuously closely worked with stakeholders from the surrounding villages to identify eligible individuals from the immediately surrounding villages for both direct and indirect job opportunities. According to the ESIA study, it is expected that during the operation phase, permanent employment opportunities will entail about 30-50 jobs (excluding security staff) on the project site consisting primarily of local staff with a small number of expats and contractors.

25. The Project Company and its contractors (including primary suppliers) are not employing child or use forced labor, and are compliant with local labor laws related to the protection of the workforce.

Human Resources Policies and Procedures

26. The majority of workers during construction was/is employed by the project Company. During operation of the proposed Project employment will be done by the O&M contractor.

27. Bayat Group as a whole has a Human Resources (HR) policy and procedures in place which has been adopted for use by the Project Company and applied to its staff. In doing so, the Project Company reflected the following: (i) project specific terms and conditions of employment, social dialogue, and mechanism for resolution of collective and individual labor disputes; (ii) compliance with local labor laws and PS2 requirements; and (iii) binding nature of HR requirements for contractors and third-party service providers. As described under Item No. 3 of the ESAP, the Project Company will need to ensure that its O&M contractor puts in place equivalent HR policies covering non-discrimination, equal employment opportunity, employee/workers Grievance Redress Mechanism, performance appraisals, workers' organization, workers' insurance in case of accidents, code-of-conduct relevant to local working conditions and the surrounding communities to be signed by each worker prior to commencement of works, OHS, as well as training for staff.

Workers Grievance Redress Mechanism

28. As mentioned above, a worker and public grievance mechanism is outlined under the ESIA and also forms a part of the Project Company's HR policy and procedures. In accordance with this, the Project Company established a functional GRM to address workers related grievances in an effective and efficient manner both during construction and operation phases.

29. The GRM procedures are posted on-site in the local languages and are disseminated verbally on an ongoing basis. The Project Company will periodically monitor the effectiveness of the GRM to be established at the O&M contractor level through interviews with employees and third parties. All grievances are/will be entered into a grievance database (or grievance excel-sheet) to enable tracking and review. There are multiple grievance uptake channels (including multi-level grievance redress committees (GRC)) in place for grievance registration/resolution. Beside its other members, the GRCs will also include a representative from a labor association to represent contracted labor and primary supply workers.

Occupational Health and Safety

30. The Project Company site specific health & safety plans (H&SP) for the construction phase to ensure that all applicable local health and safety legislation and all relevant requirements under PS2 and the World Bank Group General EHS Guidelines, the EHSGs for Thermal Power and the EHSGs for Electric Power Transmission and Distribution are met. As detailed under Item No. 1 of the ESAP, the Project Company is to ensure the O&M contractor puts in place H&SP for the operation phase and submits these for its approval prior to their implementation. The framework monitoring plan (see paragraph 18) adopted by the Project Company includes monitoring of the O&M contractors obligations with respect to health and safety measures.

Workers Accommodation

31. Workers are housed on-site in appropriate accommodation provided for by the Project Company so that no shuttling between nearby villages and/or Sheberghan City is necessary.

Contractor Safety and Workers Engaged by Third Parties

32. The Project Company has included provisions on EHS and labor performance in its agreements with contractors to ensure compliance of third party service providers (including private security agencies) with all applicable local health and safety legislation as well as the requirements under PS2 as well as with the Project Company's policy and procedures.

PS3: Resource Efficiency and Pollution Prevention

33. The proposed Project will use one 40 MW mobile gas turbine generator designed to burn natural gas. The balance of the plant will include a gas distribution and filtration system.

Greenhouse Gases

34. During operations the primary source of greenhouse gas (GHG) emissions will be the exhaust gases from combustion of natural gas. The expected yearly emissions rate of CO2 per unit of power generated could not be calculated yet since the precise engine specifications are yet to be included in the ESIA. The Project Company will therefore need to update the document in this respect which has been captured under Item No. 4 of the ESAP. However, typically GHG emissions for a gas-fired engine power plant are much lower than the typical GHG emission rate of power plants fired by coal or oil. In this context, it also worth noting that the proposed Project is a step towards Afghanistan's proclaimed intention to shift to natural gas and renewables by 2030 to contain some of the expected increase in the country's overall GHG emissions and to decarbonize its energy sector.

35. GHG emissions will be tracked and reported on by the Project Company on an annual basis and appropriate emissions control technology is to be put in place (compare Item No. 4 of the ESAP).

Air Emissions and Ambient Air Quality

36. During construction, emissions of dust and particulate matter from movement of vehicles, exposed soils, handling of friable material, and construction activities such as cutting and grinding are main air pollutants. During operation, there will be emissions of combustion gases from the gas turbine.

37. Air emissions and ambient air quality was monitored as part of the ESIA. The respective values are within the relevant World Bank guidelines for facilities smaller than 50MW and in compliance with WHO ambient air quality standards as presented in the World Bank as well as international standards for H2S, CO2 and BTEX emissions emitted from gas-flare.

38. As per Item No. 5 of the ESAP, the Project Company is expected to conduct supplemental air dispersion modelling. This is particularly relevant in order to assess potential cumulative effects of future expansion of the power plant.

Noise

39. The ESIA included an assessment of potential impacts due to construction and operational noise. A key consideration for assessment of noise impacts is the location of the power plant. As mentioned before, he ESIA indicates that the closest residences are located more than 10 km away so that noise impacts are expected to be minimal overall.

40. With respect to construction phase noise impacts in particular, most significant noise emissions occurred during activities involving operation of heavy equipment such as clearing, earthworks, trucking, installation of foundations etc. However, given the separation distance between the site and residences, and limiting noisy activities to daytime hours, impacts at the even at the nearest residences would be neglectable.

Water Consumption

41. During construction modest volumes of water will be needed for mixing concrete, pressure testing vessels and pipes, applying to loose-surfaced roads as a dust suppressant, and other low-volume uses. Possible sources of water during construction include local surface water for non-potable water and municipal water utility for potable water.

42. During operation the facilities will require a relatively low rate of water use. The turbine does not utilize water injection technology so the operating plant does not require any water. No additional measures are considered necessary to mitigate water use.

Liquid Effluents

43. All process water, water potential contaminated with oils and sediments, and sanitary wastes water will be treated prior to release to the environment. All internal service and floor drains, and any stormwater potentially contaminated by oils and greases, will be passed through an oil - water lamelar type separator that will be able to reduce the oil content of the water down to levels meeting World Bank Group guidelines for direct discharge to surface waters. The treated drains water will flow to a waste water collection pit.

44. Wastewater from toilets, showers and similar drains will be treated in a wastewater treatment plant. The effluent from the wastewater treatment plant will flow to a wastewater collection pit.

45. All treated effluent in wastewater collection pits will be evacuated for offsite disposal. Storm water collected in outdoor areas potentially contaminated by oil shall be routed to the oil - water separator for oil removal.

Solid and Hazardous Waste Management

46. The likely receiver for solid and hazardous wastes from the power plant is, initially, local municipal facilities approved to handle such waste nearest to the site. While measurable amounts of solid and hazardous wastes from the turbine operation are not anticipated, the Project Company is discussing with Afghan Gas Enterprise and the Ministry of Mines and Petroleum about the possibility of developing an on-site solution that would serve the amine plant, de-hydration facility, and the power plant.

PS4: Community Health, Safety, and Security

47. Project construction activities included civil works and transport of construction material for the project site. Construction activities generated minimal dust, noise pollution and vibration from additional traffic and operation of construction equipment. Potential adverse public health issues due to improperly managed solid waste or release of hazardous materials did not occur. As outlined under paragraph 18, The Project Company put in place a traffic management plan (including elements such as speed limits, haulage routes and maintenance of vehicle and construction equipment) to minimize emissions. A waste management plan for handling of solid

waste and accidentals release of hazardous material was adopted for the construction phase. With respect to the operation phase, the Project Company is to ensure that the O&M contractor does the same (see Items No. 1 of the ESAP).

Emergency Preparedness and Response

48. Apart from its own emergency preparedness and response measures during construction, the Project Company will require the O&M contractor to have in place EPRPs (see paragraph 17 and Item No. 1 of the ESAP). Emergency procedures are to be closely coordinated with the potentially affected communities and local government agencies to respond effectively to emergency situations. The contractor will ensure that critical components of the emergency plans are tested on a regular basis, including full scale emergency training exercises at least every year including jointly with local authorities.

Security Management

49. The Project Company will take the lead role for the project regarding security management. It facilitates a dedicated security manager and has generated security measures and procedures that govern site security for staff, contractors and visitors as well as transport to and from the site. These include screening of security personnel, that security personnel have permissible actions/clear procedures laid out and are trained in avoidance of human rights violations; security incidents are recorded, investigated and corrective action implemented; complaints against security personnel are investigated and disciplinary actions implemented; rules of engagement with public forces are clearly defined, and include training of security personnel regarding the use of force and conduct towards the community.

PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

50. The ESIA includes a review of the project's minimal impact on biodiversity and living natural resources and provides appropriate recommendations on management/mitigation of these impacts.