



Environmental and Social Review Summary

Concept Stage

(ESRS Concept Stage)

Date Prepared/Updated: 04/11/2019 | Report No: ESRSC00160



BASIC INFORMATION

A. Basic Project Data

Country	Region	Project ID	Parent Project ID (if any)
China	EAST ASIA AND PACIFIC	P163679	
Project Name	China Renewable Energy and Battery Storage Project		
Practice Area (Lead)	Financing Instrument	Estimated Appraisal Date	Estimated Board Date
Energy & Extractives	Investment Project Financing	5/20/2019	8/19/2019
Borrower(s)	Implementing Agency(ies)		
People's Republic of China	Huaxia Bank		

Proposed Development Objective(s)

The project development objective is to improve the performance of renewable energy (RE) through reduction of curtailment and deployment of emerging uses of RE in China, focusing on application of battery storage technology.

Financing (in USD Million)	Amount
Total Project Cost	645.24

B. Is the project being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

C. Summary Description of Proposed Project [including overview of Country, Sectoral & Institutional Contexts and Relationship to CPF]

The project is to finance a series of investment sub-projects to improve the performance of RE development in China. The investment includes different measures to reduce the RE curtailment in existing wind, solar, and hydropower stations, and deploy the new emerging uses of RE e.g. RE for heating in China, focusing on application of battery storage. Technical assistance will also be considered to build the capacity of the implementing agencies and establish enabling environment to improve RE performance. Huaxia Bank is selected as the financial intermediary to on lend IBRD loan to eligible investment sub-projects, following an agreed operation manual.

D. Environmental and Social Overview

Public Disclosure



D.1. Project location(s) and salient characteristics relevant to the ES assessment [geographic, environmental, social]
The Project will be implemented nationwide. The environmental and social (E&S) contexts will therefore differ among subprojects. Most subprojects at grid side and demand side are expected to be located in central and eastern China (e.g. Henan, Jiangsu, Hunan, Hubei, Zhejiang, etc.) which have more advanced economic and industrial development and more urgent need to stabilize power supply while reducing carbon emissions through increasing use of renewable energy (RE). Subprojects on the generation side are intended to be located in the northern and western provinces (such as Gansu, Qinghai, Xinjiang, Inner Mongolia, Shanxi, etc.). These provinces are leading in renewable energy (RE) development but now face grand challenges to explore innovative and emerging solutions to increase RE efficiency by reduction of serious curtailment problems. China's landscapes vary significantly over its vast area: extensive and densely populated alluvial plains in the east, broad grasslands in the northern Mongolian plateau, hills and low mountain ranges in the south and the deltas of China's two major rivers (Yellow River and Yangtze River) in the central-east region. Also, the climate and natural conditions in China differs from region to region because of the country's highly complex topography. In terms of socio-economic conditions, China's central and eastern provinces are generally more advanced in terms of economic development and are more densely populated compared with the northern and western provinces. Most of the central and eastern provinces are Han Chinese dominated, whilst northern and western provinces have a comparably higher population of ethnic minority groups. For example, as of 2017, ethnic minorities in Qinghai comprise of 48% of its total population, 27% in Ningxia, 64% in Xinjiang, and 23% in Inner Mongolia, compared with 8 % on national average. The investments under this project are expected to be technical components and installations that will be added to existing facilities. Most of installations will be minor in dimensions compared to existing premises and will be implemented within existing footprints or within the perimeters of existing facilities (such as power generation facilities, substations or consumers). No significant expansion or additional land take or conversion is expected to be required. At current concept stage, the preliminary subproject list keeps evolving, and E&S context of the project will be further reviewed during project preparation and implementation subject to availability of further information on project geographical coverage and concentration.

D. 2. Borrower's Institutional Capacity

Huaxia Bank (HXB) is the responsible Financial Intermediary (FI) for implementing the project, who has worked with World Bank and other international financial institutions (e.g., AFD) since 2008 in the areas of renewable energy, energy efficiency and air pollution control. By 2017, a total investment of 7.2 billion RMB has been made through HXB on 66 nationwide subprojects with international financing, contributing to energy saving of 4.25Mtce and emission reduction of 9.59million tCO₂e by estimate. These investments fit HXB's consistent efforts on green financial services in response to the state's loan policy and economic restructuring requirements. Following China's Green Credit policy, HXB has started the development of green finance business since 2012 with the issuance of "Interim Measures of HXB for the Management of Green Credit Business", which was revised and formalized in August 2016; facilitated by the Bank-financed PforR program, a Green Credit Center was established in December 2016 to lead and coordinate the green financing activities within HXB; in 2017, HXB was honored with the "Best Green Finance Award" by the China Banking Association. HXB has acquired extensive experience on E&S risk management through preceding World Bank and AFD funded projects. Since 2008, HXB has started to develop its ESMS system under the Bank-financed CHEEF program (Phase I) by adopting the World Bank's safeguards policies and mainstreaming the E&S requirements into the project Operational Manual (OM). During the preparation of second Bank-financed PforR program, its ESMS was reviewed with recommendations proposed for further strengthening, including the establishment of Green Credit Center. The PforR program is still being implemented with satisfactory E&S performance. HXB's institutional arrangements for E&S management has substantially enhanced since the establishment of Green Credit Center at the head office with the extension to relevant units at the branches. The center takes the primary responsibilities to (a) lead and coordinate bank-wide green financing activities (b) set up internal green lending procedures; (c) liaise with



government and financial agencies on the updates of green finance policies and regulations; and (d) provide training to staff responsible for green finance business. In addition to the full-time E&S management staff in the center, external specialists have been engaged for E&S management and monitoring of Bank-financed activities. Currently, the E&S management procedure is embedded in the normal loan operation process, from loan application, to loan approval, and until implementation supervision. Staff representatives from HXB participated in the ESF awareness training organized by the World Bank in July 2018. Nevertheless, staff expertise and capacity to meet the latest ESF requirements, particularly related to ESS1, ESS4, ESS7, ESS9 and ESS10, needs to be further assessed during project preparation. A value addition of the Project will be the enhancement and maintenance of HXB's existing ESMS to assure it is in alignment with ESF and proportionate to project risks, which will be operated in parallel with HXB's existing system. A further review of HXB's current ESMS against the new ESF (especially ESS9) will be carried out and the appraisal stage ESCP will specify the action plans to enhance E&S management capacity in response to the ESF requirements. For example, the enhanced ESMS will be designed to guarantee management commitments on adequate financial and human resources for ESMS implementation; TA activities under this Project will support HXB to further strengthen internal and external expertise and capacity on E&S management; and the ESMS will also include the requirements and procedures to assess, monitor and report the sub-borrower's capacity for, commitment to and performance on E&S management in alignment with relevant ESSs throughout the lifecycle of the subproject.

II. SCREENING OF POTENTIAL ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC)

Substantial

Environmental Risk Rating

Substantial

Energy storage systems can provide indirect environmental benefits through the improvements of energy resilience and efficiency and the increased use of clean electricity from renewable sources. The proposed subprojects (mostly Battery Energy Storage System) are not complex with small size of footprint. The environmental risks anticipated are mainly fire and explosion risks and environmental hazards related to the disposal of used batteries containing hazardous waste. The environmental risk is rated substantial considering limited availability of information on the adequacy of applicable Chinese regulations at the concept stage. Further elaboration is provided below.

A - type, location, sensitivity and scale of the Project: Moderate

Based on the project concept design and the provided list of potential subprojects, most of the anticipated investments will focus on the installation of Battery Energy Storage Systems (BESS) with the capacity of 1MWH~400MWH. Only mature and commercialized technologies will be accepted for project financing. Although the specific information on subprojects such as location and scale are unknown at this concept stage, the proposed subprojects are not complex, and the footprint size of proposed subprojects is small. The subprojects are to be installed in the footprints or parameters of existing facilities in industrial and developed areas, which are likely to be away from environmentally sensitive areas.

B - nature and magnitude of the potential ES risks and impacts: Substantial

Potential negative impacts of electricity storage will depend on the type and efficiency of storage technology. Different battery technologies involve materials that pose environmental and safety risks throughout their lifecycle from resources extraction, processing, manufacturing, transportation and installation through to operation, recycling and disposal. The fire and explosion risks and waste disposal issues during operation are the top two environmental



issues. Though China has promulgated the regulations on the life cycle management for batteries and electrical apparatus, the risks may increase exposure as new or inexperienced SMEs and individuals deploy distributed user-systems in disparate locations at proximity to people and communities. These can be addressed by enforcement of appropriate standards and strict eligibility criteria of sub-projects to be developed during project preparation.

C - capacity and commitment of the Borrower: Moderate

HXB has tracked experiences for successfully implementing World Bank projects. Its institutional arrangement for managing E&S risks have been substantially enhanced since the establishment of Green Credit Center under World Bank funded PforR program. HXB has also mainstreamed most of World Bank safeguard requirements into its own lending risk management. Although HXB is among the first to implement ESF requirements in China, the management is highly committed to provide financial resources and mobilize external specialists to bridge gaps in terms of E&S management and ensure the project follows both domestic legal regulations and the new ESF. HXB will designate a senior management representative to have overall accountability for E&S performance of FI subprojects, including the implementation of ESS9 and ESS2 and resources necessary to support such implementation.

D - other areas of risk that may be relevant: Moderate

For the proposed BESS subprojects, it is understood that batteries will be manufactured, delivered, installed and recycled by the primary producers, who would therefore play a critical role in the appropriate management of E&S risks and impacts through responsible life cycle management of their battery products. Chinese government has promulgated and enforced regulations on the implementation of Extended Producer Responsibility (EPR) for batteries sector since 2016, and associated E&S risks are deemed moderate under existing legal framework.

Social Risk Rating

Moderate

Most of installations will be minor in dimensions compared to existing premises and will be implemented within existing footprints or within the perimeters of existing facilities (such as power generation facilities, substations or consumers). Potential displacement impact and direct adverse impact on ethnic minorities is considered low risk. However, a multitude of projects located close to vulnerable communities may give rise to limited degree of social conflict, harm, human security risk associated with perceptions of community endangerment and non-receipt of benefits. The social is rated Moderate because it is can be mitigated through strict eligibility criteria of sub-projects, as well as enforcement of culturally appropriate stakeholder engagement and appropriate standards. Further elaboration is provided below:

A - type, location, sensitivity and scale of the Project: Moderate

Some BESS may be installed for existing solar/wind farms in northern and western areas with the presence of ethnic minorities around for grazing. As spatial demands of the project investments are likely minor and BESS will be installed within the boundaries of existing RE project, potential direct adverse impacts on ethnic minorities are deemed to be low risk. However, a multitude of projects located close to vulnerable communities may give rise to limited degree of social conflict, harm, human security risk associated with perceptions of community endangerment and non-receipt of benefits. This can be mitigated through strict eligibility criteria of sub-projects and enforcement of culturally appropriate stakeholder engagement.

B - nature and magnitude of the potential social risks and impacts: Moderate

Most of the subproject sites will be within the footprint or the parameters of existing facilities in industrial and developed areas. The project is expected to result in limited land acquisition and low risk direct impact on contracted



workers and local communities during construction period. Community safety risk are linked to explosion, fire and electric shock, which will be strictly managed during operation under China current regulatory framework and ESSs. Concerns on potential social conflict associated with perceived community endangerment can be managed through enforcement of stakeholder engagement. The social impacts and risks are generally site specific, low probability of serious effects to people, and can be easily mitigated in a predictable manner.

C - capacity and commitment of the Borrower: Moderate

HXB has tracked experiences for successfully implementing World Bank projects. Its institutional arrangement for managing E&S risks have been substantially enhanced since the establishment of Green Credit Center under World Bank funded PforR program. HXB has also mainstreamed most of World Bank safeguard requirements into its lending risk management. Although HXB is among the first to implement ESF requirements in China, the management is highly committed to provide financial resources and mobilize external specialists to bridge gaps in terms of E&S management and ensure the project follows both domestic legal regulations and new ESF. HXB will designate a senior management representative to have overall accountability for E&S performance of FI subprojects, including the implementation of ESS9 and ESS2 and resources necessary to support such implementation.

D - other areas of risk that may be relevant: Moderate

For BESS, it is understood that batteries will be manufactured, delivered, installed and recycled by the primary producers, who would therefore play a critical role in the appropriate management of E&S risks and impacts through responsible life cycle management of their battery products. Chinese government has promulgated and enforced regulations on the implementation of Extended Producer Responsibility (EPR) for batteries sector since 2016, and associated E&S risks are deemed moderate under existing legal framework.

B. Environment and Social Standards (ESSs) that Apply to the Activities Being Considered

B.1. General Assessment

ESS1 Assessment and Management of Environmental and Social Risks and Impacts

Overview of the relevance of the Standard for the Project:

E&S screening was based on (i) initial information collected from HXB on its E&S risk management approach; (ii) HXB's tracked E&S performances records under CHEEF program and PforR program; (iii) site visits to selected battery storage systems at grid and demand sides; (iv) consultation with specialists from China Energy Storage Association and developers/operators of energy storage projects. The proposed energy storage investments are anticipated with indirect environmental benefits, including the improvements of energy resilience and efficiency and the decrease of CO2 emission through the integration of more clean electricity from renewable sources. At the same time, potential negative environmental impacts and safety risks are also expected depending on the type and efficiency of energy storage technology to be adopted. For BEES, different battery technologies involve distinct environmental and safety hazards throughout their lifecycle, such as fire and explosion hazards, chemical toxicity and accidental pollution, electrical shock risks and so on. For example, the Li batteries have limited environmental impacts but present high fire and explosion risks during manufacture, storage, transportation, use, recycling and disposal; the Lead-Acid batteries use lead with significant toxicity and must be recycled; and for flow batteries, large-sized holding tanks for electrolytes should be carefully designed to avoid any toxic leakage. To support the development of energy storage sector, China has promulgated the regulations on the life cycle management for batteries and electrical apparatus , along with technical standards to support safety design and operation of energy storage stations, whose application



was deemed appropriate and sufficient according to the visits of BEES projects in He'nan and Jiangsu during the identification mission. However, the risks may increase exposure as new or inexperienced SMEs and individuals deploy distributed user-systems in disparate locations at proximity to people and communities. Any major risk can be addressed by enforcement of appropriate standards and strict eligibility criteria of sub-projects. The investments under this project are expected to be technical components and installations that will be added to existing facilities. Subprojects are expected to be small in physical dimension. Installation of BBES will be implemented within existing footprints or within the perimeters of existing facilities (such as power generation facilities, substations or consumers). It is unlikely to result in direct physical or economic displacement because no significant expansion or additional land take or conversion is expected. Initial due diligence identified HXB has built organizational structure and capacity for assessment and management of certain E&S risks under the preceding Bank-funded projects, and the requirements on E&S management are embedded into HXB's current Green Credit Guidelines (GCG). During preparation, World Bank will further assess the adequacy of HXB's existing ESMS, inter alia on the aspects such as environmental and social assessment, labor and working conditions, community health and safety, ethnic minorities, stakeholder engagement and grievance redress. A sound Environmental and Social Management System (ESMS) will be proposed for HXB to incorporate all the proposed actions to enhance HXB's current E&S risk management system for the design, construction and operation of proposed project activities. Following both domestic regulations and the World Bank's Environmental and Social Framework, the ESMS will include subproject eligibility criteria and exclusion list, procedures for screening all subprojects for E&S risks and impacts and designing assessment and mitigation for high or substantial subprojects in accordance with relevant ESSs, a framework for monitoring and reporting on the ESMS implementation, and institutional arrangement for staffing and capacity building. During preparation, the World Bank will further assess the relevance of ESSs for this project and verify that HXB has established an ESMS consistent with ESS9 and proportionate to the project risk. Based on the concept-stage findings, the ESMS will also include: i) Review of Chinese existing regulatory framework and their enforcement related to energy storage sector, along with mechanisms proposed to fill any major gaps if identified; and ii) Due diligence report of main battery producers and battery disposal sites as the attachment to support necessary actions proposed in the ESMS/ESCP if any, for example, adopting sustainable sourcing requirements in the project's procurement arrangements. Prior to the project appraisal, HXB will prepare an Operational Manual (OM) incorporating ESMS processes and procedures and commit to the ESMS implementation in the ESCP. To address E&S capacity gaps, HXB is required to establish a timebound capacity development plan on ESMS implementation and include it in the ESCP. In addition, for any TA activities under the project, HXB should incorporate reference to the E&S Standards in the TORs to ensure that activities and outputs are consistent with the ESF. The ESMS will be designed with appropriate mechanism of disclosure and public consultation following the ESS10 requirements and the Stakeholder Engagement Plan (SEP) will be made available prior to appraisal, as elaborated in the ESS10 section below.

Areas where reliance on the Borrower's E&S Framework may be considered:

Since energy storage is a recently emerging sector, the applicability of existing E&S legal framework in China needs to be further reviewed in comparison to the ESF and its associated environmental and social standards during the ESMS preparation. A value addition of this project will be the enhancement of HXB's exiting ESMS and strengthening of HXB's E&S capacity consistent with the requirements of the ESF and commensurate with the level of risk, under which all subprojects will be prepared and implemented in accordance with national laws and regulations, with relevant ESS requirements applying to subprojects classified as substantial risk. In addition, to address any potential gaps beyond HXB's capacity, an institutional component has been designed as part of the project supported with a GEF grant to strengthen the legislation in battery energy storage sector and to provide technical assistance on battery



manufacturing and recycling, and the National Energy Administration will be responsible for the implementation of this component.

ESS10 Stakeholder Engagement and Information Disclosure

Primary stakeholders identified for the Project would include the responsible FI (HXB), sub-borrowers under this project, entities to be installed with energy storage systems (e.g. grid company, RE developers, etc.), communities located close to the subprojects, suppliers of batteries and equipment, contractors for construction and equipment transportation, vendors for disposal of waste batteries, project beneficiaries, sector specialists (including Energy Storage Association) and relevant government authorities for approval of subprojects. Namely, the responsible government bureaus would include, but not limited to Power Bureau (for approval of grid access), Ecological and Environmental Protection Bureau, Fire-fighting Brigade, Administration of Work Safety, Natural Resources Bureau and Ethnic Minority and Religious Bureau (for confirming status of ethnic minorities in subproject areas). Initial due diligence identified grid companies, big data centers, industrial parks, enterprises and the public will benefit substantially from the Project. Prior to the Appraisal, HXB will develop a Stakeholder Engagement Plan (SEP) consistent with the requirements of ESS10. The Responsible FI (HXB) and its sub-borrowers will put in place, as part of the ESMS, procedures for stakeholder engagement and external communications on E&S matters proportionate to the risks and impacts of project activities consistent with the requirements of ESS9. The ESMS will also include establishing and maintaining systems to respond to public enquiries and to ensure concerns are recorded and responded to on a timely basis.

B.2. Specific Risks and Impacts

A brief description of the potential environmental and social risks and impacts relevant to the Project.

ESS2 Labor and Working Conditions

This project is classified as a FI project and ESS2 applies to the responsible FI itself. HXB has designated HR departments at headquarter and branches to handle labor related issues. It has set up and maintained in place a comprehensive labor management system, providing clear documented guidelines and procedures for employee hiring, labor contract management, employee training, wage payment and welfare, social security and pension benefits, health examination, worker's organization, and grievance redress. HXB's HR policies are centrally managed by the headquarter and are applicable to all direct employees. Initial Due diligence found that the labor management system is following China's Labor Law (amended in 2009) and Labor Contract Law (amended in 2012) and generally in conformance with relevant requirements on direct workers under ESS2. In addition, HXB is listed on Shanghai stock exchange and required to disclose its performances on labor and working conditions through annual Corporate Social Responsibility (CSR) Report to the public. The client's HR system is deemed adequate and appropriate. This project will rely on HXB's labor management system for managing labor related issues of responsible FI. Regarding subprojects, a special feature of storage facility is that batteries are installed in pre-made containers, without major construction work onsite. Due diligence to selected battery storage stations at grid and customer sides identified construction of a typical station (10MW/20MWh) would only last 1-2 months with the involvement of very few construction workers. Once entering full operation, the station will be monitored through remote control without on-duty staff at the station. Community workers are unlikely to be engaged in consideration of technical nature for constructing and operating battery storage stations. The risk of forced labor, child labor or health and safety



regarding primary suppliers is low considering China’s comprehensive regulations on labor protection and increasingly strengthened labor inspection by local authority. The labor and working conditions for the primary suppliers are subject to further assessment during preparation. In general, China’s existing legal system to improve occupational health and safety and to prevent forced labor and child labor fully apply to all types of workers. At this stage, no significant risks on labor and working conditions are envisaged considering the natural of the project. Relevance of ESS2 to FI subprojects will be further reviewed during FI subproject screening and preparation. Despite the existence of hazardous substances (lead, acids and so on) in the batteries, the risk of accidental exposure by workers on subproject sites is generally low considering the high automation level of BESS and the applicable Chinese regulations on labor protection. However, HXB’s ESMS will require to screen for risks and impacts on labor and working conditions in its E&S Screening process and to apply the relevant requirements of ESS2 where subprojects are found to have significant risks or impacts on working conditions. The ESMS will also have provisions to identify goods and services that may constitute primary suppliers and assess as per ESS2 and ESS6.

ESS3 Resource Efficiency and Pollution Prevention and Management

The proposed energy storage investments are designed to reduce curtailment and deploy new emerging use of RE in China, which is thus anticipated with overall positive impacts on the improvements of energy efficiency and the reduction of greenhouse emission. However, used batteries are identified as hazardous waste with damage to humans and environment if without proper disposal. Existing requirements for management (including storage, transportation and disposal) of hazardous wastes will be followed, including national legislation and applicable international conventions. Chinese government has promulgated the regulations on the life cycle management of batteries and electrical apparatus to promote the implementation of extended producer responsibility system and ensure appropriate recycling and disposal of used batteries by manufacturers and competent vendors. During preparation, relevant domestic regulations and their enforcement will be reviewed against the requirements of ESS3 and the World Bank’s applicable Environmental, Health and Safety Guidelines to confirm the adequacy of existing system for battery management and recycling in China. Necessary actions may be proposed in the ESCP at the appraisal stage if any major gap is identified. Since battery production and disposal are deemed critical in the management of potential E&S risks and impacts in the sector, due diligence will be conducted during project preparation to review the overall E&S performance of main battery producers and battery disposal sites in the market and the DD report will be attached to the project ESMS to support mitigation measures and actions proposed in the ESMS/ESCP.

ESS4 Community Health and Safety

The grid-side and demand-side subprojects will possibly be located adjacent to residential areas. Given the small size of subprojects, only a limited number of workers will be introduced to the site for construction during a very short period (1-2 months). Thus the project-resulted disturbance to local communities will be very limited during construction phase. However, the operation of neighboring energy storage system may expose nearby communities to additional fire, explosion and electrical shock hazards associated with batteries and electrical systems. In addition, the operation of BESS will lead to the limited increase of noise level around the station. Following current practice in China, safety assessment, firefighting review and environmental impact assessment will be conducted for all the project activities before implementation to ensure the integration of all the necessary safety measures into the project design, including minimum safety distance (with reference to the specifications for substations), container



requirements, illumination system, air-conditioning and ventilation systems, fire-extinguishing systems, controlling systems, earthing systems, access control systems, electrical wiring, safety manual, noise abatement measures, etc. During preparation, relevant domestic practice will be reviewed against the requirements of ESS4 and the World Bank’s applicable Environmental, Health and Safety Guidelines to confirm the adequacy of existing system in China. Necessary actions may be proposed in the ESCP at the appraisal stage if any major gap is identified.

ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

Except for installing BESS, other categories of project investment activities don’t have implications on the physical footprint. Batteries are housed for safety in multiple-storied warehouses or in containers. The former situation almost always happens at demand side, for example in industrial parks, for saving land. Due diligence found that one typical 10 MW/20MWh lithium-ion BESS (batteries in containers) occupies a footprint area ranging from 900 -1,300 m². Lithium-ion batteries has the smallest installation footprint when compared to other technologies for a similar energy capacity. Several distributed battery storage stations can integrate into a larger utility-scale system. Minor temporary displacement may also arise in case new designated power transmission lines are required to be built to connect energy storage systems to substations/power distribution grids. Overall, the project will have limited displacement impact because the BESS are intended to be installed within existing footprint or within the perimeters of existing facilities (e.g. substations, plants, industrial parks, solar/wind farm sites). When existing land does not have appropriate size to site proposed BESS, leasing adjacent municipal or industrial land (if possible) is preferred than acquiring new land. In case new land acquisition happens, the displacement risks and impacts by installation of BESS are anticipated to be low to moderate in consideration of the general nature, size and location of BESS. HXB will enhance its current procedure for land due diligence review and monitoring (established under PforR program) and incorporate it into the ESMS for this project. The policy framework established as part of the FI’s ESMS will include provision of resettlement principles, organizational arrangements, and design criteria to be applied to relevant subprojects during project implementation. During implementation, HXB will conduct screening for identification of resettlement impacts and risks. All subprojects involving minor resettlement should be prepared and implemented according to national regulations. For subprojects with the resettlement risk classified higher than minor, relevant requirements of ESS5 are should be met. The ESMS will define “minor” resettlement in consideration of regulatory context and the requirements of ESF. Relevance of ESS5 to subprojects will be further reviewed during FI subprojects preparation.

ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

Based on field visits and sector survey, most of the BEES projects are to be installed in existing facilities in industrial and developed areas, which are likely to be away from environmentally sensitive areas. In addition, under the proposed ESMS, all subprojects will be screened against the exclusion list to eliminate the activities situated in any nature reserve, critical natural habitat or scenic site. Relevance of ESS6 will be further reviewed during subprojects preparation.

ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

The Project would have a national wide coverage and several western and some northern and western regions (e.g. Qinghai, Ningxia, Xinjiang, Inner Mongolia, etc.) with a higher composition of ethnic minorities will be potentially



involved inter alia. A quick desktop study indicates solar/wind farms in western areas are prone to be sited in undeveloped areas or Gobi desert, away from communities. In some circumstances, the solar/wind farms would have the presence of ethnic minorities around (e.g. for grazing). As spatial demand of BESS is generally small, and the BESS are to be installed within the existing boundaries solar/wind projects, potential adverse impacts on ethnic minorities are considered low risks. At current concept stage, ESS7 is expected to be relevant to the Project in consideration of potential sensitive locations of certain subprojects and in the design of culturally appropriate stakeholder engagement. Regarding specific FI subprojects, applicability of ESS7 will be further assessed through subproject screening. HXB will enhance relevant elements on ethnic minorities in its E&S Risk Screening procedure. The policy framework established as part of the FI's ESMS will include elements consistent with an ethnic minority development framework and these should be informed by consultations with ethnic minorities prior to Appraisal. During implementation, HXB will conduct screening for identification of ethnic minorities based on the information collected from the applicants. World Bank will confirm the screening results. If the ESS7 is confirmed to be relevant to a subproject, HXB will take measures to ensure relevant requirements of ESS7 are met.

ESS8 Cultural Heritage

Subprojects at grid and demand sides unlikely involve risks or impacts on tangible or intangible cultural heritage because they are usually installed on existing municipal and industrial land. Regarding subprojects at generation side, potential impacts on cultural heritage (if any) can be identified during subproject screening and due diligence review and should be avoided or otherwise mitigated during preparation. HXB's ESMS is required to screen for risks and impacts on cultural heritage in its E&S Screening process and to apply the relevant requirements of ESS8 where subprojects are found to have significant risks and impacts on cultural heritage. Relevance of ESS8 will be further reviewed during FI subprojects preparation.

ESS9 Financial Intermediaries

This project is classified as a FI project. HXB is the responsible FI, which will on-lend the fund to eligible subprojects in alignment with the objective to improve efficiency of RE development. As discussed in Section B1, HXB will establish an ESMS consistent with the requirements of ESS9 and proportionate to the project risks. The ESMS as defined in ESS9 should include: (a) E&S policy, (b) E&S procedures (exclusions, screening, categorization, assessments and plans to prepare), (c) capacity for assessing, managing, and monitoring risks and impacts of subprojects and designation of a responsible senior management position for reporting; (d) monitoring and review of E&S risks of subprojects and the portfolio, and (e) external communication mechanisms. HXB is committed to firstly adopted the ESMS for the World Bank financed project and later expand it to other projects in FI's portfolio progressively when experience for running the ESMS is amassed by HXB. All subprojects will be screened against the exclusion list (to be established during preparation and including E&S eligibility) and assessed for their E&S risks and impacts prior to financing under this project. The screening and categorization procedure, as part of ESMS, will review and categorize the subprojects based on their E&S risks. Any subprojects involving potential land acquisition and resettlement; or adverse risks or impacts on Indigenous Peoples; or significant risks or impacts on the environment, community health and safety, labor and working conditions, biodiversity or cultural heritage are to be classified as high or substantial. High risk subprojects will be excluded at the screening stage and ineligible for project financing. All the project-supported subprojects will be prepared and implemented according to national regulations. For all the subprojects with substantial risks, the ESMS should include processes to notify World Bank prior to making investment decisions and



contain procedures to ensure requirements of relevant ESSs are met. To address E&S capacity gaps, HXB is required to establish a timebound capacity development plan on ESMS implementation and include it in the appraisal stage ESCP. HXB will submit to the Bank semi-annual Environmental and Social Reports on the implementation of its ESMS.

B.3 Other Relevant Project Risks

At this stage, there are no other specific risks of relevance for the project.

C. Legal Operational Policies that Apply

OP 7.50 Projects on International Waterways No

OP 7.60 Projects in Disputed Areas No

III. WORLD BANK ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

A. Is a common approach being considered? No

Financing Partners

Not applicable.

B. Proposed Measures, Actions and Timing (Borrower’s commitments)

Actions to be completed prior to Bank Board Approval:

- Establish subproject exclusion list (including E&S eligibility).
- HXB to develop an ESMS consistent with ESS9. The ESMS should be detailed in the operations manual.
- HXB to develop a SEP consistent with ESS10
- Screening reports and assessments of legacy or new subprojects consistent with the ESMS and demonstrating its resourcing and functionality

Possible issues to be addressed in the Borrower Environmental and Social Commitment Plan (ESCP):

- HXB will develop a timebound E&S capacity enhancement plan.
- HXB will designate a senior management representative to have overall accountability for E&S performance of FI subprojects
- HXB will implement ESMS consistent with ESS9
- Sub-borrower will apply relevant requirements of ESSs
- HXB will report to the Bank and agree on measures and actions if a subproject risk profile increases significantly at any stage during the life of the project

C. Timing

Public Disclosure



Tentative target date for preparing the Appraisal Stage ESRS

28-Feb-2019

IV. CONTACT POINTS

World Bank

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VI. APPROVAL

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Public Disclosure



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Jie Tang (PMGR) Concurred on 11-Apr-2019 at 13:06:58