Environmental and Social Due Diligence Report (ESDDR)

CLEANMAX VITAL ENERGY LLP
CLEANMAX AURIGA POWER LLP
CLEANMAX SCORPIUS POWER LLP
CLEANMAX KHANAK PVT LTD

Promoted by: CLEAN MAX GROUP

Loan Amount: Rs. 196.00 crores

RUPEE TERM LOAN OF ₹196 CRORE FOR SETTING UP 46.20 MW SOLAR & WIND HYBRID POWER PROJECT IN JAGALUR DISTRICT of KARNATAKA UNDER CAPTIVE MODEL

30th Dec 2021

Tata Cleantech Capital Limited

Team:
SEMS Officer: Girish Shukla
Relationship Manager: Neeraj Agrawal
Credit Manager: D. Soma Sundar
Team Lead Relationship: Mitheel Mody
Team Lead Credit: Rupin Patel

Source of inputs for ESDD:

- TCCL Credit Note No. 49/FY 21-22
- Initial assessment and terms sent to credit and sales team 12th Oct 2021
- Public domain information
- Site visit on 13th -15th Dec 2021.
- Final ESIA and ESMP Report dated 21st Dec 2021, ESDD reports of TCCL for 18.9 MW Wind power plant and 10.2 MW Solar power plant
- E&S terms included in Sanctioned letter and loan document
- Information submitted by borrowers team

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1. Summary

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<tr><td>Sector</td><td>Hybrid (Wind and Solar Power)</td></tr>
<tr><td>Borrower</td><td>Four SPVs:
Cleanmax Vital Energy LLP
Cleanmax Auriga Power LLP
Cleanmax Scorpius Power LLP
Cleanmax Khanak Pvt Ltd</td></tr>
<tr><td>Project stage, capacity</td><td>

Clean Max Group proposes to develop 46.20 MW Solar Wind Hybrid Power Project in Jagalur Taluk, Davanagere District, and Karnataka under group captive structure.
The project includes 6 WTGs (2.7 MW capacity each) of cumulative capacity 16.20 MW and four solar projects (within solar park) with aggregate capacity of 30 MW. This is to be noted that both wind and solar projects are being developed within solar and wind Park and located ~4 km from each other. Details of projects are as follows:
<table>
<tr><th>Project SPV</th><th>Offtaker</th><th>Wind (MW)</th><th>Solar (MW_{DC})</th><th>Total (MW)</th></tr>
<tr><td>Cleanmax Vital Energy LLP</td><td>Roquette India Pvt. Ltd.</td><td>2.70</td><td>8.50</td><td>11.20</td></tr>
<tr><td>Cleanmax Auriga Power LLP</td><td>Cipla Ltd.</td><td>2.70</td><td>9.00</td><td>11.70</td></tr>
<tr><td>Cleanmax Scorpius Power LLP</td><td>Manjushree Technopak Ltd.</td><td>8.10</td><td>10.00</td><td>18.10</td></tr>
<tr><td>Cleanmax Khanak Pvt Ltd</td><td>LM Windpower (India) Pvt. Ltd. (a GE entity)</td><td>2.70</td><td>2.50</td><td>5.20</td></tr>
<tr><td>Total</td><td></td><td>16.20</td><td>30.00</td><td>46.20</td></tr>
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The proposed project is brownfield expansion within the existing Wind solar Hybrid Park where TCCL has existing exposure. Evacuation system is already in place along with relevant approvals for evacuation of power. Power evacuation along with road and boundary of solar park is being developed under common infrastructure by CMES Jupiter Pvt. Ltd. Borrowers can use this infrastructure and power evacuation facility through a Common Infrastructure Sharing Agreement.
The Project is conservatively estimated to be commissioned by Sep 30, 2022. Currently, land acquisition for Wind capacity is under progress (expected to complete by Dec 2021). For solar capacity

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<tr><td></td><td>entire project land is in place while for wind the land is being progressively acquired.
• The aggregate Project cost is ₹286.79 Crores (~₹6.21 Cr/MW).

<table>
<tr><th>Particulars</th><th>Capacity (MW)</th><th>Cost (Rs. In crore)</th><th>Cost (Rs cr / MW)</th></tr>
<tr><td>Wind – hard cost</td><td>16.20</td><td>130.14</td><td>8.03</td></tr>
<tr><td>Solar – hard cost</td><td>30.00</td><td>136.54</td><td>4.55</td></tr>
<tr><td>Total hard cost</td><td>46.20</td><td>266.67</td><td></td></tr>
<tr><td>Soft costs</td><td>-</td><td>20.12</td><td></td></tr>
<tr><td>Total Cost</td><td>46.20</td><td>286.79</td><td>~6.21</td></tr>
</table></td></tr>
<tr><td>Key components and technology</td><td>• 6 WTGs of GE make with 2.7 MW capacity each, is planned for this project. Rotor diameter – 132 m and Hub height 130 m.
• Internal Transmission line of 33 kV – Wind project: 8 km long with 15 m ROW width. (~4 km with 40 towers to be developed while ~4 km is already developed as a part of common infrastructure for wind power Park).
• Internal Transmission line of 33 kV – Solar project: 6 km long (60 towers) with 15 m ROW width is already developed as a part of common infrastructure for Solar Power Park.
• EHV line of 220 kV (from PSS to GSS): 350 m long. Already developed and operational.
• Pooling Substation (PSS): 33/220 kV (3 x 75 MVA) at Hiremallanahole village is already constructed to receive power from wind solar hybrid park.
• Grid Substation (GSS): 220/400 kV KPTCL (1000MVA) existing at Hiremallanahole village.
• Land is already available within Solar Park for the development of 30 MW solar power project. Land procurement for 6 WTGs is ongoing on willing seller willing buyer basis and expected to complete by Dec 2021. Common infrastructure (Power evacuation system, road and boundary for solar power project) is being developed by CMES Jupiter. Borrowers can use the common infrastructure of wind solar hybrid park after signing agreement with CMES Jupiter Pvt. Ltd.</td></tr>
<tr><td>Revenue source</td><td>• Long term Power Purchase Agreement (PPA) is signed with following industrial customers:
o Roquette India Pvt Ltd
o Cipla Ltd
o Manjushree Technopak Ltd
o LM Windpower (India) Pvt Ltd (a GE entity)</td></tr>
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<table>
<tr><td>Key contractor</td><td>

EPC contractor – Clean Max Enviro Energy Solutions Pvt. Ltd.
O&M Contractor – Clean Max Solar will enter into a back to back agreement with GE for supply, erection and commissioning of WTG along with civil work and approval required for design and installation of WTGs.

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<tr><td>Location Coordinates</td><td>
16.2 MW Wind Power Project:
<table>
<tr><th rowspan="2">S No.</th><th rowspan="2">TURBINE ID</th><th colspan="2">UTM Coordinates</th><th rowspan="2">Offtakers</th></tr>
<tr><th>Easting (X)</th><th>Northing (Y)</th></tr>
<tr><td>1</td><td>J72</td><td>648426</td><td>1605432</td><td rowspan="3">Manjushree</td></tr>
<tr><td>2</td><td>J88</td><td>648134</td><td>1604914</td></tr>
<tr><td>3</td><td>J71</td><td>648130</td><td>1604451</td></tr>
<tr><td>4</td><td>J91</td><td>653375</td><td>1605911</td><td>Cipla</td></tr>
<tr><td>5</td><td>J30</td><td>653074</td><td>1607726</td><td>GE</td></tr>
<tr><td>6</td><td>J43</td><td>649742</td><td>1603724</td><td>Roquette</td></tr>
</table>

Villages: Thimmalapura, Siddamannahalli, Bharamasamudra, Giguddu, Kamagethanahalli and Kasavanahalli
Taluka: Jagalur, District: Davanagere, Karnataka

30 MW Solar Power Project:

Villages: Huchavanahalli & Taitoni
Taluka: Jagalur, District: Davanagere, State: Karnataka
Geo-Coordiante: 14.554989 N,76.470884 E

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<tr><td>Loan amount</td><td>Rs. 196 cr</td></tr>
<tr><td>Time Period</td><td>~15.5 years</td></tr>
<tr><td>Co-lenders</td><td>None. TCCL is the sole lender</td></tr>
<tr><td>E&S Risk Category</td><td>B
(No Environmental and social sensitivity. Project and sponsor are out of the Exclusion List, and do not pose reputational risks to TCCL based on past E&S performance)</td></tr>
<tr><td>Summary E&S Assessment</td><td>
<u>16.2 MW Wind Power Project:</u>

A. Project:

6 WTGs of 2.7 MW capacity each and aggregate capacity 16.2 MW are being developed by borrowers within wind solar hybrid park. Both wind and solar parks are ~4 km away from each other in different villages. The present project is a brownfield expansion of 18.9 MW wind power project (developed by Cleanmax Power 3 LLP). TCCL using AIIB credit line already has exposure in this project.
Wind Solar Park where the 16.2 MW project is being developed, has total capacity of 70 MW. Entire 70 MW Solar

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	Park will be developed in phase wise manner. Accordingly, 18.9 MW has been developed earlier and now 16.2 MW is being developed. • Common infrastructure has been developed by Solar Park Developer i.e. CMES Jupiter Pvt. Ltd. For both wind and solar parks. PSS and 33 kV transmission line from 18.9 MW wind plant are already developed. 33 kV transmission line from the proposed 6 WTGs will be developed to connect the project from already existing feeder. **B. Land:** • Land procurement for 6 WTGs is ongoing on willing seller – willing buyer basis and expected to complete by Dec 2021. The land procurement procedure does not involve involuntary acquisition of land. A land aggregator has been hired to facilitate land procurement from the villagers. The land parcels identified for the proposed project are mostly unirrigated. The land involved 11 title holders for 6 land parcels without having any non-title holders. No land seller become land less in this project, as informed by land team of borrower and also substantiated by ESIA study. a. No land of Schedule tribes and assigned land, are procured in this project. Land sellers have been compensated with sale price mutually agreed by land owners and borrower. Compensation paid for the land parcels is minimum 5 times higher than the government rate and up to 4 times higher than the open market private rate. Most of the compensation amount will be used for procurement of another land parcel in nearby area and repayment of existing loans, as revealed by land sellers during the stakeholder consultation. b. Land for Transmission line: There is no requirement of land procurement for the transmission line. The ROW permission will be required for transmission line connectivity to the grid substation at Mudlamachikere village. ~8 km long 33 kV transmission line passes through agricultural fields and land for towers (6m x 6m area) have been secured by paying one time compensation for crop damage as per P&T Rules, The Electricity Act 2003 and The Telegraphic Act. Any disputes regarding T. line ROW and tower footprint can be resolved by district administration using legal and administration power provided under The Telegraphic Act.

S.No.	Project SPVs	WTG No.	Number of Land owners	Land Area sold to the project (Survey Numbers)	Remaining land available with the land sellers
1	Cleanmax Vital Energy LLP	J43	WTG: 2 T. Line: 2	4 acre	4 acre
2	Cleanmax Auriga Power LLP	J91	WTG: 1 T. Line: 2	3 acre	17 acre
3	Cleanmax Scorpius Power LLP	J42, J107, J71	WTG: 4 T. Line: 3	9 acre	66 acre
4	Cleanmax Khanak Pvt Ltd	J41	WTG: 3 T. Line: 4	4 acre	11 acre

C. Regulatory Approvals:

Project has already received following regulatory approvals:

a. Government Order from Karnataka State Government: Received to develop 70 MW wind solar hybrid park.
b. Power Evacuation Approval: Required to allow power evacuation from project to Grid Substation. Approval already received from Karnataka Power Transmission Corporation Ltd. (KPTCL).
c. CEIG approval: To ensure all the electrical safety provisions and safeguards are in place. Will be received prior to project commissioning.
d. Land use change approval or NA approval: Required to use agricultural land for nonagricultural purpose. According to section 3 of Karnataka Land Reform and Certain other law (Amendment) Act, 2014, change in use of land from agriculture to industrial purpose is deemed to have been accorded with grant of permission under section 109 of Karnataka Land Reforms Act, 1961 to setup renewable energy plant. NA approvals are in progress and will be shared as soon as received.
e. Village Panchayat NOC: Required to setup project within the administrative boundary of villages. No- Objection

	Certificate (NOC) have been received from the Grampanchayat of Anabur, and Hanumanthpura. f. Aviation NOC due to Chitradurga Aeronautical testing range (>20 km from project site) – Not required as project is not within restrictive area i.e. 20 km from Aerodrome. Further, restrictive distance[1] for WTG is 10 km from all static Air Defence Radar. As project is beyond the restricted distance, Aviation NOC is not required. **D. Resource Requirement:** Construction phase lasting over around 5 to 6 months will engage 100 people during the peak construction period including 40 local people for skilled and unskilled manpower requirement. During operational phase, project is expected to engage upto 5 persons including technical persons and 2 security guards. Local labor will commute from their respective homes on daily basis while rented accommodation in Jagalur village will be provided to migrant labor. Basic amenities such as potable drinking water, water for domestic purposes, toilets, adequate lighting will be ensured. Also, directions of code and conduct including Do's and don't while community interaction will be provided to all workers through EPC contractor/subcontractors. **E. Environmental Sensitivity:** Location of WTGs, 33 kV line and 220 kV EHV line do not fall within any ecological sensitive area such as wildlife sanctuary, National Park, Important Bird Areas, Forest etc. Nearest WLS i.e. Rangayanadurga Four Horned Antelope Wildlife Sanctuary is located around 11 km NW of project site. No regulatory approval with respect to WLS is required, as project is located out of WLS and its ESZ area (ESZ extent – 0.95 km to 4.50 km around the WLS boundary). Project area i.e. WTGs and T. line route neither falls into any migratory flyway nor has nesting and breeding ground of birds as clarified by ESIA report. Apart from ecological sensitivities, project area is also devoid of any archeological and culturally important area. Project design has already considered following measures to increase the visibility of WTGs and avoid tripping incidents due to perching of birds on T. line poles: a. Installing flash light on WTGs b. Installing bird guards (spike guards) on the top of T. line poles

[1] GUIDELINES FOR ISSUE OF NOC FOR CONSTRUCTIONS AROUND INDIAN AIR FORCE AERODROMES

	F. ESIA Study, Project Disclosure, Stakeholder Consultation, EMP and OHS Plan: • ESIA study including stakeholder consultation undertaken in Oct 2021 and based on the study, EMP has been framed which will be implemented by borrower during the course of project. • The E&S risk category for this project is assigned as category B due to limited E&S impacts which can be managed/controlled using mitigation measures. • Significant disturbance to community due to shadow flickering and noise are not anticipated as major settlements (villages) are sufficiently away (>500 m) from WTGs location. Shadow flickering and noise impact study undertaken during ESIA also indicate that significant impact due to these aspects does not exist. • Project disclosure along with GRM officer details completed at Village Panchayat Office and at TCCL website. During ESIA study also, project has been discussed with community people and land owners. Based on the discussion and consent of community, NOC has been granted by office of Anabur and Hanumanthapura Village Panchayat for project establishment. • During stakeholder consultation (in Oct 2021), land owners, land aggregator, Revenue Department, Gram Panchayat and Forest Department had been consulted. The stakeholder consultations revealed that: a. Local villagers including Village Sarpanch (Head of Village) are aware about renewable energy projects (existing and upcoming). Wind and Solar power projects of same borrower are already ongoing in the vicinity. b. Villagers and land providers have a positive perception about the renewable energy project, as these projects support the local economy and employment in the area. c. Project area is a water scarce area and primarily dependent on rains for cultivation. With limited irrigation water supply, local villagers are not solely dependent on agriculture but have other means of income such as shops, labour and jobs in nearby city and towns, and land in the area is primarily used for cultivating groundnuts, grams, pulses and cotton. d. Procuring of land for the project neither resulted in any physical displacement nor resulting any local villagers becoming landless e. Land sellers have been provided fair compensation amount in comparison to market rate of project area. Mutually agreed sale price more than 5 times higher than

	the government registered rate, and up to 4 times higher than the open market private rate have been paid. Landowners are satisfied with the compensation value and intend to use it for various purposes including buying other land parcels in same area, repay existing loans, marriage of children and to open shops in the area. • GRM system is in place to address and resolve community grievances. People of project area villages are already aware about the wind power project as two wind power plants are already operating in nearby area (~ 1.5 km and 7 km away) and people have shown positive opinion to these projects. Village Panchayat NOC (No objection certificate) received in the project also shows people consent. • HSE plan and SOPs are in place and will be jointly implemented by HSE officer of Clean Max and GE (windfarm manufacturer). **<u>30 MW Solar Power Project:</u>** **A. Project:** • CMES Jupiter has got approval from Karnataka State Government to develop 70 MW Solar power plant in Jagalur taluka, Davanagere district, Karnataka. Infrastructure like PSS and 250 m long EHV line, developed by CMES Jupiter will be jointly used by both solar and wind power project. • 30 MW solar power project within this 70 MW solar park is proposed for debt funding by TCCL using AIIB credit line. Road development and 33 kV line (transmission line upto PSS) work has been carried out by CMES Jupiter. • 10.2 MW solar power project owned by another SPV of Cleanmax group has been developed within the same Solar Park. 33 kV internal transmission line is already developed to connect Solar Park with PSS. **B. Land:** • Land procurement for Solar Park (within which 30 MW project is proposed) and Pooling substation is already completed. The land for Solar Park has been procured on willing buyer – willing seller basis and procurement procedure does not involve involuntary acquisition of land as confirmed by ESIA study. A land aggregator has been hired to facilitate land procurement from the villagers. No land seller become land less in this project, as substantiated by land team of borrower and ESIA study also. • No land of Schedule tribes and assigned land, are procured in this project. Land sellers have been compensated with sale

price mutually agreed by land owners and borrower. Compensation paid for the land parcels is minimum 3 times higher than the government rate2 and up to 2.5 times higher than the open market private rate. Most of the compensation amount will be used for procurement of another land parcel in nearby area and repayment of existing loan, as revealed by land sellers during the stakeholder consultation. ~82 acre land identified for 30 MW solar power project, involved 14 title holders for 15 land parcels without having any non-title holders.

- Land for Transmission line: There is no requirement of transmission line development. ~6 km long transmission line is already available to facilitate power evacuation from Solar Park to PSS at 33 kV level.

S.No.	Project SPVs	Solar Project Capacity	Number of Land owners	Land Area sold to the project (Survey Numbers)	Remaining land available with the land sellers
1	Cleanmax Vital Energy LLP	8.50 MW	3	19 acre	17 acre
2	Cleanmax Auriga Power LLP	9 MW	6	23 acre	46 acre
3	Cleanmax Scorpius Power LLP	10 MW	7	30 acre	34 acre
4	Cleanmax Khanak Pvt Ltd	2.50 MW	1	6 acre	5 acre

C. Regulatory Approvals:

Project has already received following regulatory approvals:

a. Government Order from Karnataka State Government: Received on 22nd Oct 2019 to develop 70 MW solar Park in Jagalur taluka, Davanagere district

[2] Govt. rate (average)is Rs. 175,000/acre

	b. Power Evacuation Approval: Required to allow power evacuation from project to Grid Substation. Approval already received from Karnataka Power Transmission Corporation Ltd. (KPTCL). c. CEIG approval: To ensure all the electrical safety provisions and safeguards are in place. Will be received prior to project commissioning. d. Land use change approval: Land use change approval/NA approval is granted at solar park level. This approval is required to use agricultural land for nonagricultural purpose. According to latest Ordinance (dated 13th Jul 2020) on Land Reforms Act, now agricultural land can be purchased by any individual, organization or company with nonagricultural background. However, land use change approval (NA approval) would be required to use the land for non-agricultural use. Earlier, special permission under section 109 of Karnataka Land Reforms Act, 1961 was required to purchase agricultural land by an individual, organization or company with non-agricultural background. Change in land use/NA approval was deemed to have been accorded with grant of permission under section 109. e. Village Panchayat NOC: Required to setup project within the administrative boundary of villages. No- Objection Certificate (NOC) have been received for the project. **D. Resource Requirement:** • Water for construction activities and module cleaning will be arranged through water tankers from nearby area. A ground water recharge structure will be developed within the Solar Park premise. • Construction phase during its 3 to 4 months period is expected to engage around 175 people during the peak construction period including 100 local people for skilled and unskilled manpower requirement. During operational phase, project is expected to engage upto 10 persons including technical persons and 3-4 security guards. Local labor will commute from their respective homes on daily basis while rented accommodation in Jagalur village will be provided to migrant labor. As confirmed by borrower, basic amenities such as potable drinking water, water for domestic purposes, toilets, adequate lighting will be ensured. Also, directions of code and conduct including Do's and don't while community interaction will be provided to all workers through EPC contractor/subcontractors.

	G. Environmental Sensitivity: • Location of solar plant, 33 kV line and 220 kV EHV line do not fall within any ecological sensitive area such as wildlife sanctuary, National Park, Important Bird Areas, Forest etc. Nearest WLS i.e. Rangayanadurga Four Horned Antelope Wildlife Sanctuary is located around 21 km NW of project site. No regulatory approval with respect to WLS is required, as project is located sufficiently away from WLS and its ESZ area (ESZ extent – 0.95 km to 4.50 km around the WLS boundary). • Project area and T. line route neither falls into any migratory flyway nor has nesting and breeding ground of birds as clarified by ESIA report. Apart from ecological sensitivities, project area is also devoid of any archeological and culturally important area. • Project design has already considered spike guards on the top of T. line poles to avoid tripping incidents due to perching of birds • The E&S risk category for this project is assigned as category B due to absence of Ecological Sensitive Areas and limited E&S impacts which can be managed/controlled using mitigation measures. H. **ESIA Study, Project Disclosure, Stakeholder Consultation, EMP and OHS** • ESIA study has been undertaken in Jan 2020 for entire 70 MW solar park and EMP has highlighted the general mitigation measures applicable for construction and O&M activities in solar power project. No major specific risks have been highlighted with respect to Environmental Sensitivity. • HSE plan and SOPs are in place and will be implemented by HSE officer. Plans for HSE trainings and mock drills are in place and will be implemented for all workforce. Incident and accident records will also be maintained to analyse the root-cause of accidents and improve HSE performance. • Significant disturbance to community due to project activities and transportation of material is not anticipated, as settlements (villages) are sufficiently away (>1 km) from project location. • As a part of ESIA study, stakeholder consultation was undertaken in Jan 2020. EMP has been framed out on the basis of ESIA study and will be implemented by borrower during the course of the project. • Project disclosure along with GRM officer details at Village

	Panchayat Office is expected to complete by 22nd Jan 2021. During ESIA study also, project has been discussed with community people, land owners and Head of the Village Panchayat. Based on the discussion and consent of community, NOC has already been granted by office of Village Panchayat for project establishment. • During January 2020, stakeholder consultation undertaken with land owners, land aggregator, Revenue Department, Karnataka Ground Water Authority, Gram Panchayat and Forest Department. These stakeholder consultations reveal that: a. Local villagers are aware about renewable energy projects, and there are two solar power projects already operating within 5 km from project site b. Villagers and land providers have a positive perception about the renewable energy project, as it will support the local economy and employment in the area. c. Project area is a water scarce area and primarily dependent on rains for cultivation. With limited irrigation water supply, local villagers are not solely dependent on agriculture but have other means of income such as shops, labour and jobs in nearby city and towns, and land in the area is primarily used for cultivating groundnuts, grams, pulses and cotton. d. Procuring of land for the solar park neither resulted in any physical displacement nor resulting any local villagers becoming landless e. Mutually agreed sale price more than 3 times higher than the government registered rate, and up to 2.5 times higher than the open market private rate have been paid. Landowners are satisfied with the compensation value and intend to use it for various purposes including buying other land parcels in same area, repay existing loans, marriage of children and to open shops in the area. • GRM system is in place to address and resolve community grievances. People of project area villages are already aware about the solar power project as two solar power plants are already operating in nearby area (~ 200 m and 4.5 km west of project site) and people have shown positive opinion to these projects. Village Panchayat NOC (No objection certificate) received also shows people consent.
Recommendations	Recommended for investment based on ESDD with inclusion of E&S conditions into credit note, sanctioned letter and loan agreement. E&S terms are included in these documents and assessed as in compliance – prior to disbursement.

Key E&S Risks	• Delayed or no payment from borrower's customer due to serious accidents during project maintenance and inability of borrower to avoid or control such accidents. • Intermittent or permanent shutdown of project due to resentment to local community, resentment to workforce due to unhealthy work conditions, and non-compliance to approvals already sought for the projects, by developer
Key E&S Covenants	All specific E&S terms except submission of project approvals are closed on the basis of ESIA review and discussion with project team. **<u>Specific E&S conditions – 16.2 MW Wind Power Project: (To be complied prior to disbursement):</u>** 1. The Borrower shall submit copies of all permit, approvals/Clearances, no-objection certificates from aviation, village panchayat, PPAs, Project Documents, certificate for change in land use along with the compliance status of all the Clearances. **Assessment**: According to section 3 of Karnataka Land Reform and Certain other law (Amendment) Act, 2014, change in use of land from agriculture to industrial purpose is deemed to have been accorded with grant of permission under section 109 of Karnataka Land Reforms Act, 1961 to setup renewable energy plant. Approval under Section 109 is already received. All other permission such as Village Panchayat NOC, evacuation approval and PPAs are in place. Aviation approval or NOC due to Chitradurga Aeronautical testing range (located >20 km) not required, as project is beyond 20 km (20 km is restrictive distance from Aerodrome for construction of any tall structure and 10 km is from Radar Antenna). **Condition Closed.** 2. Borrower to submit updated status of land procured and compensation paid to the land owners **Assessment**: Land procurement is ongoing for WTGs and expected to complete by Dec 2021. Land is being procured on willing seller willing buyer basis. No involuntary land acquisition and R&R involved in the project. No land of Schedule tribes and assigned land, are procured in this project. Land sellers have been compensated with sale price mutually agreed by land owners and borrower. Compensation paid for the land parcels is minimum 5 times higher than the government rate and up to 4 times higher than the open market private rate. During stakeholder consultation with landowners, satisfaction has been expressed for the compensation amount received

and establishment of wind project. Most of the compensation amount will be used for procurement of another land parcel in nearby area and repayment of existing loans, as revealed by land sellers during the stakeholder consultation. During stakeholder consultation, it was also verified by ESIA consultants that no person has become landless in this project.

During title search study and legal due diligence undertaken by borrower, land parcels have been verified with respect to land holdings, ownership, number of titleholders and presence of irregularity and claim/objection (if any). No land has been taken from SC/ST people. Total 11 title holders were involved for 6 land parcels (accounting for total 20 acre area).

Details of title land holders and land holdings are given below.

S.No.	Project SPVs	WTG No.	Number of Land owners	Land Area sold to the project (Survey Numbers)	Remaining land available with the land sellers
1	Cleanmax Vital Energy LLP	J43	WTG: 2 T. Line: 2	4 acre	4 acre
2	Cleanmax Auriga Power LLP	J91	WTG: 1 T. Line: 2	3 acre	17 acre
3	Cleanmax Scorpius Power LLP	J42, J107, J71	WTG: 4 T. Line: 3	9 acre	66 acre
4	Cleanmax Khanak Pvt Ltd	J41	WTG: 3 T. Line: 4	4 acre	11 acre

Condition Closed.

3. The Borrower to submit the records and/or documents evidencing any grievances received from the community in relation to the Project and the actions taken by the Borrower to resolve the same.
Assessment: Grievance system exist and will be implemented at project site. As a part of ESIA study, project has been disclosed to community. Stakeholder consultation also completed as a part of ESIA study. Contact details of GRM officers disclosed in 18.9 MW wind and 10.2 MW Solar Power projects will remain applicable for the present projects also, as

	the present project is brown field extension of in the same area. Grievance redressal committee are also formed to review the recorded grievances. Record of grievances and resolution will be continuously tracked throughout the loan tenure under general E&S terms monitoring. **Condition Closed**. 4. Borrower to submit report on measures taken to ensure health and safety of project workers to avoid incidents/accidents at the site (through incident records, safety trainings, grievance redressal, etc.) **Assessment:** Borrower has EHS plan to control safety risk in wind power project. Borrower EHS team in coordination with GE EHS team are implementing EHS plan and SOPs. All training records and safety performance statistics will be maintained. **Condition Closed**. 5. Borrower to comply any additional E&S terms arising post ESDD by TCCL. Assessment: No additional terms required. Project disclosure and stakeholder consultation undertaken as a part of ESIA study. GRM Contact details disclosed in 18.9 MW wind and 10.2 MW solar projects will remain applicable for the present project also, since present proposal is being developed by Cleanmax group in same area only. **Condition Closed.** **<u>Specific E&S Terms for 30 MW Solar Power Project: (To be complied Prior to Disbursement)</u>** 1. Borrower to share details about sourcing of water for module cleaning. If ground water is planned, approval from KGWA would be required. Borrower to also share status of water conservation measures (construction of ground water recharge and use of robotic cleaning system for module) as recommended in ESIA study. Assessment: Water tankers will be used to meet the water requirement during construction phase. Water tankers will also be used for module cleaning during operational phase. If ground water extraction will be planned for operational phase, approval from KGWA or concerned department will be undertaken. Water sourcing and applicability of ground water approval will be verified as a part of general condition monitoring. **Condition Closed**. 2. Borrower to share the details of plantation program (if any). Assessment: No plantation program exist for construction phase. During operational phase, feasibility of plantation

	without causing shadow on module will be checked. **Condition Closed.** 3. Borrower to share records of any community grievances received for the project and action taken to resolve the issues Assessment: Grievance Redressal System exist for implementation at project site. Since, the project is within the solar park, limited impact and interaction with community are anticipated. As a part of project disclosure, contact details of Grievance Redressal Officer/Community Liaison Officer of borrower and TCCL has been disclosed to Panchayat Office for 10.2 MW project. Same details will remain applicable for the present project also. Records of grievances and solution provided, will be maintained. Record of grievances and resolution will be continuously tracked throughout the loan tenure under general E&S terms monitoring**. Condition Closed**. 4. Borrower to submit report on measures taken to ensure health and safety of project workers to avoid incidents/accidents at the site (through incident records, safety trainings, grievance redressal, etc.) Assessment: HSE plans and SOPs exist with borrower and will be implemented at project site. Safety training plan, Mock drills and Incident/accident reporting system are available. HSE officer will be deputed for this project to ensure continuous implementation of HSE plan and practices. **Condition Closed**. 5. Borrower to comply any additional E&S terms arising post ESDD by TCCL. Assessment: No additional terms required. Project disclosure and stakeholder consultation undertaken as a part of ESIA study. GRM Contact details disclosed in 18.9 MW wind and 10.2 MW solar projects will remain applicable for the present project also, since present proposal is being developed by Cleanmax group in same area only. **Condition Closed.** **General E&S Terms (to be monitored atleast once in every 2 years during the loan period)** 1. Borrower to ensure that the workforce engaged during construction and operation and maintenance of the Project is competent to undertake the Project (including transport of materials and workforce effectively) and can do so safely and shall undertake all safety precautions for avoiding any workplace safety incidents and /or avoid impact to safety of local communities

	2. Borrower to ensure that the workforce engaged in relation to the Project are regularly paid with wages and provided with committed benefits in compliance with Applicable Laws including laws on labour welfare to avoid any resentment of workforce for the Project or the relevant principal employer receiving fines/penalties 3. Borrower to ensure that emergency response preparedness to accidents during construction and the operation and maintenance of the Project at the Project Site, sub-station or nearby local areas is periodically tested through mock drills 4. The Borrower shall provide sufficient details to the Facility Agent to evaluate the annual environmental and social performance of the Project including but not limited to: a. Status of compliance to any E&S terms proposed by TCCL as part of E&S Due Diligence or loan monitoring b. Employment details (nos, local employment) c. Compliance to conditions of project permits relating to contract labour, CEIG approvals; Notices / fines / penalties imposed (if any) by the issuing / enforcement agencies d. Grievances (from workers and local communities) received and responded by the borrower/contractor. Submit grievances records and resolution status to TCCL e. Health & Safety Incidents recorded during project implementation 5. The Borrower shall intimate the Facility Agent at the earliest of any major incidents (resulting in facilities/serious injuries to workers or nearby communities, asset damage) due to activities in relation to the Project or extreme weather conditions experienced in the Project area.

2. Basic Project Details

a. Borrower

Borrowers (Cleanmax Vital Energy LLP, Cleanmax Auriga Power LLP, Cleanmax Scorpius Power LLP, Cleanmax Khanak Pvt Ltd.) is promoted by Clean Max Enviro Energy Solutions Pvt. Ltd. (Company of Clean Max Group). Clean Max group has received significant funding from reputed global investors such as Warburg Pincus, IFC and UKCI. Clean Max Group has implemented more than 500 MW of solar power projects till date.

b. Project

- The present proposal is development of 46.20 MW wind solar hybrid project in Jagalur Taluk, Davanagere District, and Karnataka under group captive structure.
- The project includes 6 WTGs (2.7 MW capacity each) of cumulative capacity 16.20 MW and four solar projects (within solar park) with aggregate capacity of 30 MW. This is to be noted that both wind and solar projects are being developed within solar and wind Park and located ~4 km from each other.

Project SPV	Offtaker	Wind (MW)	Solar (MW_{DC})	Total (MW)
Cleanmax Vital Energy LLP	Roquette India Pvt. Ltd.	2.70	8.50	11.20
Cleanmax Auriga Power LLP	Cipla Ltd.	2.70	9.00	11.70
Cleanmax Scorpius Power LLP	Manjushree Technopak Ltd.	8.10	10.00	18.10
Cleanmax Khanak Pvt Ltd	LM Windpower (India) Pvt. Ltd. (a GE entity)	2.70	2.50	5.20
Total		**16.20**	**30.00**	**46.20**

- Other projects of Cleanmax Group within wind solar hybrid park in the same area are as follows:
  - 18.9 MW Wind Power Project
  - 10.2 MW solar power
- CMES Jupiter Private Limited is responsible to develop common Infrastructure facilities such as boundary wall, internal and periphery roads, and evacuation infrastructure in wind solar hybrid park. Common infrastructure can be used by individual facility/project post signing of common infrastructure agreement.
- **Power Evacuation**: Power from individual projects will be evacuated through already developed power evacuation infrastructure. Pooling sub-station (PSS) of 220/33 kV capacity has been developed at Mudlamachikere village. Power from the PSS will be fed to the existing 400/220 kV Grid Sub-Station (GSS) at Hiremallanahole village, through 350 m. long 220 kV EHV power line.

c. Project location & Surrounding

The project is being located in Jagalur Taluka, Davanagere District, and Karnataka. Detailed location of project is given below:

16.2 MW Wind Power Project:

S No.	TURBINE ID	UTM Coordinates		Offtakers
		Easting (X)	Northing (Y)	
1	J72	648426	1605432	Manjushree
2	J88	648134	1604914	
3	J71	648130	1604451	
4	J91	653375	1605911	Cipla
5	J30	653074	1607726	GE
6	J43	649742	1603724	Roquette

- Villages: Thimmalapura, Siddamannahalli, Bharamasamudra, Giguddu, Kamagethanahalli and Kasavanahalli
- Taluka: Jagalur, District: Davanagere, Karnataka

30 MW Solar Power Project:

- Geo-Coordiante: 14.554989 N,76.470884 E
- Villages: Huchavanahalli & Taitoni
- Taluka: Jagalur, District: Davanagere, State: Karnataka

- Project area does not have any recognized /legally protected ecological sensitive areas (National Park and WLS) in and around the project component. Rangayanadurga Four Horned Antelope Wildlife Sanctuary is the only wildlife sanctuary located sufficiently away (around 11 km NW of wind project and 21 km NW of solar project). No regulatory approval with respect to WLS is required, as project is located sufficiently away from WLS and its ESZ area (ESZ extent – 0.95 km to 4.50 km around the WLS boundary).
- There is no scheduled areas in Karnataka therefore social sensitivities related with land procurement in scheduled areas do not exist in this project. Village settlements are sufficiently away (> 500 m) from all 6 WTG locations.
- No wetlands and breeding & nesting ground exist in project area near these WTG location

d. Land

16.2 MW Wind Power Project:

- Land procurement for 6 WTGs is ongoing on willing seller – willing buyer basis and expected to complete by Dec 2021. The land procurement procedure does not involve involuntary acquisition of land. A land aggregator has been hired to facilitate land procurement from the villagers. The land parcels identified for the proposed project are mostly unirrigated. The land involved 11 title holders for 6 land parcels without having any non-title holders. No land seller become land less in this project, as informed by land team of borrower and also substantiated by ESIA study.

- No land of Schedule tribes and assigned land, are procured in this project. Land sellers have been compensated with sale price mutually agreed by land owners and borrower. Compensation paid for the land parcels is minimum 5 times higher than the government rate and up to 4 times higher than the open market private rate. Most of the compensation amount will be used for procurement of another land parcel in nearby area and repayment of existing loans, as revealed by land sellers during the stakeholder consultation. For transmission line, There is no requirement of land procurement for the transmission line. The ROW permission will be required for transmission line connectivity to the grid substation at Mudlamachikere village. ~8 km long 33 kV transmission line passes through agricultural fields and land for towers (6m x 6m area) have been secured by paying one time compensation for crop damage as per P&T Rules, The Electricity Act 2003 and The Telegraphic Act.

30 MW Solar Power Project:

- Land procurement for Solar Park (within which 30 MW project is proposed) and Pooling substation is already completed. The land for Solar Park has been procured on willing buyer – willing seller basis and procurement procedure does not involve involuntary acquisition of land as confirmed by ESIA study. A land aggregator has been hired to facilitate land procurement from the villagers. No land seller become land less in this project, as substantiated by land team of borrower and ESIA study also.
- No land of Schedule tribes and assigned land, are procured in this project. Land sellers have been compensated with sale price mutually agreed by land owners and borrower. Compensation paid for the land parcels is minimum 3 times higher than the government rate and up to 2.5 times higher than the open market private rate. Most of the compensation amount will be used for procurement of another land parcel in nearby area and repayment of existing loan, as revealed by land sellers during the stakeholder consultation. ~82 acre land identified for 30 MW solar power project, involved 14 title holders for 15 land parcels without having any non-title holders.
- Land for transmission line: There is no requirement of transmission line development. ~6 km long transmission line is already available to facilitate power evacuation from Solar Park to PSS at 33 kV level.

e. Project Need and E&S Benefits

- Will supply the electricity needs of approximately 23,585 MWh per annum (Solar project) and 91,060 MWh per annum (Wind project). Base case projections have been prepared assuming PLF of 34.65% (Wind project) and 16.62% (Solar project).
- Will save an estimated 20,707 tonnes of greenhouse gas (GHG) emissions per annum (Solar project) and 79,950 tonnes/GHG emission per annum.
- Expected to create employment opportunities in the local community

3. E&S Risk Analysis

a. Exclusion List and Reputational Risks

Project and project sponsor are not under the Exclusion List. The past E&S performance of project and its sponsors has been satisfactory and does not pose reputational risks to TCCL.

b. E&S Permits and Related Risks

Relevant Permit	Status and Risk
Engaging Contractual Labour	Available
Consent to Operate from Pollution Control Board	Exempted for renewable energy projects
Local Panchayat consents	Obtained
Environmental Clearance	Not applicable for renewable energy projects.
Aviation NOC due to Chitradurga Aeronautical test range	Not required as project is >20 km from Aerodrome. As per IAF guideline for issuance of NOC, restrictive distance to setup tall structures and WTG are 20 km from Aerodrome and 10 km from Radar Antenna.

c. Location Related Risks

- Project site is free of any ecological sensitivity. There is no recognized, legally protected areas for ecological and environmental sensitivities within 10 km of project area. One wildlife sanctuary "Rangayanadurga Four Horned Antelope Wildlife Sanctuary" exist >10 km NW of project site. Eco sensitive zone of this WLS is limited to an extent of 0.95 km to 4.50 km around WLS boundary. Project area is sufficiently far away from both WLS and its ESZ therefore no regulatory approval is required.
- ESIA study mentions that project location and nearby area does not have any nesting, breeding ground and critical habitats of birds therefore impact of bird collision and mortality is assessed as very low and can be avoid by implementing mitigation measures.
- Project sites are not part of any scheduled and tribal areas.
- Cumulative impacts: The region where project is proposed already have wind and solar projects in operation. Borrower has also setup 18.9 MW wind and 10.2 MW solar project in the same area. Proposed wind solar hybrid project is extension of these projects. Details of projects in the area are:
  - Two windfarms (1) 19.5 MW windfarm owned by SS Renewable Energy Ventures Pvt. Ltd. is located at 1.5 km East of proposed WTGs cluster, (2) another unnamed wind power project in Lingannanahalli Village at 7 km south.

    Two solar farms (1) 10 MW solar farm owned by Vedanga Solar Energy Pvt. Ltd. at 500 m east of project site, (2) unnamed solar farm near pooling substation in Mudlamachikere village.

  Cumulative impact of proposed wind solar hybrid project in light of the existing windfarms is expected to be minor due to following factors:
    - Absence of ecological sensitive area within 10 km area of present windfarm. No cumulative impact on ecological aspect anticipated.
    - No emission of air pollutant thus no cumulative impact during long term operation of project

- Temporarily elevated noise level in immediate vicinity of project area is anticipated. However, absence of sensitive receptors (village settlements) within 200 m from project site would make cumulative impact insignificant
- Positive cumulative socioeconomic impact is expected. Already existing renewable energy projects have generated avenues of income to the local population who are deprived of any significance mean of livelihood due to nature of land and lack of rain in the area to practice profitable agricultural practice. The present windfarm has already encountered increased land price in the area which directly indicates increased income/benefit to the local community. Current project is also engaging local population during construction phase. Marginal employment will also be ensured during the operational phase. During stakeholder consultation also villagers had expressed positive opinion for renewable energy project hence cumulative impact can be considered as positive.

d. Critical natural resources and social infrastructure related risks

The resources critical for project viability for this project are land, access roads, water during construction phase, construction materials.

- During construction period, water requirement would be about 10-15 tankers (capacity 10 KLD) per week for construction activities and domestic water use. Water requirement will be fulfilled by water tankers from nearby villages. In operational phase, around 390 KL water will be required for module cleaning and will be met through water tanker. Water requirement is insignificant for wind power project.
- Land for the project is completely purchased and in possession of borrower. No conflict is seen in land procurement. In a wind project, construction of project sites or WTGs are not restricting free access of community people in the area. For solar power project, land within existing Solar Park will be allotted by Solar Park Developers. No additional land would be required (out of Solar Park). Power evacuation infrastructure is already setup.

e. Risks from other unaddressed E&S factors

i. IFC Performance Standards and AIIB's E&S Policy and Safeguards are applicable in the project.

- The applicable Performance Standards for the project are:
  PS1 – Assessment and Management of Environmental and Social Risks and Impacts
  PS 2 – Labor and working conditions
  PS 3 – Resource Efficiency and Pollution Prevention
  PS 4 – Community Health, Safety and Security

ii. IFC Performance Standards not applicable and reasoning:

- PS5 Land Acquisition and Involuntary Resettlement: No land acquisition and involuntary resettlement occurred in the project. All land identified for project are private land and procured on willing seller – willing buyer basis. Further, all procured land parcels were devoid of any physical structure and did not cause any physical displacement. Economic displacement has been

compensated by paying mutually agreed compensation amount which was higher than the government rate and open market private rate. During stakeholder consultation with landowners, satisfaction has been expressed for the compensation amount received and establishment of renewable energy project. During stakeholder consultation it was also revealed that most of the compensation amount will be used for procurement of another land parcel in nearby area and repayment of existing loan.

- PS 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources is not applicable. Neither project site nor 10 km area around it has any ecological sensitive locations, naturally protected area or area of biological significance. Project is located in modified habitat i.e. seasonal agricultural land. No nesting and breeding ground and critical habitats of birds found in project area.

- PS7: Indigenous Peoples is not applicable as no tribal area exist in taluks and districts where project sites are proposed.
- PS8: Cultural Heritage is not applicable as the project is not located in areas of known historical or cultural significance.

ii. Employment and working condition related risks

- In Solar Power project, construction phase lasting over around 6 to 8 months will engage 175 people during the peak construction period including 100 local people for skilled and unskilled manpower requirement. During operational phase, project is expected to engage upto 10 persons including technical persons and 3-4 security guards.
- In Wind power project, construction phase lasting over around 5 to 6 months will engage 100 people during the peak construction period including 40 local people for skilled and unskilled manpower requirement. During operational phase, project is expected to engage upto 5 persons including technical persons and 2 security guards
- Depending on their skills and capabilities, contractor workforce comprises both skilled and unskilled labours will be sourced from the nearby villages of Karnataka.
- Basic amenities such as potable drinking water, water for domestic purposes, toilets, adequate lighting will be provided along with labor accommodation in nearby village.

iii. Community related risks

- Settlements of nearby villages are sufficiently far away (>500 m) from project site. No disturbance on communities anticipated due to construction activities, shadow flicker and noise. However, conflict may be anticipated due to movement of material transport through village roads.
- ESIA study undertaken for the project recommended mitigation measures to ensure community safety. HSE plan are also in place to control safety risks, especially due to transportation of material to project site. Proper directions on appropriate behavior with community and controlling driving speed have been provided to drivers.
- Project details and plan have been disclosed with Village Panchayat and No objection certificate is obtained from Village Panchayat office. Project disclosure is also done at TCCL website.

- Grievance redressal mechanism exist and will also be implemented at project site to address any community related conflict.

4. E&S Risk Category – B

Based on the assessment of risks in Section 3, the project is assessed to be a Category B project owing to the following key factors:

- Engagement of migrant labor in project may cause conflict with community due to any inappropriate behavior. However, appropriate directions and training on code of conduct will be provided to labours. Also, local skilled labours and local resources (machinery, water tankers etc.) will be involved and to develop a positive relation with community and lower down risk of community conflict to an extent.
- Project location and 10 km area around it are free of any recognized and legally protected environmental/ecological sensitivities.
- Risks of E&S accidents/incidents exist during construction or operations affecting project workers or the local community and planned to be controlled by using HSE plan and SOPs.

5. Management of E&S Risks: Proposed E&S Conditions

Specific E&S Terms for Wind Power Project: (To be complied Prior to Disbursement)

1. Borrower to share copy of permit/approvals (Copy of Village Panchayat NOC, Aviation NOC, PPAs, and NA approval) issued to the project along with compliance status of approval conditions.
2. Borrower to submit updated status of land procured and compensation paid to the land owners
3. Borrower to share records of any community grievances received for the project and action taken to resolve the issues.
4. Borrower to submit report on measures taken to ensure health and safety of project workers to avoid incidents/accidents at the site (through incident records, safety trainings, grievance redressal, etc.)
5. Borrower to comply any additional E&S terms arising post ESDD by TCCL.

Specific E&S Terms for Solar Power Project: (To be complied Prior to Disbursement)

1. Borrower to share details about sourcing of water for module cleaning. If ground water is planned, approval from KGWA would be required. Borrower to also share status of water conservation measures (construction of ground water recharge and use of robotic cleaning system for module) as recommended in ESIA study.
2. Borrower to share the details of plantation program (if any).
3. Borrower to share records of any community grievances received for the project and action taken to resolve the issues
4. Borrower to submit report on measures taken to ensure health and safety of project workers to avoid incidents/accidents at the site (through incident records, safety trainings, grievance redressal, etc.)

5. Borrower to comply any additional E&S terms arising post ESDD by TCCL.

ii. <u>General E&S terms (to be monitored annually throughout the loan period):</u>

1. Borrower to ensure that the workforce engaged during construction and operation and maintenance of the Project is competent to undertake the Project (including transport of materials and workforce effectively) and can do so safely and shall undertake all safety precautions for avoiding any workplace safety incidents and /or avoid impact to safety of local communities
2. Borrower to ensure that the workforce engaged in relation to the Project are regularly paid with wages and provided with committed benefits in compliance with Applicable Laws including laws on labour welfare to avoid any resentment of workforce for the Project or the relevant principal employer receiving fines/penalties
3. Borrower to ensure that emergency response preparedness to accidents during construction and the operation and maintenance of the Project at the Project Site, sub-station or nearby local areas is periodically tested through mock drills
4. The Borrower shall provide sufficient details to the Facility Agent to evaluate the annual environmental and social performance of the Project including but not limited to:
    a. Status of compliance to any E&S terms proposed by TCCL as part of E&S Due Diligence or loan monitoring
    b. Employment details (nos, local employment)
    c. Compliance to conditions of project permits relating to contract labour, CEIG approvals; Notices / fines / penalties imposed (if any) by the issuing / enforcement agencies
    d. Grievances (from workers and local communities) received and responded by the borrower/contractor. Submit grievances records and resolution status to TCCL
    e. Health & Safety Incidents recorded during project implementation
5. The Borrower shall intimate the Facility Agent at the earliest of any major incidents (resulting in facilities/serious injuries to workers or nearby communities, asset damage) due to activities in relation to the Project or extreme weather conditions experienced in the Project area.

6. Conclusion

Recommended for investment with inclusion of specific and general E&S conditions as legal covenants in loan agreement.