

Environmental and Social Due Diligence Report (ESDDR)

PROJECT LOAN FOR SETTING UP 92.92 MW SOLAR POWER PROJECT AT 10
LOCATIONS ACROSS MAHARASHTRA AND TAMIL NADU – CAPTIVE MODEL WITH
PRIVATE CORPORATE AS OFFTAKERS

TO

9 SPVs OF CLEANTECH SOLAR GROUP

ZERACH RENEWABLES ENERGY PRIVATE LIMITED ('SPV-1')
SUNSTRENGTH RENEWABLES PRIVATE LIMITED ('SPV-2')
GREENZEST SUN PARK PRIVATE LIMITED ('SPV-3')
SUNBARN RENEWABLES PRIVATE LIMITED ('SPV-4')
SORION SOLAR PRIVATE LIMITED ('SPV-5')
STRONGSUN RENEWABLES PRIVATE LIMITED ('SPV-6')
CSE DAKSHINA SOLAR PRIVATE LIMITED ('SPV-7')
FAIRSUN SOLAR PRIVATE LIMITED ('SPV-8')
FLARESUN SOLAR PRIVATE LIMITED ('SPV-9')

PROMOTED BY

Cleantech Solar Group

Loan Amount: Rs. 220 crore

27th May 2021

Tata Cleantech Capital Limited

Team:

SEMS Officer: Mangesh Dakhore

Relationship Manager: Neeraj Agrawal

Credit Manager: Shreya Sanghvi

Head – Sales & Origination: Mitheel Mody

Team Lead Credit: Rupin Patel

Source of inputs for ESDD:

- TCCL Credit Note No. 72/FY 20-21
- Initial assessment and terms sent to credit and sales team 8th Apr 2021
- Public domain information
- Site visit deferred due to COVID-19 situation
- E&S terms are included in sanction letter and Loan Agreement
- ESIA study and discussion with borrower's team

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1. Summary

Sector	Ground Mounted Solar Power																				
Borrower	9 SPVs of Cleantech Solar <ul style="list-style-type: none"> • ZERACH RENEWABLES ENERGY PRIVATE LIMITED ('SPV-1') • SUNSTRENGTH RENEWABLES PRIVATE LIMITED ('SPV-2') • GREENZEST SUN PARK PRIVATE LIMITED ('SPV-3') • SUNBARN RENEWABLES PRIVATE LIMITED ('SPV-4') • SORION SOLAR PRIVATE LIMITED ('SPV-5') • STRONGSUN RENEWABLES PRIVATE LIMITED ('SPV-6') • CSE DAKSHINA SOLAR PRIVATE LIMITED ('SPV-7') • FAIRSUN SOLAR PRIVATE LIMITED ('SPV-8') • FLARESUN SOLAR PRIVATE LIMITED ('SPV-9') 																				
Project stage, capacity	<ul style="list-style-type: none"> • Ground mounted solar power plants with aggregate capacity of 92.92 MW are being developed at 10 locations across Maharashtra and Tamil Nadu • Out of 10 locations, projects at 4 locations have already achieved commissioning by 31st Mar 2021. Commissioning of remaining projects can be expected by Oct 2021. • These projects are being developed under captive consumption model with private companies/corporates as offtakers. • ESIA studies have been undertaken for these projects. This is to be noted that most of the projects are at same or nearby locations, however being developed by different SPVs and therefore ESIA studies have been clubbed on the basis of project locations i.e. one ESIA study covers all the projects with same or nearby locations, under its scope. 																				
	<table border="1"> <thead> <tr> <th>SPV</th> <th>Offtaker</th> <th>Capacity (MW_D)</th> <th>Project Location</th> <th>PPA tenor (yrs)</th> <th>COD / SCOD</th> <th>GSS Locations and Status of Power Evacuation Infrastructure</th> </tr> </thead> <tbody> <tr> <td>Zerach Renewables Energy Pvt Ltd ('SPV-1')</td> <td>TDK India Pvt Ltd</td> <td>7.00</td> <td> <p>Pimpalgaon Dhas Village, Patoda Taluka/Tehsil, Beed District, Maharashtra</p> <p>Hatkarwadi Village, Shirur Kasar Taluka/Tehsil, Beed District, Maharashtra</p> </td> <td>25</td> <td>Commissioned in Mar-2021</td> <td> <p>132/33 KV (Raimoha, Beed)</p> <p>Power Evacuation Infra – completed</p> </td> </tr> </tbody> </table>							SPV	Offtaker	Capacity (MW _D)	Project Location	PPA tenor (yrs)	COD / SCOD	GSS Locations and Status of Power Evacuation Infrastructure	Zerach Renewables Energy Pvt Ltd ('SPV-1')	TDK India Pvt Ltd	7.00	<p>Pimpalgaon Dhas Village, Patoda Taluka/Tehsil, Beed District, Maharashtra</p> <p>Hatkarwadi Village, Shirur Kasar Taluka/Tehsil, Beed District, Maharashtra</p>	25	Commissioned in Mar-2021	<p>132/33 KV (Raimoha, Beed)</p> <p>Power Evacuation Infra – completed</p>
SPV	Offtaker	Capacity (MW _D)	Project Location	PPA tenor (yrs)	COD / SCOD	GSS Locations and Status of Power Evacuation Infrastructure															
Zerach Renewables Energy Pvt Ltd ('SPV-1')	TDK India Pvt Ltd	7.00	<p>Pimpalgaon Dhas Village, Patoda Taluka/Tehsil, Beed District, Maharashtra</p> <p>Hatkarwadi Village, Shirur Kasar Taluka/Tehsil, Beed District, Maharashtra</p>	25	Commissioned in Mar-2021	<p>132/33 KV (Raimoha, Beed)</p> <p>Power Evacuation Infra – completed</p>															

	Sunstrengthen Renewables Pvt Ltd ('SPV-2')	SKF India Ltd	8.40	Pimpalgaon Dhas Village, Patoda Taluka/Tehsil, Beed District, Maharashtra	12	Commissioned in Mar-2021	132/33 KV (Raimoha, Beed) Power Evacuation Infra – completed
	Greenest Sun Park Pvt Ltd ('SPV-3')	Bekaert Industries Pvt Ltd	22.50	Malhipparaga Village, Jalkot, Talukar tehsil, Latur District, Maharashtra	20	SCOD: Sept-2021	220/132 KV (Malihapparga, Jalkot) Power Evacuation Infra – under construction
	Sunbarn Renewables Pvt Ltd ('SPV-4')	Mahindra CIE Open Access - Plant 3	6.5	Hatkarwadi Village, Shirur Kasar Taluka/Tehsil, Beed District, Maharashtra	25	6.5 MW commissioned in Mar-2021.	132/33 KV (Raimoha, Beed) Power Evacuation Infra – completed
		Mahindra CIE Open Access - Plant 2	18.0	Malhipparaga Village, Jalkot, Talukar tehsil, Latur District, Maharashtra		SCOD: May-2021	220/132 KV (Malihapparga, Jalkot) Power Evacuation Infra – under construction
	Sorion Solar Pvt Ltd ('SPV-5')	Galaxy Surfactants Ltd	5.60	Hatkarwadi Village, Shirur Kasar Taluka/Tehsil, Beed District, Maharashtra Pimpalgaon Dhas Village, Patoda Taluka/Tehsil, Beed District, Maharashtra	25	Commissioned in Mar-2021	132/33 KV (Raimoha, Beed) Power Evacuation Infra – completed

	Strongsun Renewables Pvt Ltd ('SPV-6')	Minda Industries Ltd	8.54	Bhoom Village, Bhoom Taluk, Osmanabad Dist, Maharashtra	25	SCOD: Aug-2021	132/33 KV (Boom) Power Evacuation Infra – completed
	CSE Dakshina Solar Pvt Ltd ('SPV-7')	Minda Industries Ltd	5.30	Pillayarkulam Village Manur taluka, Tirunelveli Dist, Tamil Nadu	25	SCOD: Aug-2021	230/33 KV (Kanarpatti SS, Manur) Power Evacuation Infra – under construction
	Fairsun Solar Pvt Ltd ('SPV-8')	Britannia Industries Ltd	8.00	Malhipparaga Village, Jalkot, Talukar tehsil, Latur District, Maharashtra	25	SCOD: Oct-2021	220/132 KV (Malihapparga, Jalkot) Power Evacuation Infra – under construction
	Flaresun Solar Pvt Ltd ('SPV-9')	Kellogg India Pvt Ltd	3.08	Bhoom Village, Bhoom Taluk, Osmanabad Dist, Maharashtra	15	SCOD: Sep-2021	132/33 KV (Boom, Osmanabad) Power Evacuation Infra – construction yet to begin.
		Total	92.92				
Key components and technology	<ul style="list-style-type: none"> • Land: Total 279 acre required for all 10 projects together. 244 acre (87%) are available for project. Discussion for remaining 35 acre is ongoing. All land is private land and has been procured on willing seller – willing buyer basis. • Pooling Substation (PSS): All PSS are within the project site only • Grid Substation (GSS) & EHV Line: Based on the GSS locations, projects have been clubbed together and presented below: <ul style="list-style-type: none"> ○ All projects listed below, in Patoda & Shirur Kasar Taluka, Beed district are connected to 132/33 KV GSS in Raimoha, Beed district. EHV line length is ~7 km. Grid Connectivity approval is obtained by M/s Soloptic Solar Energy Pvt. Ltd. 						

	<ul style="list-style-type: none"> • Project 1 (by SPV 1) – 7 MW • Project 2 (by SPV 2) – 8.40 MW • Project 4 (by SPV 4) – 6.5 MW • Project 6 (by SPV 5) – 5.60 MW <p>○ All projects (listed below) in Bhoom taluka, Osmanabad district will be connected to 132/33 KV GSS in Bhoom town, Osmanabad district. EHV line length is ~3.3 km from projects. Grid Connectivity approval is obtained by BVG Clean Energy Ltd.</p> <ul style="list-style-type: none"> • Project 7 (by SPV 6) – 8.54 MW • Project 10 (by SPV 9) – 3.08 MW <p>○ All projects in Malihapparga village, Jalkot Taluka, Latur district will be connected to 220/132 KV GSS in Jalkot, Latur district. EHV line length is ~1.45 km from projects. Grid Connectivity approval is obtained by TS Wind Power Developers:</p> <ul style="list-style-type: none"> • Project 3 (by SPV 3) – 22.50 MW • Project 5 (by SPV 4) – 18 MW • Project 9 (by SPV 8) – 8 MW <p>○ Project in Pillayarkulam village, Mannur Taluka, Tirunelveli district, Tamil Nadu will be connected to 220/33 KV GSS in Kannarpatti, Mannur taluka. EHV line length is ~4 km. Grid connectivity approval is obtained by CSE Solar Sunpark Tamil Nadu.</p> <ul style="list-style-type: none"> • Project 8 (by SPV 7) – 5.30 MW
Revenue source	<ul style="list-style-type: none"> • Long term Power Purchase Agreement (PPA) have been signed with 10 private offtakers Details of PPA tenure and list of offtakers are already tabulated above
Key contractor	<ul style="list-style-type: none"> • EPC contractor: <ul style="list-style-type: none"> ▪ Project 1 – 7 MW - Sunsire Energy / Primesolar Renewable ▪ Project 2 – 8.40 MW - Sunsire Energy / Primesolar Renewable ▪ Project 3 – 22.50 MW - Belectric ▪ Project 4 – 6.5 MW - Belectric & Sunsire Energy / Primesolar Renewable ▪ Project 5 – 18.0 MW - Belectric & Sunsire Energy / Primesolar Renewable ▪ Project 6 – 5.60 MW - Sunsire Energy / Primesolar Renewable ▪ Project 7 – 8.54 MW - Belectric ▪ Project 8 – 5.30 MW - L&T ▪ Project 9 - 8.0 MW - Belectric ▪ Project 10 – 3.08 MW - Belectric
Location Coordinates	All 92 MW are being developed at 10 locations across Maharashtra and Tamil Nadu
Loan amount	Rs. 220 cr

Time Period	~16 years
Co-lenders	None. TCCL is the sole lender
E&S Risk Category	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)
Summary E&S Assessment	<p>(A) Project: Total 10 ground mounted projects are being developed by 9 SPVs of Cleantech Solar Group. Out of 10 projects, 9 projects are located in Maharashtra while one project is in Tamil Nadu states. 4 projects out of 10 in Maharashtra State comprise 26.78 MW, are already commissioned by 31st Mar 2021. Construction phase is ongoing for remaining 6 projects (65.42 MW) and commissioning can be expected by Oct 2021. Individual capacities of each project vary in range of 3.08 MW to 22.50 MW. Details are as follows:</p> <ul style="list-style-type: none"> ▪ Project 1 – 7 MW (commissioned) ▪ Project 2 – 8.40 MW (commissioned) ▪ Project 3 – 22.50 MW (under construction) ▪ Project 4 – 6.5 MW (commissioned) ▪ Project 5 – 18.0 MW (under construction) ▪ Project 6 – 5.60 MW (commissioned) ▪ Project 7 – 8.54 MW (under construction) ▪ Project 8 – 5.30 MW (under construction) ▪ Project 9 - 8.0 MW (under construction) ▪ Project 10 – 3.08 MW (under construction) <p>(B) Land: Considering all the 10 projects together, total land requirement is 273 acre. Out of 273 acre, ~236 acre (~86%) private land has already been procured on willing seller-willing buyer basis. No land of Schedule tribes and assigned land, are procured in this project. Land sellers have been compensated with sale price mutually agreed by landowners and borrower. Most of the compensation amount will be used to buy fertile land in nearby area, as informed by land sellers during discussion with ESIA team. Discussion is ongoing for remaining 37 acre land. Project wise land requirement and availability status are as follows:</p> <ul style="list-style-type: none"> ▪ Project 1 – 29.13 acre (100% land available) ▪ Project 2 – 28.86 acre (100% land available) ▪ Project 3 – 44.40 acre (50% land available) ▪ Project 4 – 20.48 acre (100% land available) ▪ Project 5 – 63.60 acre (90% land available) ▪ Project 6 – 23.13 acre (100% land available) ▪ Project 7 – 28.1 acre (100% land available) ▪ Project 8 – 21.18 acre (100% land available) ▪ Project 9 – 14.75 acre (50% land available) ▪ Project 10 – 5.61 acre (60% land available) <p>Transmission line: land for transmission line towers and ROW have been secured by paying one time compensation to landowners, in all 10 projects.</p>

<p>Transmission line has been laid as per P&T Rules, The Electricity Act 2003 and the Telegraphic Act.</p> <p>Details of land procured for project site and Transmission line and compensation paid are captured in ESIA reports. Right now land consolidation is in progress, both in terms of amount of land holdings under each SPV and transfer of land ownership, which will be updated in our records based on receipt of communication from the borrower. Summary of land procured and compensation status are presented below:</p>					
Project	Land required for project site	Landowners for project site	Status of land available to develop project site	Landowners for Transmission line	Status of compensation for main project site and Transmission line (tower and ROW)
Projects in Patoda & Shirur Kasar Taluka, Beed district, Maharashtra:					
Project 1 (by SPV 1) – 7 MW	29.13 acre	92	100% land available and project is already commissioned	103	Compensation paid for main project site and T. line tower and ROW
Project 2 (by SPV 2) – 8.40 MW	28.86 acre				
Project 4 (by SPV 4) – 6.5 MW	20.48 acre				
Project 6 (by SPV 5) – 5.60 MW	23.13 acre				
Bhoom taluka, Osmanabad district, Maharashtra					
Project 7 (by SPV 6) – 8.54 MW	28.1 acre	15	100% land available. SCOD – Aug 2021	26	Compensation has been paid for the land parcels procured so far for main

	Project 10 (by SPV 9) – 3.08 MW	5.61 acre		60% land available. SCOD – Sep 2021		project site. For T. line, compensation has been paid for Tower and ROW.
Malihapparga village, Jalkot Taluka, Latur district, Maharashtra						
	Project 3 (by SPV 3) – 22.50 MW	44.40 acre	38	50% land available SCOD – Sep 2021	7	Compensation paid for the land parcels procured so far, for main project site. For T. line, compensation has been paid for Tower and ROW.
	Project 5 (by SPV 4) – 18 MW	63.60 acre		90% land available SCOD – May 2021		
	Project 9 (by SPV 8) – 8 MW	14.75 acre		50% land available SCOD – Oct 2021		
Pillayarkulam village, Mannur Taluka, Tirunelveli district, Tamil Nadu						
	Project 8 (by SPV 7) – 5.30 MW	21.18 acre	8 landowners	100% land available SCOD – Aug 2021	28	Compensation paid for main project site and T. line tower and ROW.
	<p>(C) Regulatory Approval:</p> <ul style="list-style-type: none"> ○ Land use change approval from agricultural to non-agricultural land – According to Maharashtra’s Comprehensive Policy for grid connected power projects based on new and renewable (non-conventional) Energy Sources, 2015, deemed non-agricultural status is given in respect of the land procured for the solar power projects. For project in Tamil Nadu, land use change approval has been received while for projects in Maharashtra, Land use change approval will be granted on submission of regulatory fee. Fees are already submitted and receipt of approval can be expected shortly ○ Forest Approval/NOC: No Forest NOC is required for projects in Bhoom, Latur and Tirunelveli Districts. However, Forest NOC is applicable for 					

projects in Beed District, Maharashtra. Location of projects in Beed district falls within ESZ and close to Forest Area and therefore forest NOC is applicable. Approval from Divisional Forest Officer (DFO) who is also a secretary of ESZ monitoring committee has been obtained for the projects in Beed location.

- **CEIG approval:** Will be obtained before commissioning.
- **Village Panchayat NOC:** Awaited
- **Ground Water Extraction Approval:** Presently water is being sourced through water tankers. Application for ground water extraction approval are being prepared by borrower's team for projects in Osmanabad and Latur District. For projects in Beed district, ground water extraction is not feasible due to hard rock structures/strata. Ground water approval for project in Tamil Nadu has been received. Receipt of approval for Osmanabad and Latur projects will be tracked.

(D) **Resource Requirement:** Manpower requirements have been estimated in ESIA and summarized below:

Particulars	Projects in Beed District	Projects in Latur District	Project in Bhoom, Osmanabad District	Project in Tirunelveli District
Construction Phase	80 persons	200 persons	75 persons	70 persons
Operational Phase	22 persons	30-35 persons	12 persons	10-15 person

Around 20% labor have been engaged from local or nearby area. Rented accommodation have been provided for migrant labours while local labor commute from their home on daily basis.

(E) **Environmental Sensitivity:** No wildlife sanctuary, National Park and other recognized area for protection of wildlife exist near projects (within an area of 10 km radius from project site) in Latur, Osmanabad and Tirunelveli District. However, projects in Beed district exist within ESZ area of Naigaon Peacock WLS. ESZ of this WLS extends from 100m – 200m. According to regulatory requirement, required approval has been obtained to setup solar power plant within ESZ. To minimize impact on birds due to ~7 km long transmission line, bird guards have been implemented. It has been observed that location of GSS is ~7 km north of this WLS and therefore T. line is going away from the WLS.

(F) **ESIA Study:** ESIA studies have been undertaken for these projects. This is to be noted that most of the projects are at same or nearby locations, however being developed by different SPVs and therefore ESIA studies have been clubbed on the basis of project locations i.e. one ESIA study covers all the projects with same or nearby locations, under its scope. Draft ESIA report is awaited from consultant for projects in Latur District. However, E&S scoping and Critical Habitat Assessment reports are available for Latur District. Key

inputs on land, biodiversity, stakeholder consultation and GRM have been referred from these available reports.

Capacities of solar power projects in the ESIA studies have been observed to be larger than what is currently being considered in this transaction by TCCL, and which seems to be part of the phased development planned at each location. ESDD limits its scope to project capacity being developed in the initial phase.

- ESIA study for 84 MW_{DC} projects in Beed District – Site visit and stakeholder consultations in Aug 2020. Final report submitted in Mar 2021
- ESIA study for 10 MW_{DC} projects in Bhoom, Osmanabad District – Site visit and stakeholder consultations in Aug 2020. Draft report submitted in Oct 2020
- ESIA study for 80 MW_{AC} projects in Latur District – Site visit and stakeholder consultations in Aug 2020. E&S Scoping report submitted in Oct 2020. ESIA report is under preparations.
- ESIA study for 50 MW project in Tirunelveli District, Tamil Nadu – site visit and stakeholder consultations in April 2019. Final report submitted in July 2020.

Borrower plans the ESIA's to be updated and finalized, once land procurement is complete.

(G) Project Disclosure & Stakeholder Consultation: It is observed that project has been disclosed to community, Village Panchayat and other stakeholders in both informal and formal way. Discussion with community and Village Panchayat had been undertaken prior to land procurement and basis of discussion and disclosure about the project, NOC has been granted in these projects. Public notices in News Paper were also published to inform about the land procurement. Formal consultation and disclosure of project were also undertaken through ESIA studies on following dates:

- Projects in Beed District – stakeholder consultation in Aug 2020
- Projects in Bhoom, Osmanabad District – Stakeholder consultation in Oct 2020
- Projects in Latur District – Stakeholder consultation in Aug 2020
- Projects in Tirunelveli District – Stakeholder consultation in Apr 2019.

During ESIA, stakeholders consulted for discussion included landowners, land aggregator, Revenue Department, Village Panchayat and Forest Department. Discussion with stakeholder reveals the common expectations of community from this project. These expectations include engagement of local labor for project work (especially during lean agriculture season) and support in schools and other development activities in villages. ESIA team has confirmed

	<p>that landowners have been consulted prior to initiating the land procurement process and sale prices have been mutually discussed and agreed.</p> <p>(H) Grievance Redressal Mechanism: Grievance redressal mechanism exist with borrower. A community liaison officer has been appointed at project sites to receive and communicate the addressed community grievances. Role of Community Liaison officer also include coordination with Village Panchayat Office and community to establish a good relationship over a long period of time. The details of GRM has been displayed on the information board, shown at the project site and can be easily accessed by the community.</p> <p>(I) EMP & OHS Plan: Environment Management Plan and OHS plan are being implemented at all project sites. Bird guards are also installed at Transmission line. Health and safety is being ensured by project specific health and safety plan. Ensuring implementation of safety procedures is in scope of EPC contractor. Borrower's team is responsible for monitoring of EHS performance. Following safety practices and trainings are being implemented. Presently, community members are not involved for trainings.</p> <ul style="list-style-type: none"> ○ Toolbox talk, ○ Mock drills, ○ Permit to work system (LOTO) implementation at site <p>Training on electrical and mechanical hazards, hazard identification and risk assessment at site, near miss/risk investigation and reporting at site, mock drill</p>
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	<ul style="list-style-type: none"> ● 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	<p>Most of the specific E&S terms are closed on the basis of ESIA review and discussion with project team. Details are as follows:</p> <p><u>Specific E&S conditions (to be complied prior to disbursement):</u></p> <ol style="list-style-type: none"> 1. Geo-graphical coordinate/kmz file of project locations, T. line and PSS to be submitted by borrower for all the 10 locations. Assessment: Information received from borrower. Condition Closed 2. Borrower to share information about the source of water to be used for construction and O&M phases. If ground water is planned for O&M phase, borrower shall obtain prior permission from regulatory authority Assessment: Presently water is being sourced through water tankers. Application for ground water extraction approval are being prepared by borrower's team for prjoects in Osmanabad and Latur District. For projects in

	<p>Beed district, ground water extraction is not feasible due to hard rock structures/strata. Ground water approval for project in Tamil Nadu has been received. Receipt of approval for Osmanabad and Latur projects will be tracked through ESAP. . Condition Open.</p> <p>3. Borrower to confirm whether robotic system for module cleaning is planned in this project Assessment: Feasibility of robotic system is being evaluated. No immediate plan for installation of robotic system in these projects. Condition Closed</p> <p>4. Borrower to submit details of safeguards planned to prevent bird collision with T. line Assessment: Bird guards have been implemented at transmission line to minimize the impact. Condition Closed</p> <p>5. Borrower to submit land procurement status, land procurement process and details of landowners and land holdings Assessment: Details are captured in ESIA reports. Private land has been procured on willing seller – willing buyer basis. Compensation has been mutually discussed and paid to landowners for project site. For Transmission line, land for tower footprint and ROW have been secured by paying one-time compensation, according to P&T Rules, The Electricity Act 2003 and the Telegraphic Act. Condition Closed</p> <p>6. Borrower to submit copies of approvals (ground water extraction approval, land use permission, fire NOC, Village NOC) along with compliance status of E&S conditions (if any). Assessment: Panchayat NOC have been received. According to Maharashtra’s Comprehensive Policy for grid connected power projects based on new and renewable (non-conventional) Energy Sources, 2015, deemed non-agricultural status is given in respect of the land procured for the solar power projects. Forest NOC from Divisional Forest Officer (DFO) has been obtained for projects in Beed District. No Forest NOC required in other projects. CEIG approval will be submitted post project commissioning. Condition Closed</p> <p>7. Borrower to share information of grievances received from community and status of solution provided so far. Assessment: Grievance redressal system exist. Records of grievances have been sought from borrower. Condition Open</p> <p>8. Borrower to share details of community expectation and needs being understood and fulfilled through grievance redressal and local employment Assessment: Grievance redressal system exist and implemented at project sites. Community liaison officer appointed at project sites to maintain good relationship with community. Condition Closed</p> <p>9. Borrower to share details of measures, being taken or planned to respond to emergencies and avoid safety related accidents at project site Assessment: OHS plan and safety measures and training have been developed and being implemented at project sites to mitigate the safety hazards. Condition Closed</p> <p>10. Borrower shall disclose relevant project information related to project, consultations, feedback and addressal of community concerns as required to</p>
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affected communities and stakeholders in line with the significance of risks and impacts through appropriate communication channel.

Assessment: Project information has been disclosed to community through both formal and informal means. Discussion held with community and Village Panchayat before initiating land procurement. Discussion were also held with various stakeholders including community and Village Panchayat during ESIA study. Village Panchayat has also issued NOC for these projects. ESIA reports are also being uploaded at TCCL website. **Condition Closed.**

11. Borrower shall disclose GRM details (grievance redressal officer of borrower and contact details of TCCL) at project site and website.

Assessment: Community Liaison Officer have been appointed at project sites to setup good relationship with community. CLO will also be responsible for addressing the community grievances. Contact details of CLO have been displayed at project board, shown at project site itself. **Condition Closed**

12. Borrower shall undertake ESIA study and allocate adequate resources (team and finance) to implement ESMP of ESIA and ESAP issued by TCCL, throughout the project life

Assessment: ESIA studies have been undertaken for all the project sites. EMPs are being implemented at project sites. Progress of EMP implementation will be tracked through ESAP. **Condition Closed**

General E&S Terms (to be monitored annually 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 is periodically tested through mock drills
4. The Borrower shall annually provide sufficient details to the Facility Agent to evaluate the 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) Compliance status of AIB ESP and Project Affected Peoples Mechanism (PPM)
 - c) Employment details (nos, local employment)
 - d) Compliance to conditions of project permits relating to contract labour, CEIG approvals; Notices / fines / penalties imposed (if any) by the issuing / enforcement agencies

	<ul style="list-style-type: none"> e) Grievances (from workers and local communities) received and responded by the borrower/contractor. Submission of grievances records and resolution status to TCCL f) Health & Safety Incidents recorded during project implementation g) Continuous implementation of the ESAP and compliance of all other applicable E&S requirements h) Submission of Semi-Annual Monitoring Report (during construction phase) and Annual E&S monitoring report (O&M Phase) <p>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.</p>
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Methodology:

ESDD undertaken by TCCL team, to identify Key E&S risks in the transaction. Information available in public domain, database maintained by Regulatory Bodies (such as Ecological Sensitivity, Tribal Areas, Monument with Cultural significance, Regulatory Policies and Laws) and Project Plans shared by the borrower have been assessed in detail. ESIA Reports have also been referred to understand the land procurement process followed by borrower, ecological sensitivities (in and around the project locations), applicable approvals, project disclosure through stakeholder consultation etc. Details of findings have been captured in executive summary and further sections below.

2. Basic Project Details

a. Borrower

The borrowers i.e. all the Nine SPVs are promoted by Cleantech Solar Group. Cleantech Solar has presence in 7 South Asian countries namely Singapore (headquarters), India, Thailand, Cambodia, Vietnam, Philippines and Malaysia. They have set up projects for globally renowned MNCs such as Tata Steel, Coca-Cola, Apollo tyres, Kellogg's, Pfizer, Coca-Cola, Arvind textiles, Nestle, Schneider Electric, Cognizant Technology Solutions etc. Cleantech Solar has received funding of US\$50 Mn from Climate Fund Managers and US\$75 Mn from Shell group.

India is the largest market for Cleantech Solar with ~105.93 MWp of operational capacity as on date and ~92.00 MWp of under construction capacity

b. Project

- The present proposal is development of 10 ground mounted solar power plant with aggregate capacities of 92.92 MW, across Maharashtra and Tamil Nadu. Out of 10 projects, 9 projects are in three districts (Osmanabad, Latur and Beed) of Maharashtra while one project is in Tirunelveli district of Tamil Nadu State.
- 4 projects out of 10 in Maharashtra state are already commissioned as on 31st Mar 2021. Commissioning of remaining 6 projects are scheduled till Oct 2021.
- According to geographical locations, cumulative capacity of projects location in same district will be:
 - Four projects with cumulative capacity 27.5 MW are in Beed District, Maharashtra. All the four projects are located on contiguous land parcels.
 - Two projects with cumulative capacity 11.62 MW in Osmanabad district, Maharashtra, are also located on contiguous land parcels.
 - Three projects with cumulative capacity 48.5 MW in Latur district, Maharashtra, are being developed 400 m apart from each other.
 - One project with capacity 5.30 MW is being developed in Tirunelveli district, Tamil Nadu
- Based on the geographical location of projects, total four ESIA studies (covering all the ten project locations) have been undertaken. ESIA report of three projects are available while draft report is under preparation for one project in Latur district.
- **Power Evacuation:** Details of power evacuation from all these 10 projects are as follows:
 - All four projects in Patoda & Shirur Kasar Taluka, Beed district are connected to 132/33 KV GSS in Raimoha, Beed district. EHV line length is ~7 km. Grid Connectivity approval is obtained by M/s Soloptic Solar Energy Pvt. Ltd.
 - Two projects in Bhoom taluka, Osmanabad district will be connected to 132/33 KV GSS in Bhoom town, Osmanabad district. EHV line length is ~3.3 km from projects. Grid Connectivity approval is obtained by BVG Clean Energy Ltd.
 - All three projects in Malihapparga village, Latur district will be connected to 220/132 KV GSS in Jalkot, Latur district. EHV line length is ~1.45 km from projects. Grid Connectivity approval is obtained by TS Wind Power Developers.
 - Project in Pillayarkulam village, Mannur Taluka, Tirunelveli district, Tamil Nadu will be connected to 220/33 KV GSS in Kannarpatti, Mannur taluka. EHV line length is ~4 km. Grid connectivity approval is obtained by CSE Solar Sunpark Tamil Nadu.

c. Project location

Location of all the nine projects have been clubbed on the basis of administrative divisions of India i.e. district within the state. Further, All the project sites are contiguously located.

Projects & SPV	Locations	Geo-Coordinates
Project 1: 7 MW ground mounted solar Developed by: Zerach Renewables Energy Pvt Ltd (SPV-1)	Hatkarwadi Village, Shirur Kasar Taluka/Tehsil, Beed District, Maharashtra & Pimpalgaon Dhas Village, Patoda Taluka/Tehsil, Beed District, Maharashtra	18°55'45.57"N 75°30'58.00"E
Project 2: 8.40 MW ground mounted solar Developed by: Sunstrength Renewables Pvt Ltd (SPV-2)		
Project 4: 6.5 MW ground mounted solar Developed by: Sunbarn Renewables Pvt Ltd (SPV-4)		
Project 6: 5.60 MW ground mounted solar Developed by: Sorion Solar Pvt Ltd (SPV-5)		
Project 7: 8.54 MW ground mounted solar Being developed by: Strongsun Renewables Pvt Ltd (SPV 6)	Bhoom taluka, Osmanabad district	18°28'47.73"N 75°41'37.46"E
Project 10: 3.08 MW ground mounted solar Being developed by: Flaresun Solar Pvt Ltd (SPV 9)		
Project 3: 22.50 MW ground mounted solar Being developed by: Greenzest Sun Park Pvt Ltd (SPV 3)	Malihapparga village, Jalkot Taluka, Latur district	18°34'6.70"N 77°12'50.47"E
Project 5: 18 MW ground mounted solar Being developed by: Sunbarn Renewables Pvt Ltd (SPV 4)		
Project 9: 8 MW ground mounted solar Being developed by: Fairsun Solar Pvt Ltd (SPV 8)		
Project 8: 5.30 MW ground mounted solar Being developed by: CSE Dakshina Solar Pvt Ltd (SPV 7)	Pillayarkulam village, Mannur Taluka, Tirunelveli district, Tamil Nadu	80° 53' 32.83" N 77° 40' 31" E

- Project area except in Beed district, do not have any recognized /legally protected ecological sensitive areas (National Park and WLS) in and around the project component.
- Naigaon Peacock WLS exist in Patoda taluka of Beed district, Maharashtra. Eco sensitive zone of this sanctuary extends from 100-200 me from WLS boundary. Projects in Beed districts are within Eco sensitive Zone (ESZ) of this WLS. Except transmission line, solar power project as such does not have adverse impact on avifauna. Bird guards have been installed on 7 km long transmission line to minimize adverse impact on birds. GSS where this project is connected for power evacuation, is around 7 km away from project site in north direction.
- No project site exists within scheduled areas, as also confirmed by ESIA studies.

d. Land

- ~273 acre land is required for all 10 projects together. Out of total requirement, around 236 acre (86%) are available for project and have been procured on willing seller – willing buyer basis. No forced land acquisition happened in any of the project. Price paid to land seller have been decided on mutual discussion basis, as confirmed by borrower and also substantiated by ESIA studies. Land aggregators have been hired to facilitate land procurement from the villagers. The land parcels procured for the proposed project were mostly seasonal cultivated due to limited presence of irrigation sources.
- No land of Schedule tribes and assigned land, are procured in this project. Land sellers have been compensated with sale price mutually agreed between land owners and borrower. Compensation paid for the land parcels were equivalent to and higher than the market rate except in Bhoom project, where compensation paid was less than the circle rate. This is for a limited amount of land that was purchased from erstwhile developer, and is because land sold for the projects was barren land (not suitable for agricultural activity). Farmers in Bhoom area are generally big farmers with large land holdings. Land sellers involved in Bhoom projects do not fall in the category of small and marginal farmers and had enough land with them, even after selling the land. Land sellers have purchased better quality of land using the amount paid to them after selling the land, as reported by ESIA.
- Land for transmission line: Land for transmission line towers and ROW have been secured by paying one time compensation to landowners, in all 10 projects. Transmission line has been laid as per P&T Rules, The Electricity Act 2003 and the Telegraphic Act. Details of land procured for project site and Transmission line and compensation paid are captured in ESIA reports. 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. However, no disputes have been sensed during stakeholder consultation undertaken by ESIA team. Positive perception about renewable energy project has been observed among the communities, as reported by ESIA.

e. Project Need and E&S Benefits

- Will supply the electricity needs of approximately 1,28,177 MWh of renewable energy per annum. Base case projections have been prepared assuming PLF of 15.87%.
- Will save an estimated 1,12,539 tonnes of greenhouse gas (GHG) emissions per annum using GEF of 0.878 as per MDB methodology
- Created employment opportunities (to be assessed during monitoring) 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.
Ground water extraction approval	To be obtained for use of Borewell during O&M phase. Application being filed by borrower for projects in Osmanabad and Latur Districts. Approval is already received for project in Tamil Nadu state. Ground water extraction is not feasible for projects in Beed District.

c. Location Related Risks

- There are no recognized, legally protected areas for ecological and environmental sensitivities within 10 km of project area, at any project sites except projects in Beed district. Projects in Beed district falls within ESZ of Naigaon Peacock wildlife sanctuary. To comply regulatory requirement, approval from Division Forest Officer (also secretary of ESZ monitoring committee of Naigaon Peacock WLS) has been obtained for the project. To mitigate impact of ~7 km long transmission line of these projects, bird guards have been installed on the transmission line.
- ESIA study also mentions that project location and nearby area does not have any recognized ecological sensitive habitats.
- Project sites are not part of any scheduled and tribal areas.
- Villagers are aware about the solar power projects and during stakeholder consultation villagers had expressed positive opinion for renewable energy project.

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 and O&M phases, access to the power grid, construction materials.

- Water tankers are being used for construction phase to meet domestic and construction water requirements. During construction period, water requirement would be about 8-10 tankers (capacity 10 KLD) per week. During operation phase, water would be required for module cleaning and planned to source either through tankers or bore well. Presently water is being sourced through water tankers. Application for ground water extraction approval are being prepared by borrower's team for projects in Osmanabad and Latur District. For projects in Beed district, ground water extraction is not feasible

due to hard rock structures/strata. Ground water approval for project in Tamil Nadu has been received. Receipt of approval for Osmanabad and Latur projects will be tracked.

- Around 86% land has been procured on willing seller – willing buyer basis. Compensation amount has been decided on the basis of mutual discussion with land owners. ESIA studies for these projects have also verified land procurement process through willing seller – willing buyer basis. Agreement of land price through mutual discussion and compliance of land procurement procedures have been substantiated through stakeholder consultation, as reported in ESIA reports. No conflict is seen in land procurement. Availability of 100% project land shall be pre-disbursement condition of loan for respective project capacity.

e. Risks from other unaddressed E&S factors

i. Applicability of IFC Performance Standards – All projects are fully aligned with IFC PS and AIIB ESP.

- 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
 - PS 6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources (applicable only for projects in Beed district)

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. Receipt of compensation amount and its use to purchase another more fertile land parcels in nearby village, has been informed by land sellers during stakeholder consultation with ESIA team. Also, satisfaction has been expressed by land sellers for the land procurement process and establishment of solar projects.
- **PS 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources** is not applicable for projects in Osmanabad, Latur and Tirunelveli districts. 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 either modified habitat i.e. seasonal agricultural land or barren 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 any recognized historical or cultural significance.

ii. Employment and working condition related risks

- 4 projects out of 10 are already commissioned as on 31st Mar 2021. Remaining 6 projects are under construction and scheduled to be commissioned in May, Aug, Sep and Oct 2021. Construction phase lasting over around 5-6 months is expected to engage around 100 people during the peak construction period including 20-30% local people for skilled and unskilled manpower requirement. During operational phase, projects are expected to engage 10 -30 persons including technical persons and security guards. During lockdown due to CVOID 19, mostly local skilled people are being engaged in these projects, as restriction was posed on movement of labours from outside area.
- Basic amenities such as potable drinking water, water for domestic purposes, toilets, adequate lighting along with rented accommodation in nearby village, have been provided to workers.

iii. Community related risks

- Settlements of nearby villages are sufficiently far away (>1 km) from all 10 project sites and can be easily accessed through separate roads (other than village roads). No significant disturbance on communities anticipated due to construction activities and movement of material.
- 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 completed through ESIA during stakeholder consultation. Project disclosure is also done at website of TCCL.
- Grievance redressal mechanism exist and being implemented at project site to address any community related conflict. Community liaison officers have been appointed to establish good relationship with community and to address their grievances. Contact details of Community Liaison Officer/Grievance Redressal Officer have been displayed at project site.

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:

- Project location is free of any recognized and legally protected environmental/ecological sensitivities.
- Low risks of E&S accidents/incidents during construction or operations affecting project workers or the local community.
- No involuntary land acquisition and resettlement in the project.

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

i. Specific E&S Conditions (prior to disbursement):

1. Geo-graphical coordinate/kmz file of project locations, T. line and PSS to be submitted by borrower for all the 10 locations.

2. Borrower to share information about the source of water to be used for construction and O&M phases. If ground water is planned for O&M phase, borrower shall obtain prior permission from regulatory authority.
3. Borrower to confirm whether robotic system for module cleaning is planned in this project.
4. Borrower to submit details of safeguards planned to prevent bird collision with T. line
5. Borrower to submit land procurement status, land procurement process and details of title and non-title holders and land holdings
6. Borrower to submit copies of approvals (ground water extraction approval, land use permission, fire NOC, Village NOC) along with compliance status of E&S conditions (if any).
7. Borrower to share information of grievances received from community and status of solution provided so far.
8. Borrower to share details of community expectation and needs being understood and fulfilled through grievance redressal and local employment
9. Borrower to share details of measures, being taken or planned to respond to emergencies and avoid safety related accidents at project site
10. Borrower shall disclose relevant project information related to project, consultations, feedback and addressal of community concerns as required to affected communities and stakeholders in line with the significance of risks and impacts through appropriate communication channel
11. Borrower shall disclose GRM details (grievance redressal officer of borrower and contact details of TCCL) at project site and website.
12. Borrower shall undertake ESIA study and allocate adequate resources (team and finance) to implement ESMP of ESIA and ESAP issued by TCCL, throughout the project life

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

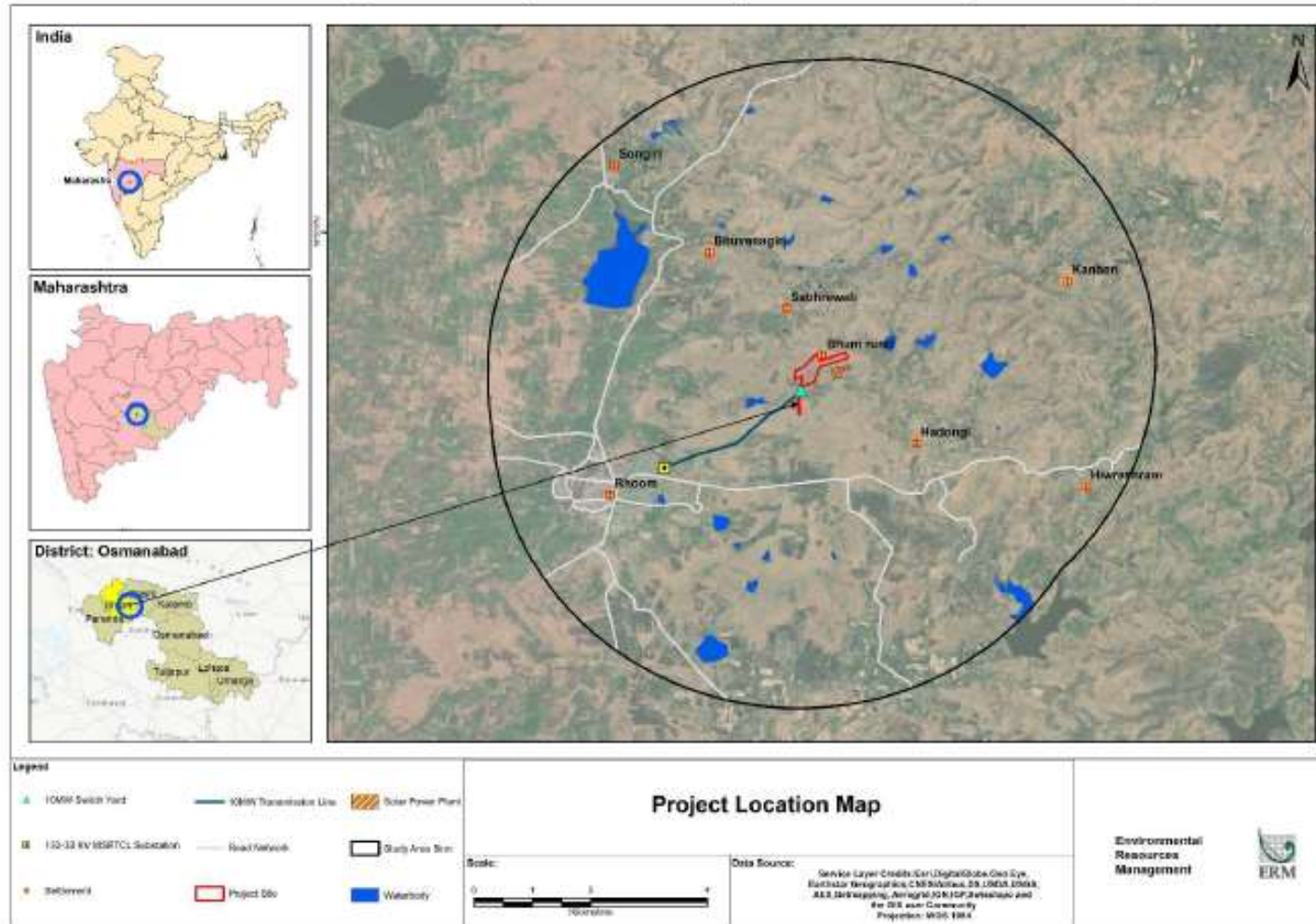
1. Borrower to ensure that the workforce engaged during construction and operation and maintenance of the Project is competent to undertake the Project (including transport of materials and workforce effectively) and can do so safely and shall undertake all safety precautions for avoiding any workplace 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 annually provide sufficient details to the Facility Agent to evaluate the 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. Compliance status of AIB ESP and Project Affected Peoples Mechanism (PPM)
 - c. Employment details (nos, local employment)

- d. Compliance to conditions of project permits relating to contract labour, CEIG approvals; Notices / fines / penalties imposed (if any) by the issuing / enforcement agencies
 - e. Grievances (from workers and local communities) received and responded by the borrower/contractor. Submission of grievances records and resolution status to TCCL
 - f. Health & Safety Incidents recorded during project implementation
 - g. Continuous implementation of the ESMP, ESAP and compliance of all other applicable E&S requirements
 - h. Submission of Semi-Annual Monitoring Report (during construction phase) and Annual E&S monitoring report (O&M Phase)
5. The Borrower shall intimate the Facility Agent at the earliest of any major incidents (resulting in fatalities/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

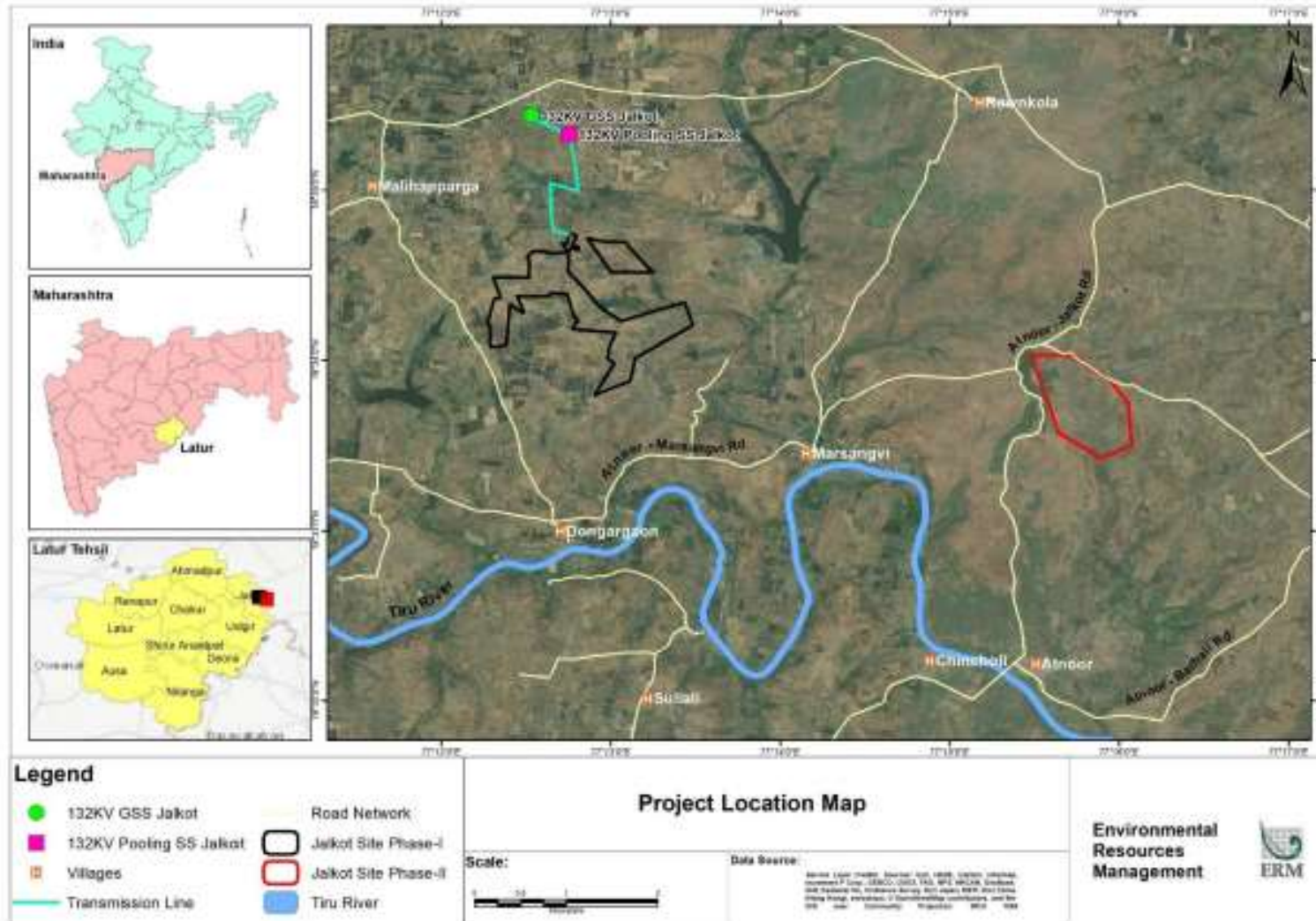
6. Conclusion

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

Project Location: Osmanabad District, Maharashtra



Project Location: Latur District, Maharashtra



Project Location: Tirunelveli District, Maharashtra

