



Environmental and Social Compliance Audit

February 2020

THA: Southern Thailand Wind Power and Battery Energy Storage Project

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ABBREVIATIONS

ADB – Asian Development Bank

NOTE

- (i) In this report, "\$" refers to United States dollars.

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Report on Environmental and Social Compliance Audit (ESCA)

**Lomligor 10MW Wind Power Project in
Nakhon Si Thammarat, Thailand**

13 February 2020

Project No.: 0519188

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Report on Environmental and Social Compliance Audit (ESCA)

Lomligor 10MW Wind Power Project in Nakhon Si Thammarat, Thailand

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Acronyms and Abbreviations

Name	Description
ADB	Asian Development Bank
ADB SPS	Asian Development Bank Safeguard Policy Statement
Applicable Standards	Applicable laws and relevant ADB and international standards
Bangchak	Bangchak Corporation Public Company Limited
BCPG	BCPG Public Company Limited
BSE	Bangchak Solar Energy Company Limited
CAP	Correction Action Plan
COD	Commercial Operation Date
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
ESMP	Environmental & Social Management Plan
EPC	Engineering Procurement and Construction
EPP	Environmental Protection Plan
ERM	ERM-Siam Company Limited
ERP	Emergency Response Plan
ERT	Emergency Response Team
E&S	Environmental and Social
ESCA	Environmental and Social Compliance Audit
ESS	Energy Storage System
GAD	Gender and Development
HR	Human Resource
Goldwind-HK	Goldwind International Holdings (HK) Limited
Goldwind-Thai	Goldwind International (Thailand) Company Limited
IEE	Initial Environmental Examination
IFC	International Finance Corporation
ILO	International Labour Organization
IP	Indigenous Peoples
IUCN	International Union for Conservation of Nature and Natural Resources
LLG	Lomligor Company Limited
OHS	Occupational Health and Safety
PPA	Power Purchase Agreement
SEA	Strategic environmental assessment
SEP	Stakeholders Engagement Plan
SGC	SGC Wind Energy Company Limited
SVG	Static Var Generators
WBG	World Bank Group
WTG	Wind Turbine Generator

EXECUTIVE SUMMARY

Background

The Asian Development Bank (“**ADB**”) is considering an investment opportunity in the Lomligor Wind Energy Project (“**the Project**”). The Project, already an operating facility, is a 10-MW wind farm located in Pak Phanang District in Nakhon Si Thammarat Province. It is operated by Lomligor Company Limited (“**LLG**”), a wholly owned subsidiary of BCPG Public Company Limited (“**BCPG**”). LLG has subcontracted Goldwind International (Thailand) Company Limited (“**Goldwind-Thai**”) to provide supporting technical services and maintenance. Construction completed in March 2018, and the Project commenced commercial operations on 11 April 2019. To support its decision-making process, BCPG has commissioned ERM-Siam Company Limited (“**ERM**”) to conduct an environmental and social compliance audit (“**ESCA**”) of the Project against applicable laws and relevant ADB standards (“**the Applicable Standards**”).

Scope of Work

The scope of work of the ESCA included:

- A review of documents and information relating to the Project that have been publicly disclosed or provided to ERM;
- A site visit including site inspection and interviews with relevant stakeholders;
- An assessment of gaps against Thai laws and applicable international treaties, ADB Safeguard Policy Statement (SPS 2009), ADB Social Protection Strategy (2001), ADB Gender and Development Policy (1998), ADB Public Communications Policy (2011), World Bank Group General EHS Guidelines (2007), World Bank Group EHS Guidelines for Wind Energy (2015), World Bank Group EHS Guidelines for Electric Power Transmission and Distribution (2007), the International Covenant on Economic, Cultural, and Social Rights, and relevant ILO Core Labour Standards Conventions;
- Based on the above, preparation of corrective action plans to close gaps, if any.

The ESCA was conducted following the agreed scope of work as defined in ERM’s proposal 0509449-Rev 0 dated 16th August 2019.

The ESCA encompassed the following tasks detailed below:

- Task 1: Project Inception Meeting with Stakeholders;
- Task 2: Environmental and Social Compliance Audit; and
- Task 3: Reporting.

Project Categorization

The Project consists of 4 x 2.5MW wind turbine generators (“**WTGs**”), an underground internal transmission line, a main building containing a meeting room, a control room, an energy storage system (“**ESS**”) room, static var generators (“**SVG**”), a garage, and a warehouse building. All facilities are located across an area of approximately 21.3 ha in Pak Phanang District in Nakhon Si Thammarat Province (“**Project Area**”).

Within the 3-km radius of the Project Area are 17 villages in Sub-Districts Bang Phra, Baan Perng, and Tha Praya. The Project Area was formerly used as farmland by local communities.

The Project Area is not located within conservation areas or critical habitats. There are some potential adverse environmental impacts such as impacts on native bird species and noise levels. The onsite visit confirmed that albeit rare, there have been observances of birds flying into the wind turbines. Interviewed village members also reported hearing noises from the wind turbines during quiet hours. As these impacts are site-specific and can be mitigated, ERM considers that the ADB would categorize the Project activities as Category B for Environment.

There are no Indigenous Peoples (“IPs”) living in the Project Area currently nor prior to Project development. According to the Portal of Indigenous Peoples Information in Thailand, a public database developed by indigenous groups and academic institutions, there are no IPs living in Nakhon Si Thammarat Province. ERM has thus not received or identified any evidence that suggests Indigenous Peoples would be impacted by Project activities. ERM considers that the ADB would categorize the Project activities as Category C for Indigenous Peoples.

BCPG acquired LLG in June 2018. All of the Project Area land belonged to LLG prior to BCPG’s acquisition of LLG. This land was previously made up of 26 land parcels owned by small landowners from the local villages. LLG provided land sales and purchase agreements as evidence that all of these parcels were acquired through a consensual sale and purchase process between 2016-2018. The onsite visit and interviews with village heads confirmed that there have been no complaints made about these transactions. It is thus understood that there was no involuntary land acquisition involved. ERM considers that the ADB would categorize the Project activities as Category C for Land Acquisition.

Key E&S Areas of Improvement and Timeline

To address performance gaps against the Applicable Standards, ERM proposes that LLG develop an Environmental and Social Management Plan (“ESMP”) for the project. The ESMP should a) identify risks and impacts; b) have a defined institutional structure for management of the identified risks/impacts; c) include documentation, monitoring and reporting parameters for risk mitigation; and d) include training needs for staff and contractors to manage EHS and social issues of the project that align with the Applicable Standards. Additionally, LLG should also implement grievance redress mechanism and human resources policy that meet the Applicable Standards. These actions are included in corrective action plan (“CAP”), and LLG is required to execute them in order to comply with the Applicable Standards.

ERM has also provided additional recommendations that were discussed during the onsite visit. These recommendations are not required to close the performance gaps, but strongly advisable.

More detailed description of the CAPs and additional recommendations are provided in the table below.

Ref	Corrective Action	Timeline
Environmental and Social Management		
1	<p>Develop and implement an operational environmental and social management plan (ESMP) commensurate with the level of environmental and social risks and impacts of the project.</p> <p>The ESMP should a) identify risks and impacts; b) have a defined institutional structure for management of the identified risks/impacts; c) include documentation, monitoring and reporting parameters for risk mitigation; and d) include training needs for staff and contractors to manage EHS and social issues of the project.</p>	An ESMP prior to the first disbursement
2	<p>Establish and implement programme for:</p> <ul style="list-style-type: none"> Avifauna and Bat monitoring: This should include a monitoring programme (commensurate with the risks/impacts) for assessment and mitigation of potential impacts on birds and bats. 	Prior to first disbursement and ongoing

Ref	Corrective Action	Timeline
	<ul style="list-style-type: none"> Quarterly noise monitoring to assess and verify the noise levels at nearby sensitive receptors (e.g. nearest school, village). Where high noise levels are found, appropriate mitigation measures may need to be implemented. 	
3	Develop and implement a communication and grievance redress plan for managing complaints and grievances (internal as well as external, if any) resulting from the operations of the project. This plan/system should be gender inclusive and cover all employee and contractor staff. Information about this should be widely disseminated amongst stakeholders.	Prior to first disbursement and ongoing

Labour and Working Conditions

4	Develop and implement a human resources policy (for both staff and contractors) that clearly commits to statutory requirements and core labour standards ¹ The HR policy shall also include anti-sexual harassment policy, including an effective and accessible harassment reporting mechanism, a private and fair investigative process, a fair and transparent redress system and annual training delivered to all staff.	Q4 2021.
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¹ <https://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm>

1. INTRODUCTION

1.1 Background and Objectives

The Asian Development Bank (“**ADB**”) is considering an investment opportunity in the Lomligor Wind Energy Project (“**the Project**”). The Project is a 10-MW wind farm located in Pak Phanang District in Nakhon Si Thammarat Province. It is operated by Lomligor Company Limited (“**LLG**”), a wholly owned subsidiary of BCPG Public Company Limited (“**BCPG**”). LLG has subcontracted Goldwind International (Thailand) Company Limited (“**Goldwind-Thai**”) to provide supporting technical services. Construction completed in March 2018, and the Project commenced commercial operations on 11 April 2019. To support its decision-making process, BCPG has commissioned ERM-Siam Company Limited (“**ERM**”) to conduct an environmental and social compliance audit (“**ESCA**”) of the Project against applicable laws and relevant ADB standards (“**the Applicable Standards**”).

ERM understands that the overall objective of this ESCA is to provide an independent and objective assessment of the potential environmental and social (“**E&S**”) issues associated with the Project against the Applicable Standards, including:

- Thai laws and applicable international treaties;
- ADB Safeguard Policy Statement (SPS 2009), ADB Social Protection Strategy (2001), ADB Gender and Development Policy (1998), ADB Public Communications Policy (2011);
- World Bank Group General EHS Guidelines (2007), World Bank Group EHS Guidelines for Wind Energy (2015); and the World Bank Group EHS Guidelines for Electric Power Transmission and Distribution (2007); and
- International Covenant on Economic, Cultural and Social Rights and relevant ILO Core Labour Standards Conventions.

The Assessment has sought to identify E&S gaps or issues in accordance with the aforementioned Applicable Standards. These gaps or issues are proposed to be addressed through a Corrective Action Plan (“**CAP**”) to be agreed by all parties as a condition to financing.

1.2 Project Overview

The Project consists of 4 x 2.5 MW wind turbine generators (“**WTGs**”) at 90 m hub height located in Pak Phanang District of Nakhon Si Thammarat Province. The Project can be accessed through a public road. Within the Project Area, which is wholly owned by LLG, are also other facilities including an internal transmission line, a main control building containing a meeting room, a control room, an energy storage system (“**ESS**”) room, static var generators (“**SVG**”), and a garage, and a warehouse. While the full capacity is 10 MW, LLG has obtained a Power Purchase Agreement (“**PPA**”) from the Provincial Electricity Authority (“**PEA**”) for 8.965 MW. Excess electricity is to be stored in the batteries.

1.3 Scope of Work and Methodology

The scope of work of the ESCA included:

- A review of documents and information relating to the Project that have been publicly disclosed or provided to ERM;
- A site visit including site inspection and interviews with relevant stakeholders;
- An assessment of gaps against Thai laws and applicable international treaties, ADB Safeguard Policy Statement (SPS 2009), ADB Social Protection Strategy (2001), ADB Gender and Development Policy (1998), ADB Public Communications Policy (2011), World Bank Group General EHS Guidelines (2007), World Bank Group EHS Guidelines for Wind Energy (2015), World Bank Group EHS Guidelines for Electric Power Transmission and Distribution (2007), the International Covenant on Economic, Cultural, and Social Rights, and relevant ILO Core Labour Standards Conventions;

- Based on the above, preparation of corrective action plans to close gaps, if any.

The ESCA was conducted following the agreed scope of work as defined in ERM's proposal 0509449-Rev 0 dated 16th August 2019.

The ESCA encompassed the following tasks detailed below:

1.3.1 Task 1: Project Inception Meeting with Stakeholders

ERM held a meeting with ADB and LLG to confirm understanding of Project operations, clarify expectations, roles, and responsibilities, and discuss and confirm site visit date and logistics.

1.3.2 Task 2: Environmental and Social Compliance Audit

1.3.2.1 Task 2A: Document Review

ERM reviewed relevant E&S information and documents provided by the Project (in response to the information and document request issued to the Project by ERM before the site visit) to get a general understanding about the E&S management practices and the Project's E&S performance, identify potential non-compliance issues which need to be clarified or followed up during the site visit.

The list of provided documents is provided in **Appendix A**.

1.3.2.2 Task 2B: Site Visit

1.3.3 Task 2: Site Visit

The site visit was conducted on 15 August 2019 by an ERM team consisting of Meyanee Srikul, Maria Rita Borba, and Charis Smuthkochorn.

During the Site visit, the following activities were carried out by the ERM team:

- *Site inspection:* A general site walkover through the Project area and its associated facilities, interviews regarding E&S issues related to Project activities with 5 of the Project's representatives from LLG, including the General Manager, O&M Manager, O&M Engineer, and 2 O&M Operators, and 2 representatives from BCPG, including the Vice President of Corporate Communications at BCPG who oversees CSR activities for the Group and its subsidiaries and a representative from BCPG HR, and a review of additional E&S documents which had not been provided under Task 2A.
- *Interview with stakeholders:* Interviews with stakeholders, selected by the Project, including 3 Goldwind-Thai subcontractors, 2 village heads, and 8 local community members.

1.3.4 Task 3: Reporting

This report documents the activities presented above, describes the Project's identified potential E&S issues or gaps against the Applicable Standards identified during the Assessment and suggests mitigation measures to address these gaps.

1.4 Limitations

The Assessment has been conducted through the aforementioned Tasks 1, 2, and 3. ERM cannot guarantee that these activities necessarily yield complete information. To the extent that the services require judgement, there can be no assurance that fully definitive or desired results are obtained, or if any results are obtained, that they are supportive of any given course of action. The services may include the application of judgement to scientific principles, to that extent; certain results of this work may also be based on subjective interpretation.

ERM is not engaged in consulting for the purpose of advertising, sales promotion, or endorsement of any of the BCPG's interests, including raising capital or recommending investment decisions or other

publicity purposes. All reports are prepared and made exclusively for the ADB, and ERM will accept no liability of whatsoever nature for claims from other third parties to whom the contents of such reports, surveys, etc. are made known directly or indirectly by ADB, in respect of which claims ADB shall indemnify ERM against any loss, damage, costs or expenses of whatsoever nature suffered by ERM in connection with any reliance placed on its work product by those other third parties.

Nothing contained in the report of ERM shall be construed as a warranty or affirmation by ERM that the Site and property described in the report are suitable collateral for any loan or that acquisition of such property by any lender through foreclosure proceedings or otherwise will pose no risk of potential environmental liability on the part of such a lender. ADB also agrees that none of its advertising, sales promotion, or other publicity matter containing information obtained from these audits and reports will make reference to ERM's trade name without ERM's written approval. The information to be provided under this proposal is not to be construed as legal advice.

ERM prepares the report for the benefit of the ADB. ERM acknowledges that certain persons may be granted access to ERM's report, for the purpose of, as the case may be, investing, purchasing the ownership of the entity involved or providing financing for the acquisition, but in each case only if ADB's consent to such reliance and only if this reliance is granted pursuant to a reliance letter entered into by such person with ERM in a form acceptable to ERM and not otherwise. A fee will be charged by ERM for reliance. The use of, or reliance upon, the report by any person other than in the circumstances set out in the previous sentences shall be entirely at their own risk and ERM accepts no responsibility or liability to any such person, whether in contract, tort or otherwise, for use of, or reliance upon, this report in any circumstances. The grant of reliance will be made under ERM's standard reliance agreement.

1.5 Applicable Standards

The ESCA has been conducted based on the following Applicable Standards:

1.5.1 Relevant Thailand Regulations

EIA Requirement

According to the Announcement of Ministry of Natural Resources and Environment for the Type and Size of Projects or Activities to be developed an EIA and Rules, Methods, Practices, and Guidelines for EIA Development B.E. 2562 (2019), wind power projects do not require an environmental impact assessment (“EIA”).

In Thailand, the Initial Environmental Examination (IEE) study is a voluntary process since there is no regulation to enforce renewable power operation to complete this study as part of the operation permit. However, LLG has conducted an IEE report (by Taksin University) in August 2015 to identify the environmental risk, potential impacts and necessary mitigation measures for the Project.

Energy Industry Act 2007

The Energy Industry Act empowers the Energy Regulatory Commission to enforce all applicable legislation on labour protection and the requirements and standards for energy industry operation. Main enforcing issues include permit issuing, provision of operation information, operator qualification, as well as operation fee. The Project shall obtain the permit of power generation according to this Act.

Regulation of Ministry of Industry No. 24, B.E. 2558 (2015)

The regulation was issued to amend the Regulation of Ministry of Industry No. 23, B.E. 2557 (2014), issued under the Factory Act B.E. 2535 (2002), to classify that the Wind Power Plant is not a factory under the Factory Act. Therefore, the operation permit under the Factory Act (Ror Gnor 4) is not required for the Project.

Notification of the National Environment Board, No. 15, B.E. 2540 (1997), Re: Ambient Noise Standards

The Notification prescribes the standards for ambient noise levels, including the measurement method and criteria. The general noise level standard is for the maximum noise level (L_{max}) to not exceed 115 dB(A); and for the 24-hour A-weight equivalent continuous noise level (Leq 24 hr) to not exceed 70 dB(A).

Notification of the Pollution Control Committee, B.E. 2550 (2007), Re: Measurement and Calculation Method for Background Noise Level, Non-Disturbance and Disturbance Noise Level, and Measurement Record

The Notification prescribes the measurement and calculation methods for the level of disturbance and measurement criteria (i.e. location of microphone, calibration of measuring instrument, measuring noise level). The Notification also prescribes form for recording level of disturbance.

The facility shall have an ambient noise monitoring programme conducted to ensure that the ambient noise levels of the surrounding areas do not exceed the prescribed standards.

Safety, Occupational Health and Environment at Work Act, B.E. 2554 (2011)

The Safety, Occupational Health and Environment at Work Act empowers the Ministry of Labour to enforce all applicable legislation on labour protection and the requirements and standards for health and safety in the workplace. Main enforcing issues include provision safe and hygiene workplace conditions, supports safe work practices to prevent harm to physical, mental, health and fatality, and request a collaboration from employees regarding the management of safety, occupational health and work environment.

Labour Protection Act, B.E. 2541 (1998)

The Thai Labour Protection Act empowers the Ministry of Labour to enforce all applicable legislation on labour protection and the requirements and standards for health and safety in the workplace. Main enforcing issues include machinery safety, provision of good environmental working conditions, electrical safety, provision of protective equipment, working safety in confined spaces as well as building sanitation requirements.

Labour Protection Act (No.7), B.E. 2562 (2019)

The latest Labour Protection Act (No.7) entered into force in May 2019. Key changes introduced include higher layoff compensation rate for long-serving employees, new termination compensation structure rates, increase in maternity leave days, and requirements on equal compensation between men and women for the same jobs or capacities.

Order of the Energy Regulation Committee, Re: Public Participation guidelines for Power Plant Business B.E. 2559 (2016)

This Order provides guidelines for public participation, as one (1) round of stakeholder consultation is required. The stakeholder consultation shall cover communities living within 3 km for non-fuel based power plants with a capacity equal to or over 10MW.

Notification of the Energy Regulation Committee, Re: Safe Distance (Set Back) Criteria for Wind Farm B.E. 2558 (2015)

This Notification provides the requirements of safe distance (set back) criteria for wind farm, i.e. safety zone for project boundary, distance between turbines, safety zone for nearest communities, and standards of nuisance noise level.

1.5.2 Relevant ADB Standards and Policies

ADB Safeguard Policy Statement (SPS 2009)

The ADB Safeguard Policy Statement 2009 sets out the policy objectives, scope, triggers, and principles for the following three key safeguard areas:

- Environmental Safeguards screen and assess projects according to type, location, scale, and sensitivity and the magnitude of their potential environmental impacts, including direct, indirect, induced, and cumulative impacts;
- Involuntary Resettlement Safeguards screen and assess projects according to social impacts from involuntary resettlement, and;
- Indigenous People Safeguards screen and assess projects on impacts on indigenous peoples according to magnitude of impact in terms of customary rights of use and access to land and natural resource, socioeconomic status, cultural and communal integrity, health, education, livelihood, social security status, the recognition of indigenous knowledge, and the level of vulnerability of the affected Indigenous Peoples community.

For each Safeguards, ADB uses a classification system to reflect the significance of a project's potential impacts. Projects are classified into four categories: A, B, C or FI considering the significance of their impacts on Environment, Involuntary Resettlement or Indigenous Peoples.

ADB Social Protection Strategy (2001)

The ADB Social Protection Strategy is the set of policies and programmes designed to reduce poverty and vulnerability by promoting efficient labour markets, diminishing people's exposure to risks and enhancing their capacity to protect themselves against hazards and interruption/loss of income. Social Protection consists of five major elements:

- (1) Labour markets policies and programmes designed to facilitate employment and promote and efficient operation of labour markets;
- (2) Social insurance programmes to cushion the risks associated with the unemployment, health, disability, work injury, and old age;
- (3) Social assistance and welfare service programmes for the most vulnerable groups with no other means of adequate support;
- (4) Micro and area-based schemes to address vulnerability at the community level; and
- (5) Child protection to ensure the healthy and productive development of the future Asian workforce

ADB's Social Protection Strategy requires the Borrower to comply with applicable national labour laws in relation to the Project, and take the following measures to comply with the core labour standards for the ADB financed portion of the Project:

- (i) Carry out its activities in a manner consistent with the intent of ensuring legally permissible equal opportunity, fair treatment and non-discrimination in relation to recruitment and hiring, compensation, working conditions and terms of employment for its workers (including prohibiting any form of discrimination against women during hiring and providing equal work for equal pay for men and women engaged by the Borrower);
- (ii) Not restrict its workers from developing a legally permissible means of expressing their grievances and protecting their rights regarding working conditions and terms of employment;
- (iii) Engage contractors and other providers of goods and services:
 - a. Who do not employ child labour or forced labour;

- b. Who have appropriate management systems that will allow them to operate in a manner which is consistent with the intent of (A) ensuring legally permissible equal opportunity and fair treatment and non-discrimination for their workers, and (B) not restricting their workers from developing a legally permissible means of expressing their grievances and protecting their rights regarding working conditions and terms of employment; and
- c. Whose subcontracts contain provisions which are consistent with paragraphs (a) and (b) above.

ADB Gender and Development Policy (1998)

ADB's policy on gender and development ("**GAD**"), approved in 1998, adopts gender mainstreaming as a key strategy for promoting gender equity. This requires gender concerns to be treated as a cross-cutting theme influencing all social and economic processes.

The GAD policy provides a policy framework; introduces institutional mechanisms to address gender concerns in ADB's programme of activities; and supports a greater emphasis on gender issues in all ADB operations. Specifically relevant to the projects are the following elements.

Gender sensitivity: on how operations affect women and men, and to take into account women's needs and perspectives in planning its operations; and

Gender analysis: to assess systematically the impact of a project on men and women, and on the economic and social relationship between them; and

Gender planning: to formulate specific strategies that aim to bring about equal opportunities for men and women; and

Mainstreaming: to consider gender issues in all aspects of project operations, accompanied by efforts to encourage women's participation in the decision-making process in development activities.

ADB Public Communications Policy (2011)

The Public Communications Policy of ADB guides the institutional efforts to be transparent and accountable to the people it serves. The Policy recognizes that transparency and accountability are essential to development effectiveness. The objective of the policy is to enhance stakeholders' trust in and ability to engage with ADB. The policy recognizes the right of people to seek, receive, and impart information about ADB operations. It supports knowledge sharing and enables participatory development or two-way communications with affected people. The policy is based on a presumption in favour of disclosure unless there is a compelling reason for nondisclosure. It commits ADB to disclose institutional, financial, and project-related information proactively on its website, following strictly time limits, and provides mechanisms to handle responses and complaints.

1.5.3 Other Relevant International Standards and Guidelines

World Bank Group General EHS Guidelines (2007)

The World Bank Group General EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs. It covers topics such as environmental, occupational health and safety ("**OHS**"), community health and safety and construction and decommissioning.

World Bank Group EHS Guidelines for Wind Energy (2015)

The World Bank Group EHS Guidelines for Wind Energy are specific guidelines for wind energy projects. This covers risks, mitigation measures, and monitoring recommendations for:

- Environmental issues specific to wind energy projects and facilities such as landscape, seascape, and visual impacts, noise, biodiversity, shadow flicker, and water quality;

- OHS hazards specific to wind energy facilities and activities such as working at height, working over water, working in remote locations, and lifting operations; and
- Community health and safety hazards specific to wind energy facilities such as blade and ice throw, aviation, marine navigation and safety, electromagnetic interference and radiation, public access, and abnormal load transportation.

World Bank Group EHS Guidelines for Electric Power Transmission and Distribution (2007)

The World Bank Group EHS Guidelines for Electric Power Transmission and Distribution are specific guidelines for EHS issues associated with electric power transmission and distribution that occur during the construction and operation phases of a facility. This covers risks, mitigation measures, and monitoring recommendations for:

- Environmental issues during the construction phase of power transmission and distribution projects, such as terrestrial habitat alteration through right-of-way construction and maintenance;
- OHS hazards specific to electric power transmission and distribution projects, such as working with live power lines and working at height;
- Community health and safety impacts during the construction, operation, and decommissioning of transmission and distribution power lines, such as electrocution and visual amenity.

1.6 Structure of the Report

The remainder of the report is structured as follows:

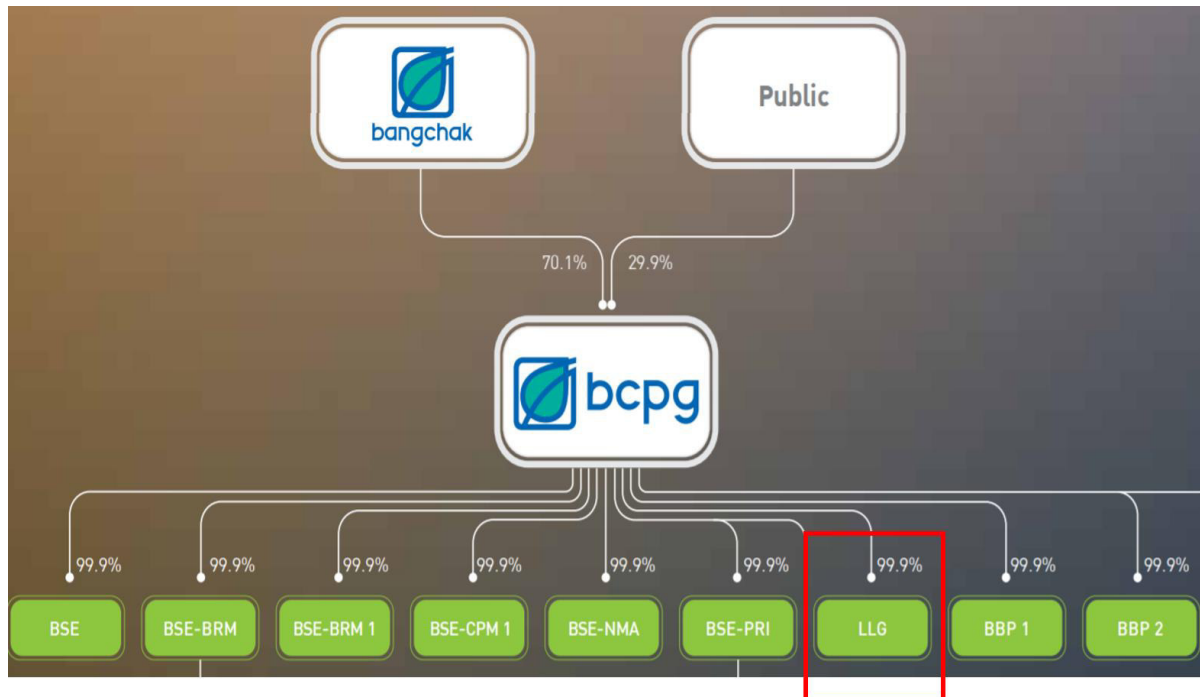
- **Section 2** – describes the Project;
- **Section 3** – presents ERM's findings with regards to the Project's E&S performance and management against the requirements of the Applicable Standards and the proposed Categorisation of the Project; and
- **Section 4** – presents the proposed Corrective Action Plan.

2. PROJECT DESCRIPTION

2.1 Organizational Structure

The Project is under the management of LLG. As a subsidiary of BCPG, which is in turn a subsidiary of Bangchak Corporation Public Company Limited (“**Bangchak**”), LLG’s activities are governed under policies that are cascaded from BCPG and Bangchak (see **Figure 2.1**). During the onsite visit, BCPG have indicated that environmental, health and safety policies and procedures of Bangchak Solar Energy Company Limited (“**BSE**”) will be used as examples for those to be developed for LLG.

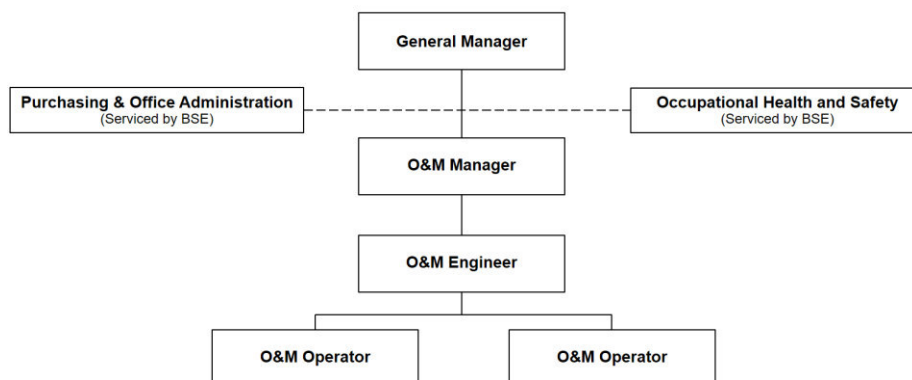
Figure 2.1: BCPG Group’s Business Structure



Source: BCPG Annual Report 2018

The organizational structure of LLG is shown in **Figure 2.2** below. Its purchasing and office administration and OHS activities are overseen by BSE. See more details on Project personnel in **Section 2.4.4**.

Figure 2.2: LLG Organizational Structure



Source: LLG (2019)

2.2 Project Location

The Project spans an area of approximately 21.3 ha in Pak Phanang District, Nakhon Si Thammarat Province, Thailand (see **Figure 2.4**). The Project site is bordered by:

- North: Moo 3 of Bang Phra Sub-District;
- South: Moo 1 and Moo 9 of Tha Praya Sub-District;
- East: Bordering the Thai Gulf (approximately 2.5 km west from the coast);
- West: Moo 1 of Bang Phra Sub-District and Moo 7 of Baan Perng Sub-District.

Within a 3-km radius around the Project Area are 17 villages across Sub-Districts Bang Phra, Baan Perng, and Tha Praya, namely:

- Bang Phra Sub-District: Moo 2, 3, and 4
- Baan Perng Sub-District: Moo 1, 2, 3, 4, 5, 7, and 8
- Tha Praya Sub-District: Moo 1, 2, 3, 5, 6, 8, and 9

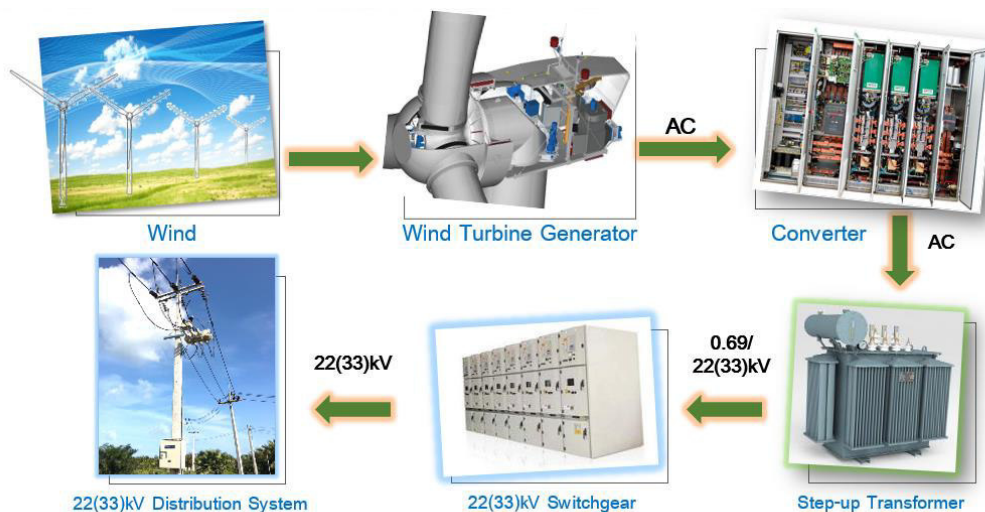
The Project is accessible through a public road that connects the Project from the west and cuts through the Project Area from west to east. LLG has agreed to keep the portion of the road that lies on the Project Area public so that village members can continue to use the road. There are also additional roads within the Project Area, specifically connecting the wind turbines with the main building, the warehouse, and an exit point to the southeast of the Project Area. These additional roads that have been built specifically for LLG use are also open for public use during the day time.

2.3 Project Components and Setting

Operational Process

The flowchart summarising the Project electrical generation and its connection to the national grid is described in the following **Figure 2.3**.

Figure 2.3: Summary of Project Operational Process



Source: BCPG (2019)

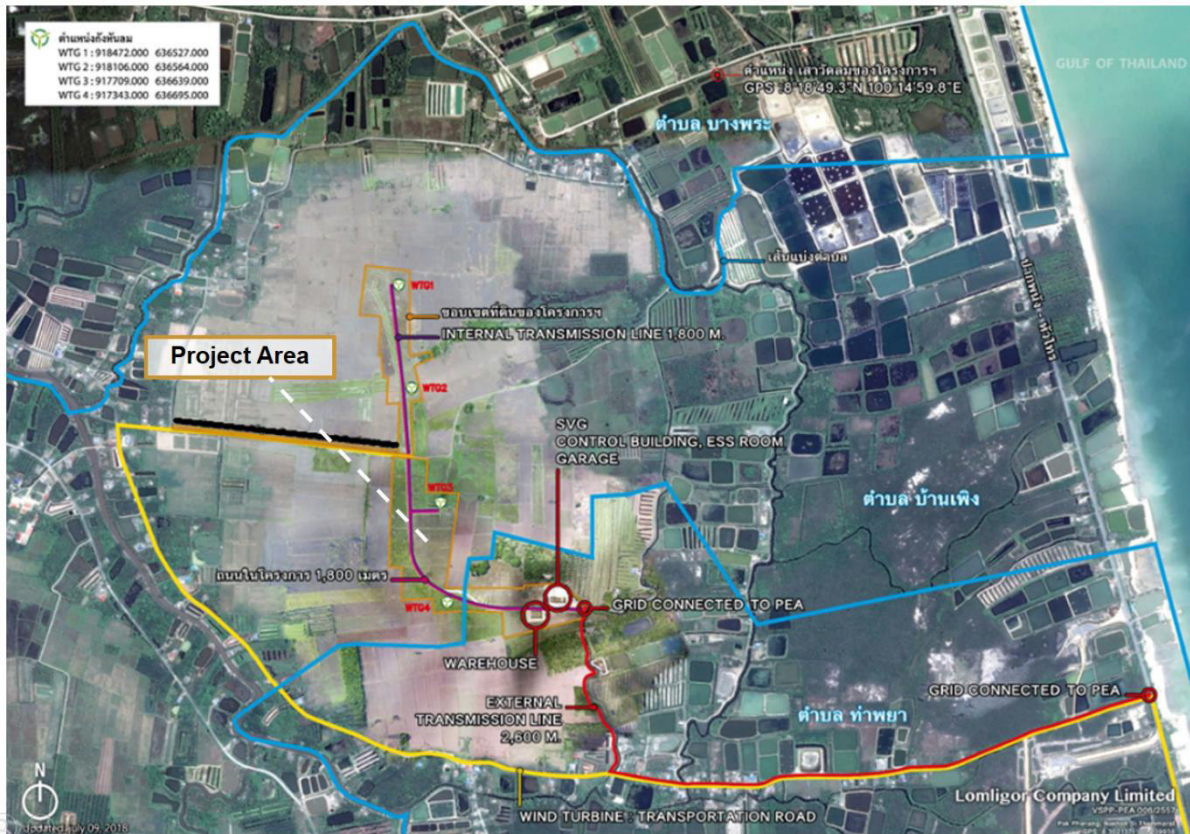
Project Components and Facilities

The Project consists of 4x2.5 MW wind turbine generators (“WTGs”), an underground internal transmission line, a main building containing a meeting room, a control room, an energy storage system room (“ESS”), static var generators (“SVG”), a garage, and a warehouse building. It is connected to the PEA through a PEA transmission line. Details on project components and facilities are provided in **Table 2.1: Project Components and Facilities** and **Figure 2.4**.

Table 2.1: Project Components and Facilities

No	Components and Facilities	Function	Description and Technical characteristic	Notes
1	WTGs	To convert wind to electrical energy	A total of 4 x 2.5MW wind turbine generators Module: GW2500/121	Each of the WTGs are on a piled foundation surrounded by enclosed gates to prevent public access.
2	WTG Transformers	To transform the low voltage output (690 V) to medium voltage level (33 kV)	A pad mounted Substation which is rated at capacity 3,000 kVA	
3	Internal Transmission Line	To connect the WTGs to the main building	An underground 33 kV transmission line spanning 1.8 km from the WTGs to the main building	
4	Main Building	To house control room, ESS, SVG, and a garage	A one-storey building housing the control room, ESS, SVG, and garage	
5	Warehouse Building	For storage		
6	Station Transformers	To connect to the 33 kV medium voltage distribution line of Public Electricity Authority (“PEA”)	Station service transformer with rated capacity of 160 kVA for wind farm substation	
7	External Transmission Line	To connect to PEA	An external 33 kV transmission line above ground that LLG/BCPG has paid PEA for upgrade and use spanning 2.6 km from the main building to PEA grid	The Right of Way is agreed by the PEA and is not under LLG management.

Figure 2.4: Project Components and Facilities Location



Source: BCPG (2019)

2.4 Project Development

A summary of the Project Development timeline is provided below in **Table 2.2: Project Development Timeline**

Table 2.2: Project Development Timeline

Timeline	Project Development
23 June 2014	SGC Wind Energy Company Limited (“ SGC ”), a wind power operator, is awarded a power purchase agreement from the Provincial Electricity Authority.
29 May 2015	Inter Far East Wind International Company Limited (“ IWIND ”) acquires SGC.
26 June 2015	SGC changes its name to Lomligor Company Limited.
August 2015	LLG employs Thaksin University to complete an initial environmental examination for another wind farm (i.e. the Project) in Nakhon Si Thammarat Province.
28 November 2015	First public hearing conducted by Thaksin University for LLG.
October 2016 - January 2018	LLG purchases 26 land parcels from smallholders for the Project.
12 March 2018	Project construction starts.
31 March 2018	Second public hearing conducted by IWIND for LLG.
13 June 2018	A coordination agreement for the engineering, procurement, construction, commissioning, and performance test run assistance of the Project is made among LLG as the employer, Goldwind International Holdings (HK) Limited (“ Goldwind-HK ”) as the offshore supplier, and the Consortium of Italthai Engineering Company Limited (“ Italthai ”) and Silamas Services Company Limited (“ Silamas ”) as the onshore contractor.
15 June 2018	BCPG acquires LLG from IWIND.
20 December 2018	Building construction is completed.
11 April 2019	The Project commenced commercial operations.
10 June 2019	Works under the EPC is completed.

2.4.1 Environmental and Social Risk Assessment

Although not legally required, an initial environmental examination (“**IEE**”) was completed in August 2015. The objectives were:

- 1) To develop an overview of the planned operations and determine an approach to develop the Project in the Project Area;
- 2) To study and identify a suitable site for construction and installation of wind turbine generators and transmission line; and
- 3) To study primary environmental impacts from the Project, communicate Project details to communities surrounding the Project Area, and listen to the communities’ thoughts on the Project in order to have engagement with local communities.

The IEE collected baseline data and assessed the impacts on:

- Physical environmental resources: Topography, climate, noise, geology, coastal resources;
- Biological environmental resources: Land ecosystem, coastal ecosystem;
- Human use: Water transport, land use, sanitation and public utilities, coastal aquaculture and fisheries;

- Quality of life: Socioeconomic status, significant archaeological or historical sites, aesthetics.

Out of the assessed aspects, the IEE identified an aspect with high likelihood of impact occurring during the operation phase and necessary mitigation measures, as shown in **Table 2.3**.

Table 2.3: Environmental Impacts and Proposed Mitigation Measures Reported in the IEE

Aspect	Environmental Impact	Proposed Mitigation Measure
Noise levels (Operation)	Although the Project has made use of gearless wind turbines which create less noise, impacts on noise levels are still expected as the baseline conditions have very low background noise.	Use technology that can further reduce noise levels. Monitor noise levels on monthly basis. Invest in equipment maintenance.

During initial development of the IEE, village members, representing 40 villages, from the Sub-Districts in the 3-km radius (i.e. Sub-District Bang Phra, Baan Perng, and Tha Praya), as well as Sub-Districts Kanab Nak and Eastern Pak Phanang, were consulted in 2010.

After completion of the IEE, two public hearings were organized in 2015 and 2018. The first public hearing was conducted on 28 November 2015 by Thaksin University and included stakeholders within a scope of 1-km radius around the Project Area. A total of 508 representatives from local communities and public agencies attended the public hearing. Questionnaires were also distributed during the hearing, involving 461 survey respondents.

The second public hearing was conducted on 31 March 2018 by IWIND and included stakeholders within a scope of 3-km around the Project Area (i.e. the Sub-Districts identified in **Section 2.2**). A total of 322 representatives from local communities and public agencies attended the public hearing. There were 255 respondents to the administered questionnaire. The results showed that most respondents expected to benefit from an economic boost from the Project, primarily through the wind farm becoming a tourist and sightseeing spot and bringing in an influx of tourists.

2.4.2 Land Acquisition

All of the Project Area land had been property of LLG prior to BCPG's acquisition of LLG in June 2018. This land was previously made up of 26 land parcels owned by small landowners from the local villages. Starting in 2016, LLG entered into land sales and purchase agreements (based on a willing seller-buyer arrangement) with the landowners. Most of the current Project area land was purchased by LLG in 2016, with a few purchases made in January 2018. Based on interviews with the 2 village heads, there have been no complaints about these transactions. The site visit and consultations with stakeholder including selected land parcels did not report any legacy or concurrent risks associated with the sale/purchase of land.

Land use in the Project Area prior to LLG ownership has been primarily agricultural. After LLG purchased these land parcels, an informal verbal agreement was made with the previous landowners that they may continue to use the peripheries of LLG land for agriculture. This is more of a good will measure with a reassurance/commitment from land users to stop using lands when the project requires it for its activities. The Project Area is demarcated using marked poles at its boundaries.

2.4.3 Project Construction

Upon completing the IEE and acquiring the land, construction of the wind turbines and associated facilities in the Project Area commenced on March 2018 after BCPG's acquisition of LLG and was completed on December 2018. LLG employed Gold Wind International Holdings (HK) Limited ("**Goldwind-HK**") as the offshore contractor and the Consortium of ItalThai Engineering Company

Limited (“**Italthai**”) and Silamas Services Company Limited (“**Silamas**”) as the onshore contractor for the procurement and installation of the wind turbine equipment. The procurement and installation of the energy storage system (“**ESS**”) was completed by the Consortium of PEC (Technology) Thailand Company Limited, Italthai Engineering Company Limited, and Electrical Engineering Solution Co., Ltd. LLG also employed 2 local companies to carry out road construction in the Project, road improvement near the Project, and construction of the control building, warehouse, and parking space. According to the village heads interviewed, these local companies also employed some of the village members.

2.4.4 Project Operation

Project Permits

Table 2.4 summarises the permits obtained by the Project for its development.

Table 2.4: Project permits

No.	Permit name	Date of permit
1	Business Registration Certificate (Form Sor Jor 5 No. 052501) issued by the Department of Business Development	30 October 2007
2	Power Purchase Agreement, No. VSPP-PEA-006/2557 between SGC Wind Energy Co., Ltd. and the Provincial Electricity Authority (“ PEA ”) Note: SGC Wind Energy was the previous name of LLG, before it changed its name to “Lomligor Company Limited” on 26 June 2015.	23 June 2014
3	Permission letter from the Provincial Electricity Authority (PEA), No. Mor Thor 5304.12/12524, for synchronizing power generator with the PEA transmission line	21 March 2019
3	Building construction permit issued by Energy Regulatory Commission: <ul style="list-style-type: none"> No. Kor Kor Por (Or. 1)-1-077/2560 for wind turbine generation (Ban Peng), issued on 12 December 2017 No. Kor Kor Por (Or. 1)-1-078/2560 for office building, warehouse (Tha Praya), issued on 12 December 2017 	13 December 2018
4	Controlled Energy Generation Permit (Form Por Kor 2) issued by Energy Regulatory Commission	8 March 2019 - 8 March 2023 (4 years)
5	Electricity Generation License issued by the Energy Regulatory Commission, No. Kor Kor Por 01-1(1)/62-842	10 January 2019
6	Power generation commencing letter issued by Energy Regulatory Commission Office, No. Sor Kor Por 5502/4377	29 March 2019

The Project completed building construction in December 2018, and commenced commercial operations (“**COD**”) on 11 April 2019.

Personnel and Working Conditions

Currently, the Project employs 2 operators, 1 engineer, and 2 managers. The operators and engineer work onsite, while the managers shift between the Project site and the BCPG office in Bangkok. Purchasing and office administration services and occupational health and safety are currently run by personnel from Bangchak Solar Energy Company Limited (“**BSE**”), another one of BCPG’s subsidiary.

Onsite maintenance activities are also supported by 4 subcontractors from Goldwind-Thai. Based on interviews conducted with the subcontractors, working hours are fixed at 8 hours per day. Overtime work is ruled by Goldwind-Thai. ERM did not have access to Goldwind-Thai’s HR Policy.

LLG also subcontracts to a third-party local service company to oversee security in the Project Area. A total of 7 security guards have been subcontracted, with 4 working day shifts and 3 working night shifts. Some of these security guards are from the local villages.

Safety, Health, and Environment

Management of safety, health, and environment aspects of the Project is shared between BCPG and BSE. According to the interviews with LLG and BCPG’s representatives, LLG will base its management system on BSE’s Occupational Health and Safety, Environment, Energy, Quality, and Service Policy and Quality and Environment Management System. This includes applying and receiving certifications for OHSAS 18001:2007, ISO 14001:2015, and ISO 9001:2015. LLG plans to have these certifications by end of 2020.

Community Engagement and CSR Programs

The 2 interviewed village heads reported that they were regularly communicated on project information by LLG. Parents, teachers, and the school principal from the local school shared that they were regularly communicated by the BCPG representative responsible for CSR programs. When asked if there have been complaints about the Project, all groups interviewed said they are unaware of any complaints, adding that there is a good relationship with the Project staff and open communication channels with different staff members.

CSR programs are primarily led and organized by BCPG personnel from Bangkok, with onsite LLG staff implementing the programs. During the onsite visit, it was reported that most of these CSR programs have been organized with the local school. Based on the interview, activities organized included an environmental conservation camp for the students and financial support given in the form of scholarships and donations for Children’s Day activities and sports tournaments.

Beyond CSR programs, onsite interviews pointed to community satisfaction regarding road improvement and increased employment from Project activities.

Grievance Mechanisms

LLG employees can raise their grievances through their managers, directly to HR, and through the online whistle-blower channel on the BCPG website. A screenshot of the online channel is provided below in **Figure 2.5**.

Figure 2.5: BCPG online whistle-blower channel

Please provide your personal information – which will be kept strictly confidential – so we may follow up and respond.

Name *

Telephone Number * youremail@email.com *

Address *

Please select department

Employees CEO, Directors or Subcommittees

Select Topics: Violations of *

Confirm Your Disclosure or Complaint *

You can also attach your information here

Attachment File Choose File No file chosen

Source: BCPG Website

Community members can raise their grievances through village heads, who have the contacts of onsite LLG employees and the BCPG personnel leading CSR activities. LLG has a formal grievance form in paper which it intends to make available through planting grievance boxes in the security guards boxes. However, ERM did not receive evidence detailing grievance mechanism procedures. It is unclear how grievance mechanism procedures have been communicated to community members apart from direct communication with LLG staff, as mentioned above. However, grievance channels informed by interviewees (i.e. direct contact with LLG staff) does not guarantee anonymity, and it is not clear how anonymity is maintained if requested.

Based on the interview, there was no grievance received. However, ERM did not receive a grievance log from LLG.

3. ENVIRONMENTAL AND SOCIAL COMPLIANCE REVIEW

3.1 ADB Safeguard Policy Statement

3.1.1 ADB SPS Environmental Safeguards

Ref	Aspect	Applicable Standards	Current Practices and Gaps	Corrective Action/Recommendations
1	Environmental Assessment	<p>ADB SPS, Environmental Safeguards, 1-3</p> <p>World Bank EHS General Guidelines, 1</p> <p>World Bank EHS Guidelines for Wind Energy, 1-2</p> <p>The Announcement of Ministry of Natural Resources and Environment for the Type and Size of Projects or Activities to be developed an EIA and Rules, Methods, Practices, and Guidelines for EIA Development, B.E. 2562 (2019)</p>	<p>According to Thai regulations, the Project is not required to conduct an EIA. Nonetheless, LLG employed an external expert (Thaksin University) to conduct an IEE in 2015 prior to project development. The IEE covered baseline data and identified potential impacts on the physical, biological, socioeconomic, and physical cultural resources in the Project Area. The mitigation measures were addressed in the IEE to ensure the minimization of impacts.</p> <p>Most of the IEE findings were confirmed during the onsite visit. Interviewed village heads reported increased noise levels after Project operations, and no other complaints from village members regarding the Project.</p> <p>The IEE also discussed Project impacts on climate change, which were largely positive through greenhouse gas reductions associated with increased use of renewable energy.</p> <p>Regarding land use, LLG provided ERM with written approvals from Baan Perng and Tha Praya Municipal offices confirming that Project development is in compliance with land use planning and zoning. However, the evidence of the study of safe distance (set back) criteria for wind farm location e.g. safety zone for nearest communities to prevent nuisance noise and shadow flicker, distance from grid, etc. was not available for the review, and due to the limited time of onsite visit, the actual distance measurement could not be conducted.</p> <p>Based on the interview, the Project plans to implement the risk assessment process by May 2020.</p>	None.

Ref	Aspect	Applicable Standards	Current Practices and Gaps	Corrective Action/Recommendations
			<p>Note: In reference to Paragraph 10 of <i>Safeguard Requirements 1: Environment</i>, this ESCA counts as the environmental assessment for the Project, as it involves existing activities and facilities.</p> <p>No significant gap is identified.</p>	
2	Environmental Planning and Management	<p>ADB SPS, Environmental Safeguard, 4</p> <p>World Bank EHS General Guidelines, 1</p> <p>World Bank EHS Guidelines for Wind Energy, 1-2</p>	<p>LLG currently does not have company policies governing management of environmental and social risks and impacts. Reportedly, LLG will apply an EHS policy in compliance with the BCPG standard, similar to the BSE example provided. However, based on the document review, the BSE policy covers only commitment to Occupational Health and Safety, Environment, Energy, Quality, and Service. There is no specific coverage of local community, equal opportunity and non-discrimination, gender development in the policy documents reviewed. Cultural heritage and resettlement do not apply to the Project's current stage as it is an existing facility.</p> <p>Based on the review of IEE conducted on September 2015, the environmental and social management plan (ESMP) was not developed as part of the study.</p>	<p>Develop and implement an operational environmental and social management plan (ESMP) commensurate with the level of environmental and social risks and impacts of the project.</p> <p>The ESMP should a) identify risks and impacts; b) have a defined institutional structure for management of the identified risks/impacts; c) include documentation, monitoring and reporting parameters for risk mitigation; and d) include training needs for staff and contractors to manage EHS and social issues of the project.</p>
3	Information Disclosure	<p>ADB SPS, Environmental Safeguard, 6</p> <p>ADB's Public Communications Policy 2011</p>	<p>The IEE and its associated environmental monitoring report were submitted to ERM as part of the ESCA IDRL.</p> <p>The IEE was written in Thai, and communities were informed about the Project during the 2 public hearings organized in 2015 and 2018.</p> <p>As discussed in Aspect 6: Monitoring and Reporting, LLG employed a licensed company to conduct an environmental monitoring program in March 2019.</p> <p>No significant gap is identified.</p>	None.

Ref	Aspect	Applicable Standards	Current Practices and Gaps	Corrective Action/Recommendations
4	Consultation and Participation	<p>ADB SPS, Environmental Safeguard, 5</p> <p>Order of the Energy Regulation Committee, Re: Public Participation guidelines for Power Plant Business B.E. 2559 (2016)</p>	<p>During initial development of the IEE in 2010, public consultations were organized across 5 Sub-Districts.</p> <p>After the IEE was completed, LLG organized 2 public hearings prior to Project development. The first public hearing was organized on 28 November 2015, while the second public hearing was organized on 31 March 2018. Some of the attendees also participated in responding to a questionnaire collecting data on awareness of Project details and opinions regarding the Project. In both 2015 and 2018, women made up the majority of questionnaire respondents (63.6% in 2015 and 65.9% in 2018).</p> <p>There is evidence of concerns communicated during the public hearing sessions that have been incorporated into Project implementation. For example, during the first public hearing, some of the village members expressed concerns regarding impacts on rice farming and road access. LLG reportedly came into an informal verbal agreement with the village members that were previous land users that they may continue to use the peripheries of the Project Area for rice farming. LLG also committed to giving public access to the road that was previously for public use but now is within the Project Area.</p> <p>The 2 interviewed village heads and the parents, teachers, and school principal interviewed at the school confirmed that LLG has maintained regular communications with them since commercial operations have started. The comprehensive list of topic for communication has not been provided for review.</p> <p>No significant gap is identified.</p>	None.
5	Grievance Redress Mechanism	<p>ADB SPS, Environmental Safeguard, 5</p>	<p>LLG has a grievance registration form that details 3 steps: grievance registration, corrective action assigned (if any), and response to the complainant. Grievances can be submitted primarily through calling the</p>	<p>Develop and implement a communication and grievance redress plan for managing complaints and grievances (internal as well</p>

Ref	Aspect	Applicable Standards	Current Practices and Gaps	Corrective Action/Recommendations
			<p>onsite LLG or BCPG office by phone, the BCPG website, or through representatives such as the village heads and school principal or LLG/BCPG staff. Based on the interviews with the village heads, the most common way to submit a complaint is through the latter approach. Village members can communicate their concerns to the village heads and school principal, and they would call the LLG/BCPG staff they knew. Nonetheless, village heads and the school principal shared that they have not received complaints from village members to date.</p> <p>LLG also has plans to install boxes filled with grievance registration forms by the security guard booths such that village members may submit grievances at any time.</p> <p>It is unclear whether the grievance mechanism is gender responsive, culturally appropriate, and readily accessible to all segments of the affected people.</p> <ul style="list-style-type: none"> • Current forms of grievance submission do not guarantee anonymity, and access to the channels may be affected by village members' relationships with their representatives. It is noteworthy that both the village heads and the head of school interviewed are older men. • Although the grievance registration forms may bring anonymity, they are inaccessible to illiterate village members. 	<p>as external, if any) resulting from the operations of the project. This plan/system should be gender inclusive and cover all employee and contractor staff. Information about this should be widely disseminated amongst stakeholders.</p>
6	Monitoring and reporting	<p>ADB SPS, Environmental Safeguard, 7</p> <p>World Bank EHS Guidelines for Wind Energy, 2</p>	<p>As discussed in Aspect 2: Environmental Planning and Management, LLG expects to have an environmental and social management plan/system yet by the end of 2020. Thus, disclosure of the ESMP and monitoring results should be implemented by the end of 2020.</p> <p>The Project conducted the environmental monitoring in March 2019. The monitoring was conducted by third party (i.e. Pacific Laboratory Co., Ltd.). The monitoring program included ambient air (i.e. TSP, PM-10) at office</p>	<p>Establish and implement programme for quarterly noise monitoring to assess and verify the noise levels at nearby sensitive receptors (e.g. nearest school, village). Where high noise levels are found, appropriate mitigation measures may need to be implemented.</p>

Ref	Aspect	Applicable Standards	Current Practices and Gaps	Corrective Action/Recommendations
		<p>Notification of the National Environment Board, No. 15, B.E. 2540 (1997), Re: Ambient Noise Standards</p> <p>Notification of the Pollution Control Committee, B.E. 2550 (2007), Re: Measurement and Calculation Method for Background Noise Level, Non-Disturbance and Disturbance Noise Level, and Measurement Record</p> <p>Notification of the Energy Regulation Committee, Re: Safe Distance (Set Back) Criteria for Wind Farm B.E. 2558 (2015)</p>	<p>building; ambient noise level (i.e. Leq, Lmax) at office building, WTG 2 and WTG 4; and water discharge (i.e. pH, SS, O&G, Temperature, BOD, COD and DO) at discharge point. All parameters are in compliance with Thai standards. However, the monitoring program did not cover noise level at community according to the Notification of the Energy Regulation Committee and World Bank EHS Guidelines for Wind Energy.</p>	

Ref	Aspect	Applicable Standards	Current Practices and Gaps	Corrective Action/Recommendations
7	Unanticipated Environmental Impacts	ADB SPS, Environmental Safeguard, 11	Since environmental and social risk assessment process during operations has not been implemented, the unanticipated impacts have not been determined. In addition, the ESMP has not been developed yet.	Refer to Aspect 2: Environmental Planning and Management
8	Biodiversity Conservation and Sustainable Natural Resource Management	ADB SPS, Environmental Safeguard, 8 World Bank Group EHS Guidelines for Wind Energy, 1.1.3 and 2.1.4 Wildlife Preservation and Protection Act, B.E. 2535 (1992)	<p><i>Modified Habitats</i></p> <p>Impacts and risks on biodiversity and natural resources were assessed as part of the IEE. The IEE found that the Project Area and the land surrounding it have been heavily modified by human use, with land use being primarily agriculture and shrimp farming. There are some expected impacts on bird species of concern.</p> <ul style="list-style-type: none"> Out of the 27 bird species identified during the field survey conducted as part of the IEE, all of them were classified as a protected species according to the Wildlife Preservation and Protection Act, B.E. 2535 (1992). One of them is also protected by Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). It was observed that the bird species identified in the Project Area tend to fly from coastal areas towards the Project Area to feed. There are risks that the birds may fly into the wind turbines. During the onsite visit, interviewed village heads reported that they rarely see birds flying into the wind turbines. However, this is not supported by a formally established bird monitoring system. <p><i>Natural Habitats</i></p> <p>Not applicable.</p> <p><i>Critical Habitats</i></p> <p>Not applicable.</p>	Establish and implement programme for Avifauna and Bat monitoring. This should include a monitoring programme (commensurate with the risks/impacts) for assessment and mitigation of potential impacts on birds and bats.

Ref	Aspect	Applicable Standards	Current Practices and Gaps	Corrective Action/Recommendations
			<p><i>Legally Protected Areas</i></p> <p>Not applicable.</p> <p><i>Invasive Alien Species</i></p> <p>Not applicable.</p> <p><i>Management and Use of Renewable Natural Resources</i></p> <p>See “Environmental Planning and Management”.</p>	
9	Pollution Prevention and Abatement	<p>ADB SPS, Environmental Safeguard, 9</p> <p>World Bank EHS General Guidelines, 1</p> <p>Regulation of Ministry of Industry No. 24, B.E. 2558 (2015)</p>	<p><i>Pollution Prevention, Resource Conservation, and Energy Efficiency</i></p> <p>Based on the IEE, the Project does not generate significant environmental pollution except noise. Resources used during the operation phase include electricity and water for office operation, diesel for generator, and materials for maintenance activities which do not generate significant impact. Reduction of noise level generates from wind turbine generator was considered by using the equipment with less noise generation. Maintenance program is in place to ensure the efficiency of equipment related to noise level.</p> <p><i>Wastes</i></p> <p>The Project tracks the volume of waste generated from the operation activities. Currently, the waste generated from the site include recyclable waste (e.g. paper, bottle, etc.) and food waste in small volumes (3 LLG persons working onsite). Segregation of waste is implemented. Reportedly, recyclable wastes are transferred offsite by the LLG operators for selling. Food wastes are transferred to dispose at Pak Phanang Municipal landfill. As the Project is not required to get an Operation Permit (Ror Ngor 4) from the Department of Industrial Works (DIW), an offsite waste disposal permit is not required. Reportedly, used battery will be generated once maintenance</p>	For noise level, refer to Aspect 6: Monitoring and Reporting.

Ref	Aspect	Applicable Standards	Current Practices and Gaps	Corrective Action/Recommendations
			<p>is conducted in the future. The used battery is reportedly to be disposed by a licensed company which is responsible by Goldwind-Thai.</p> <p><i>Hazardous Materials</i></p> <p>The only hazardous material used at the Project site is diesel oil contained in 400L storage drum and that is used in the generator located behind the office building. This is as the back up power in case of electricity break down.</p> <p><i>Pesticide Use and Management</i></p> <p>Pesticide is not used in the Project Area.</p> <p><i>Greenhouse Gas Emissions</i></p> <p>As a renewable energy project, the Project is expected to contribute to the reduction of greenhouse gas emissions.</p>	
10	Health and Safety	<p>ADB SPS, Environmental Safeguard, 10</p> <p>World Bank EHS General Guidelines, 2-3</p> <p>World Bank EHS Guidelines for Wind Energy, 1.2-1.3 and 2.2</p> <p>Occupational Safety, Health and Environment Act, B.E. 2554 (2011)</p>	<p><i>Occupational Health and Safety</i></p> <p>The Project conducted risk assessment to identify safety risk form the Project activities. Permit to work is implemented for activities conducted by Goldwind-Thai only.</p> <p><i>Community Health and Safety</i></p> <p>Risk assessment and register was conducted by the EHS representatives of BSE. The register covered hazard generated from Project's activities and mitigation measures.</p> <p>No significant gap is identified.</p>	None.

Ref	Aspect	Applicable Standards	Current Practices and Gaps	Corrective Action/Recommendations
		Labour Protection Act, B.E. 2541 (1998)		
11	Physical Cultural Resources	ADB SPS, Environmental Safeguard, 11	<p>The IEE assessed impacts on historical or cultural sites and aesthetics. It found no significant historical or cultural sites or tourist spots in or near the Project Area. On the other hand, it was suggested that the Project would add aesthetic value to the area and bring in more tourists. BCPG shared that this is not unheard of in Thailand. The Huai Bong Wind Farm in Nakhon Ratchasima Province in Northeastern Thailand has become a tourist attraction, with a café where tourists visit to enjoy the view of the wind farm. During the onsite visit, the interviewed village heads also expressed their expectations that more tourists will come into the area as a result of the wind farms.</p> <p>No significant gap is identified.</p>	None.

3.1.2 ADB SPS Involuntary Resettlement Safeguards

The ADB Involuntary Resettlement Safeguards are not triggered for this Project. According to Paragraph 5 of the ADB Safeguard Requirements 2: Involuntary Resettlement, the involuntary resettlement requirements apply to physical displacement resulting from involuntary acquisition of land or involuntary restrictions on land use or on access to legally designated parks and protected areas. Resettlement is considered involuntary when displaced individuals or communities do not have the right to refuse land acquisition that results in displacement. This has not been the case in the Project as LLG acquired land from the previous landowners through negotiated land sales and purchase agreements between 2016 – 2018. The 2 interviewed village heads confirmed that they have not received any complaints regarding these sales from their village members. LLG has reportedly agreed to allow the previous landowners to continue using parts of the land for rice farming and livestock rearing to support their livelihoods. This practice was observed during the onsite visit.

3.1.3 ADB SPS Indigenous Peoples Safeguards

The ADB Indigenous Peoples Safeguards are not triggered for this Project. According to Paragraph 9 of the ADB Safeguard Requirements 3: Indigenous Peoples, the safeguards are triggered if a project directly or indirectly affects the dignity, human rights, livelihood systems, or culture of Indigenous Peoples or affects the territories or natural or cultural resources that Indigenous Peoples own, use, occupy, or claim as their ancestral domain. This has not been the case for this Project as, according to the Portal of Indigenous Peoples Information in Thailand², there are no Indigenous Peoples in Nakhon Si Thammarat province. From its document review and the onsite visit, ERM has not identified any evidence that suggests Indigenous Peoples would indeed be impacted by the Project's activities.

² The Portal of Indigenous Peoples Information in Thailand is a project to develop a community knowledge-based database system to empower the most marginalized and vulnerable indigenous groups in Thailand. It is the result of a collaboration between civil society groups and academic institutions – namely, the Indigenous Peoples' Foundation for Education and Environment, the National Council of Indigenous Peoples in Thailand, Chulalongkorn University Social Research Institute, and the Center for Ethnic Studies and Development at Chiang Mai University. The Project is funded by the European Union and the International Work Group for Indigenous Affairs.

3.2 Other Applicable ADB Standards

Ref	Aspect	Applicable Standards	Current Practices and Gaps	Corrective Action/Recommendations
1.	Gender and Development	<p>ADB's Policy on Gender and Development, June 2003</p> <p>Gender Equality Act, B.E. 2558 (2015)</p> <p>Labour Protection Act (No. 7), B.E. 2562 (2019)</p> <p>ILO Equal Remuneration Convention, 1951 (No. 100)</p> <p>ILO Discrimination (Employment and Occupation) Convention, 1958 (No. 111)</p>	<p>At the time of the onsite visit, there was one identified female employee or worker involved in the Project activities: LLG had 1 female employee out of 4 employees, 4 male Goldwind-Thai subcontractors, and 7 male subcontracted security guards.</p> <p>Based on the interview, the practice of on-discrimination is referred to in Bangchak Group's Human Rights Policy, which covers all of Bangchak's subsidiaries. However, ERM was not provided for review any written document that would be reiterating BCPG's or LLG's responsibility in implementing Bangchak Group's Human Rights Policy.</p> <p>Regarding maternity leave, the LLG HR Policy states that employees are provided with 90 days of maternity leave, with the first 60 days being compensated by LLG. The 90-day count is not in compliance with the Labour Protection Act (No. 7), B.E. 2562 (2019) (effective May 2019), which mandates that employees are granted up to 98 days of maternity leave per year.</p> <p>There are currently no initiatives or programs to support women leadership or employment in LLG or BCPG. During the interviews, BCPG's HR personnel expressed interest at making commitments and targets to drive women representation at the time of the interview.</p> <p>Current outreach CSR programs have been focused on ad hoc financial support and activities for the local school. During the interview with the head of school, several women joined in the discussion and shared concerns and ideas relating to problems with rice farming and livelihoods in the community (i.e. influx of seawater, lack of storage, marketing challenges). The interviewed village members at the school, BCPG, LLG, and ADB agreed</p>	None

Ref	Aspect	Applicable Standards	Current Practices and Gaps	Corrective Action/Recommendations
			<p>during the discussion that rice farming would be an impactful area that LLG or BCPG could support communities with in the long term.</p> <p>No significant gap is identified.</p>	
2.	Labour and Social Protection	<p>ADB's Social Protection Strategy, September 2001</p> <p>Labour Protection Act B.E. 2541 (1998)</p> <p>ILO Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)</p> <p>ILO Employment Service Convention, 1948 (No. 88)</p> <p>ILO Forced Labour Convention, 1930 (No. 29)</p> <p>ILO Abolition of Forced Labour Convention, 1957 (No. 105)</p>	<p>No child labour or forced labour was identified during the site visit. See more on gender in Aspect 1: Gender and Development of Section 3.2 above.</p> <p>The LLG HR Policy provided for review and that governs the Project does not fully align with international human rights principles regarding discriminatory practices.</p> <p>During construction, LLG contributed to the local labour market through employing local service providers that employed local community members. Both village heads knew of local community members that have been employed for construction services. Security guards are also currently employed from a local company, but it is unclear how many of them are members of the local villages.</p> <p>Current CSR programs and initiatives developed by LLG/BCPG are related to education. None are related to employment at this time. However, interviewed community members have expressed optimism at the Project boosting the local economy through drawing in tourists in the future. Additionally, the interview with the school principal and several village members also touched on opportunities to strengthen livelihoods through projects relating to rice farming.</p>	<p>Develop and implement a human resources policy (for both staff and contractors) that clearly commits to statutory requirements and core labour standards. The HR policy shall also include anti-sexual harassment policy, including an effective and accessible harassment reporting mechanism, a private and fair investigative process, a fair and transparent redress system and annual training delivered to all staff.</p>

Ref	Aspect	Applicable Standards	Current Practices and Gaps	Corrective Action/Recommendations
		ILO Minimum Age Convention, 1973 (No. 138) ILO Worst Forms of Child Labour Convention, 1999 (No. 182) ILO Equal Remuneration Convention, 1951 (No. 100) ILO Discrimination (Employment and Occupation) Convention, 1958 (No. 111)		

3.3 Project Categorization

Following the ADB's SPS Categorisation System presented in **Section 2** and based on the ESCA gap analysis conducted above within this **Section 3**; the proposed categorizations of the Project are presented in the below table.

ADB's SPS Proposed Categorisation for the Project

Site	Environment ⁽¹⁾	Involuntary Resettlement ⁽²⁾	Indigenous Peoples ⁽³⁾
Lomligor Wind Project	Category B	Category C	Category C

Note:

- (1) Category B. The main Project impacts identified are noise levels and impacts on native bird species. The impact level for both impacts have been assessed to be minimal and site-specific, with none of them being irreversible if properly managed. Thus, the proposed environmental categorization of the Project is B.
- (2) Category C. As discussed in 3.1.2, there was no involuntary resettlement for the Project. Thus, the proposed project categorization of the Project is C.
- (3) Category C. As discussed in 3.1.3, there are no Indigenous Peoples in the Project Area and no impacts on Indigenous Peoples from the Project. Thus, the proposed project categorization of the Project is C.

4. CORRECTIVE ACTION PLAN

This section summarises the proposed list of corrective actions that should be undertaken by the Project to address the gaps against the Applicable Standards identified in the **Section 3** of the ESCA. The proposed Corrective Action Plan (CAP) of the Assessment is provided in the table below, along with proposed timelines and specific action items.

ERM has also provided additional recommendations that were discussed during the onsite visit. These recommendations are not required to close the performance gaps, but strongly advisable.

Table 4.1 Proposed Corrective Action Plan for the Project

Ref	Corrective Action	Deliverable	Responsibility	Timeline	Indicative Budget/Resources
Environmental and Social Management					
1	Develop and implement an operational environmental and social management plan (ESMP) commensurate with the level of environmental and social risks and impacts of the project. The ESMP should a) identify risks and impacts; b) have a defined institutional structure for management of the identified risks/impacts; c) include documentation, monitoring and reporting parameters for risk mitigation; and d) include training needs for staff and contractors to manage EHS and social issues of the project.	Operational ESMP	LLG	Prior to the first disbursement	Management time
2	Establish and implement programme for: <ul style="list-style-type: none"> Avifauna and Bat monitoring: This should include a monitoring programme (commensurate with the risks/impacts) for assessment and mitigation of potential impacts on birds and bats. Quarterly noise monitoring to assess and verify the noise levels at nearby sensitive receptors (e.g. nearest school, village). Where high noise levels 	Third party monitoring records	LLG	Prior to first disbursement and ongoing	Third party hiring cost and management time

Ref	Corrective Action	Deliverable	Responsibility	Timeline	Indicative Budget/Resources
	are found, appropriate mitigation measures may need to be implemented.				
3	Develop and implement a communication and grievance redress plan for managing complaints and grievances (internal as well as external, if any) resulting from the operations of the project. This plan/system should be gender inclusive and cover all employee and contractor staff. Information about this should be widely disseminated amongst stakeholders.	Grievance Register and evidence of its communication to stakeholders	LLG	Prior to first disbursement and ongoing	Third party hiring cost and Management time

Labour and Working Conditions

4	Develop and implement a human resources policy (for both staff and contractors) that clearly commits to statutory requirements and core labour standards. The HR policy shall also include anti-sexual harassment policy, including an effective and accessible harassment reporting mechanism, a private and fair investigative process, a fair and transparent redress system and annual training delivered to all staff.	HR Policy	LLG	Q4 2021	Management time
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APPENDIX A LIST OF DOCUMENTS PROVIDED FOR REVIEW

No.	Documents (En)	Document (Th)
01	General	
1	LLG Project Presentation, including Project details and location	-
2	Key project timeline	-
3	Feasibility study	-
4	Major equipment brochures, specifications, and track records for blades, nacelle, tower, and energy storage	-
5	Turbine layout plan	-
6	Maintenance plan and schedule	-
02	Wind Resources	
7	Technical Due Diligence on Lomligor Wind Farm Project	-
03	Corporate Documents	
8	Affidavit No. Sor Jor 5 052501	หนังสือรับรอง เลขที่ สจ.5 052501
9	Article of Association Form Bor Aor Jor 3 No. 100923005967	บอจ.3 ฉบับจัดตั้ง เลขที่ 100923005967
10	Memorandum of Association Form Bor Aor Jor 2 No. 1-1006-62-4-017978	หนังสือบริคณห์สนธิ แบบ บอจ.2 เลขที่ 1-1006-62-4-017978
11	Registered Shareholder List Form Bor Aor Jor 5 No. 1-1006-62-4-034493	สำเนาบัญชีรายชื่อผู้ถือหุ้น แบบ บอจ.5 เลขที่ 1-1006-62-4-034493
04	Project Parties	
12	Organization Chart	-
13	List of Directors and CV	-
14	Coordination Agreement Among LLG, Goldwind-HK, and Italthai Engineering and Silamas (13 June 2018)	-

No.	Documents (En)	Document (Th)
	<p>ESS Contractor Documents, including:</p> <ul style="list-style-type: none"> • Sales Agreement with Furukawa Battery Co., Ltd. (13 January 2017) • Product Distribution Agreement between Samsung SDI of Korea and Electrical Energy Solution Col, Ltd. (1 February 2017) • Contract Agreement no. LPWP-CONT-17-02 with the Consortium of PEC (Technology) Thailand Co., Ltd., Italthai Engineering Company Limited, and Electrical Energy Solution Co., Ltd. (1 March 2017) • Endorsement and Confirmation Letter from the Furukawa Batter Co., Ltd. (29 April 2018) 	-
	<p>Offshore Contractor Documents, including:</p> <ul style="list-style-type: none"> • Turbine Supply Agreement No. GWITHALOM201601C with Goldwind International Holdings (HK) Limited (26 April 2016) • Equipment Supply Agreement No. GWIESATHALOM201701C with Goldwind International Holdings (HK) Limited (19 January 2017) • Endorsement and Confirmation Letter from Goldwind International Holdings (HK) Limited (10 May 2018) 	-
	<p>Onshore Contractor Documents, including:</p> <ul style="list-style-type: none"> • Contract Agreement (Onshore) No. LPWP-CONT-17-01 with the 	-

No.	Documents (En)	Document (Th)
	<p>Consortium of Italthai Engineering Company Limited and Silamas Services Company Limited (30 January 2017)</p> <ul style="list-style-type: none"> Particular Conditions (Onshore) between LLG and Italthai and Silamas Confirmation Letter from Italthai (26 April 2018) 	
	<p>Other agreements, including:</p> <ul style="list-style-type: none"> Service Agreement No. Kor 2559/004 for Road Construction within Lomligor Project between LLG and Traithong Nakhon Sri Part., Ltd. (1 December 2016) Service Agreement No. LPWP-CON-001/2561 for Construction of Control Building, SVG Building, Warehouse, and Parking Space between LLG and S.Zone Company Limited (17 April 2018) Service Agreement No. LOM-CT-LG-11/8/2560-1 for a construction project including the improvement of the public road along the Baan Bang Rad – Baan Makam Ted Ditch and the installation of sewage pipes, including digging drainage ditches between LLG and Traithong Nakhon Sri Part., Ltd. (11 August 2017) Service Agreement for management services between LLG and Inter Fareast Wind International Company Limited (15 June 2018) 	<ul style="list-style-type: none"> สัญญาจ้างโครงการก่อสร้างถนน ภายในโครงการนาลมลิกร์ เลขที่ ค. 2559/004 ระหว่าง บริษัท ลมลิกร์ จำกัด ห้างหุ้นส่วนจำกัด ไตรทอง นครศรีฯ (1 ธันวาคม 2559) สัญญาจ้างเหมาก่อสร้างอาคารควบคุม อาคาร SVG อาคารเก็บอุปกรณ์ โรงจอดรถ โครงการนาลมลิกร์ LPWP-CON-001/2561 ระหว่าง บริษัท ลมลิกร์ จำกัด กับ บริษัท เอส.โซน จำกัด (17 เมษายน 2561) สัญญาจ้างงานก่อสร้างโครงการปรับปรุงถนนสาธารณะสายคูส่งน้ำบ้านบางแรด – บ้านมะขามเทศ และวางท่อระบายน้ำพร้อมชุดดักคูระบายน้ำข้างทาง เลขที่ LOM-CT-LG-11/8/2560-1 ระหว่าง บริษัท จำกัด กับ ห้างหุ้นส่วนจำกัด ไตรทอง นครศรีฯ (11 สิงหาคม 2560) สัญญาให้บริการระหว่างบริษัท ลมลิกร์ จำกัด กับ บริษัท อินเตอร์ พาร์อีสท์ วินด์ อินเตอร์เนชั่นแนล จำกัด มิถุนายน 2561)
05	Other Project Agreements	

No.	Documents (En)	Document (Th)
	<p>Land acquisition documents, including:</p> <ul style="list-style-type: none"> List of land parcels for Lomligor Project Map of land deeds in Lomligor Project owned by LLG Map of land parcels surrounding Lomligor Project Scanned copies of land title deeds 	<ul style="list-style-type: none"> ที่ดินโครงการลอมลิกอร์ ผังโฉนดโครงการลอมลิกอร์ ผังที่ดินรอบโครงการลอมลิกอร์ โฉนดที่ดิน
2	<p>Power Purchase Agreement No. VSPP-PEA-006/2557 between SGC Wind Energy Company Limited and PEA (23 June 2014)</p>	<p>สัญญาซื้อขายไฟฟ้า เลขที่ VSPP-PEA-006/2557 ระหว่าง บริษัท เอสจีซี วินด์ เอ็นเนอจี จำกัด กับ การไฟฟ้าส่วนภูมิภาค (มิถุนายน 2557)</p>
2	<p>Announcement of consideration of changed scheduled commercial operation date (SCOD)</p>	<p>แจ้งผลการพิจารณาเลื่อนกำหนดวันเริ่มต้นซื้อขายไฟฟ้า (SCOD) ที่ มท ๕๓๐๓.๑๒/๒๕๖๗๐</p>
06	<p>Licenses and Permits</p>	
2	<p>Building construction permits issued by the Energy Regulatory Commission</p> <ul style="list-style-type: none"> No. Kor Kor Por (Or. 1)-1-077/2560 for wind turbine generation (Ban Peng), issued on 12 December 2017 No. Kor Kor Por (Or. 1)-1-078/2560 for office building, warehouse (Tha Praya), issued on 12 December 2017 	<ul style="list-style-type: none"> ใบอนุญาตก่อสร้างอาคาร ดัดแปลงอาคาร หรือรื้อถอนอาคาร เลขที่ กกพ. (อ.๑)-๑-๐๗๗/๒๕๖๐ ใบอนุญาตก่อสร้างอาคาร ดัดแปลงอาคาร หรือรื้อถอนอาคาร เลขที่ กกพ. (อ.๑)-๑-๐๗๘/๒๕๖๐
2	<p>Approval letters from the relevant Sub-district Administrative Organization</p> <ul style="list-style-type: none"> No. Nor Sor 76803/596 from Tambon Tha Praya 	<ul style="list-style-type: none"> เอกสารตอบเรื่องขอความอนุเคราะห์หรือ ตรวจสอบข้อมูลสำหรับโครงการลอมลิกอร์ ที่ นศ ๗๖๘๐๓/๕๙๙ จากที่ทำการองค์การบริหารส่วนตำบลท่าพญา เอกสารตอบเรื่องขอความอนุเคราะห์หรือ ตรวจสอบข้อมูลสำหรับโครงการลอมลิกอร์ ที่ นศ ๗๖๑๐๓/๓๕๙ จากที่ทำการองค์การบริหารส่วนตำบลบ้านเพิง

No.	Documents (En)	Document (Th)
	<ul style="list-style-type: none"> No. Nor Sor 86103/351 from Tambon Pak Phanang 	
2	Board of Investment (BOI) Promotion Certificate	บัตรส่งเสริม คณะกรรมการส่งเสริมการลงทุน เลขที่ 59-1518-1-00-1-0
2	Controlled Energy Generation Permit (Form Por Kor 2) issued by Energy Regulatory Commission	ใบอนุญาตให้ผลิตพลังงานควบคุม กกพ (พค.๒) – ๐๗๗/๒๕๖๒
2	Electricity Generation License issued by the Energy Regulatory Commission, No. Kor Kor Por 01-1(1)/62-842	ใบอนุญาตประกอบกิจการผลิตไฟฟ้า เลขที่ กกพ ๐๑-๑(๑)/๖๒-๘๔๒
2	Permission letter from the Provincial Electricity Authority (PEA), No. Mor Thor 5304.12/12524, for power connecting to the PEA system	ใบอนุญาตขานานเครื่อง ที่ มท ๕๓๐๔.๑๒/๑๒๕๒๔
2	Letter from PEA confirming COD, including: <ul style="list-style-type: none"> Announcement of scheduled COD PEA reading of electricity meter 	<ul style="list-style-type: none"> รับแจ้งความประสงค์จะเริ่มประกอบกิจการผลิตไฟฟ้า ที่ สกพ ๕๕๐๒/๔๓๗๗ รายงานการอ่านมิเตอร์ไฟฟ้าประจำเดือนสำหรับผู้ผลิตไฟฟ้าขนาดเล็กมาก
07	Financial Accounting Legal	
2	Financial Statements for 2014-2018	-
08	Environmental and Social	
3	Initial Environmental Examination	รายงานผลการศึกษามลกระทบสิ่งแวดล้อมเบื้องต้น
3	LLG Environmental Monitoring Report	รายงานการตรวจวัดคุณภาพสิ่งแวดล้อม
3	Flood Study Report	รายงานการศึกษาน้ำท่วมในพื้นที่โครงการนาลมลิกร์
3	LLG HR Policy	-

No.	Documents (En)	Document (Th)
	Public Hearing Documents, including: <ul style="list-style-type: none"> • Public Hearing 1 on 28 November 2015 • Public Hearing 2 on 31 March 2018 	รายงานฉบับสมบูรณ์ การมีส่วนร่วมของประชาชนและชุมชนต่อโครงการนาลมลิฮอร์
09	Others	
	Site pictures and photos	-
	Insurance Policy, including: <ul style="list-style-type: none"> • General Public Liability Insurance No. 14013-111-190000204 • Operation All Risks and Business Interruption Insurance No. 93-11-62/000038 • Single Project Professional Liability (SPPI) 	-
	MOU with NSTDA covering research on the battery energy storage system	บันทึกข้อตกลงความร่วมมือด้านการวิจัยและพัฒนาการศึกษาการใช้งานแบตเตอรี่ขนาดใหญ่เพื่อเป็นแหล่งกักเก็บพลังงานไฟฟ้าที่ผลิตได้จากระหว่าง สำนักงานพัฒนาวิทยาศาสตร์และเทคโนโลยีแห่งชาติ โดย ศูนย์เทคโนโลยีโลหะและวัสดุแห่งชาติ กับ ฟาร์อีสท์ วินด์ อินเตอร์เนชั่นแนล จำกัด บริษัท เกาะเต่า วินด์ จำกัด และ บริษัท ลมลิฮอร์ จำกัด

APPENDIX B PHOTO LOG



Photo 1. View of wind turbine generators from neighboring school



Photo 2. Warehouse



Photo 3. Back view of the main control building



Photo 4. Project Area borders community land with no physical demarcation



Photo 5. Wind turbines are fenced with locked entry



Photo 6. Safety signs on the wind turbines

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