

Environmental and Social Due Diligence Report (ESDDR)

TP LUMINAIRE PRIVATE LIMITED (TPLPL)

Promoted by: TATA PROJECTS LIMITED (TPL)

Loan Amount: Rs. 57 crores

PROJECT LOAN FOR SETTING UP
SMART LED LIGHTING IN NOIDA & NASHIK

27th Aug 2020

Tata Cleantech Capital Limited

Source of inputs for ESDD:

- TCCL Credit Note No. 18/FY 20-21
- Initial assessment and terms sent to credit and sales team 25th Jun 2020
- Public domain information
- Telecon with Business Unit Head of TP Luminaire on 7th Aug 2020
- Information shared by client on 17th and 18th Aug 2020
- E&S terms included in Sanctioned letter and loan document

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1. Summary

Sector	Energy Efficiency															
Borrower	TP Luminaire Private Limited															
Project stage, capacity	<ul style="list-style-type: none"> The project involves development, operation and maintenance of Smart LED projects with the municipal authorities of NOIDA and Nashik as per the respective concession agreements. <table border="1"> <thead> <tr> <th>Events</th> <th>NOIDA</th> <th>Nashik</th> </tr> </thead> <tbody> <tr> <td>Project Details</td> <td>Replacement of existing light fixture with Installation of 74,000 LED fixtures and Central Control Monitoring Systems (CCMS) within 1 year and O&M for 7 yrs</td> <td>Replacement of existing 92,014 light fixtures with new LED fixtures & installation of Central Control Monitoring Systems (CCMS) within 9 months 15 days and O&M for 7 yrs</td> </tr> <tr> <td>Concession Effective Date</td> <td>16-Jul-18</td> <td>20-Aug-19</td> </tr> <tr> <td>Actual COD (COD) / Extended SCOD (SCOD)</td> <td>15-Sep-19</td> <td>Dec-20[#]</td> </tr> <tr> <td>Concession End Date</td> <td>15-Jul-26</td> <td>Oct-27</td> </tr> </tbody> </table> <p>[#] Request for extension till November 30, 2020</p> <ul style="list-style-type: none"> Concession periods are in the range of 7 - 8 years (including survey and installation period of 9 months - 12 months) for the projects. Post commissioning, the Concessionaire is required to operate and maintain the LED lights and fixtures during the concession and handover the same to the respective authorities at the end of concession period The combined project cost of all 3 projects is estimated to be ~₹209 crores 	Events	NOIDA	Nashik	Project Details	Replacement of existing light fixture with Installation of 74,000 LED fixtures and Central Control Monitoring Systems (CCMS) within 1 year and O&M for 7 yrs	Replacement of existing 92,014 light fixtures with new LED fixtures & installation of Central Control Monitoring Systems (CCMS) within 9 months 15 days and O&M for 7 yrs	Concession Effective Date	16-Jul-18	20-Aug-19	Actual COD (COD) / Extended SCOD (SCOD)	15-Sep-19	Dec-20 [#]	Concession End Date	15-Jul-26	Oct-27
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Key components and technology	<ul style="list-style-type: none"> NOIDA: Retro Fitment of 74,000 LED fixtures, installation of Central Control Monitoring Systems (CCMS) within 1 year and O&M for 7 years Nashik: Replacement of 92,014 existing light fixtures & with new LED fixtures, installation of Central Control Monitoring Systems (CCMS) within 9 months 15 days and O&M for 7 years 															
Revenue source	<ul style="list-style-type: none"> During the O&M period, the concessionaire would receive agreed percentage share of energy savings under ESCO (energy Saving Company) model as per the quoted guaranteed energy savings. 															
Key contractor	<ul style="list-style-type: none"> Contract agreement has been signed by TPL/TPLPL with vendors to supply and implement LED fitting/fixtures and CCMS panels 															
Location Coordinates	Municipal area of NOIDA and Nashik															

Loan amount	Rs. 57 cr (Rs. 37.12 crore – NOIDA project, Rs. 19.89 crore – Nashik project)
Time Period	4.9 years – NOIDA Project 6.16 years – Nashik Project
Co-lenders	Tata Capital Financial Services Limited (TCFSL)
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	<ul style="list-style-type: none"> • Energy and cost savings – TPLPL aims to replace 1,62,014 street light fixtures having high pressure sodium lamps with LED lightings. The replacement is expected to achieve 26,59,957 kWh energy saving/month. As a part of Prebid study, TPLPL has already estimated energy saving in range of ~50% - 60%. Energy savings will also help to protect environment through GHG reduction¹ (2181 tCO₂/month) • Apart from environmental benefit, social benefit in terms of improving women and children safety and reducing traffic accidents due to dark spots are also expected from the project. • Project has been disclosed by Noida Authority² and Nashik Municipal Corporation³ in leading News Paper on 21st Jun 2018 and 20th Nov 2019. • On awarding of contract, TPLPL had completed stretch wise check survey to estimate suitable wattage (LUX requirement) & to ensure 56% energy savings. Based on the survey outcomes, wattage estimation has been finalized and inspected by Noida Authority and Nashik Municipal Corporation. • Post inspection, removal of old fixtures and installation LED fixtures along with CCMS Panel installation completed in NOIDA and ongoing in Nashik. • Labors from project area are engaged by vendors/contractors of TPLPL for LED fixtures installation. Labor license to engage upto 100 labors is available with TPL. Evidence to demonstrate compliance of labor welfare measures such as Provident fund, Employee State Insurance Scheme (ESIC) have been submitted by contractors engaged in this project. • During installation phase, old lighting fixtures are removed and deposited to Noida Authority and Nashik Municipal Corporation. TPLPL

¹ Weighted average Grid emission factor 0.82 t CO₂/MWh

² <https://timesofindia.indiatimes.com/city/noida/noida-to-replace-74k-streetlights-with-leds/articleshow/64672561.cms>

³ <https://timesofindia.indiatimes.com/city/nashik/remote-controlled-led-lights-to-brighten-city/articleshow/72133002.cms>

	<p>has no right on old lighting fixtures as these are the property of government (Noida Authority/Nashik Municipal Corporation).</p> <ul style="list-style-type: none"> • During O&M phase, non functional/faulty/fused LED fixtures/bulbs will be replaced by vendor/Lighting Partner engaged to install lighting and maintain performance during the project tenure. • Borrower has project EHS plan to cover the various OHS risks related to workers safety, transportation of material, loading and unloading of material, traffic diversion or management, electrical risk during installation, and emergency preparedness. Various hazards related to installation and O&M phase activities have been identified and recorded in HIRA (Hazard Identification and Risk Assessment Matrix). Standard Operating Procedures (SOPs) are developed in line with the identified hazards and being practiced as per EHS plan. • Emergency Response Plan is in place to deal with emergencies situation such as flash floods, storms, earthquakes and any public unrest/riots. • A comprehensive mobile app and toll free no. (1800120959500) based grievance redressal system has been implemented to record and resolve community grievances related to LED Street light within a limited time frame i.e. (24 – 48 hrs). In case of unaddressed queries (including E&S), Grievance Redressal Officer of Tata Cleantech Capital can be contacted through sems_tccl@tatacapital.com • Adequate training, mock drill and skilled enhancement arrangement are in place and being implemented under EHS plan.
Recommendations	Recommended for investment based on ESDD with inclusion of E&S conditions into loan agreement
Key E&S Risks	<ul style="list-style-type: none"> • Penalty/fines and delayed or no payment from Municipal Corporation and Developmental Authorities may be expected due to following: <ul style="list-style-type: none"> ○ Accidents causing harms to workers and community due to ignoring OHS and community risk during installation and O&M phase ○ Poor performance of installed light leading to community grievances ○ Inadequate arrangement of material shifting, installation and waste management
Key E&S Covenants	<p>Compliance assessment of specific E&S terms are given below on the basis of discussion with project team and review of information submitted by client.</p> <p><u>Specific E&S conditions (to be complied prior to disbursement):</u></p> <ol style="list-style-type: none"> 1. Borrower to share plans and their implementation status to address the risk related to workers safety, traffic management, electrical safety, transportation, handling, installation, storage of materials, and emergency preparedness

	<p>Assessment: EHS Plan and Standard Operating Procedures (SOPs) are in place and have been developed to control OHS and community risk related to transportation of material, loading and unloading of material, traffic diversion or management, installation and O&M of LED fixture at height. Emergency response plan is also available and cover both natural as well man made emergencies. Condition Closed.</p> <p>2. Borrower to share details on specific safeguards and their implementation effectiveness, to avoid or minimize any incidents relating to vehicular traffic during day & night – due to installation activities, movement of vehicles deployed for the project, operation & maintenance activities, including due to lighting issues such as inadequate / excess / glare</p> <p>Assessment: EHS plan, SOPs and traffic management plan are in place to avoid or minimize vehicular traffic related accident during installation and O&M activities. Maintenance of adequate Lux level (illumination) is also in scope of borrower and will be regularly inspected. Faulty bulbs or fixtures will be replaced by O&M team to ensure adequate illumination level. Condition Closed.</p> <p>3. Borrower to share permits (their compliance status) and buy back arrangements to store, transport and dispose electronic and hazardous waste generated from the project activities, and cutting or pruning of trees required for installation and maintenance</p> <p>Assessment: As per contract all old lighting fixtures will be replaced with LED fixtures. All old lighting fixtures has been deposited to Noida Authority. Authority will sale out by itself. Borrower’s scope is limited only to replacement of old lighting fixture with LED light. In Nashik project, old lighting fixture and lamps will be disposed through vendor. Finalization process of vendor is presently ongoing. Any faulty LED fixture during O&M phase will be replaced by vendor (lighting partner) as it is covered under warranty period. Condition Closed.</p> <p>4. Borrower’s understanding and safeguards with regard to key environmental vulnerabilities such as floods, storms, earthquakes, fog that can impact the project performance and its operation controls applicable for each of the project locations</p> <p>Assessment: Emergency response plan is in place to ensure safety of workers and community during natural emergency. Operation of LED lighting can be remotely controlled through CCMS panel and will be helpful in event of any emergency to avoid electrical risk. Condition Closed.</p> <p>5. Borrower to share details about labor numbers, labor license, accommodation arrangement and safety arrangement/safeguards (related to COIVD-19) at worksite and labor camp area</p>
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Assessment: Labor license to engage less than 100 labours is available. All the labor are from project area i.e. NOIDA and Nashik and engaged through contractors. Labor camp is not required. Safety plans related to COVID 19 is in place. All necessary directions related to safe work at project site during COVID 19 situation have been given to workers and being complied. **Condition Closed.**

6. Borrower to share details and implementation effectiveness of grievance redressal mechanism for the project with regard to:
- a. Community grievances / incidents during installation phase and operation & maintenance phase – directly or through the Municipal Corporation / Traffic Police / Utility operators / heritage trusts
 - b. Grievances from Workers & sub-contractors engaged during the installation phase, and operation & maintenance phase

Assessment: A comprehensive mobile app and toll free number based grievance redressal system has been implemented to record and resolve community grievances related to LED Street light within a limited time frame i.e. (24 – 48 hrs). Grievance of workers & sub-contractors are being addressed through HR system and account system. **Condition Closed.**

7. Borrower shall disclose project details and GRM details (grievance redressal officer of borrower and contact details of TCCL) at website, if required.

Assessment: Information about project has been communicated to public through news article in leading News Paper. Project has been disclosed by Noida Authority⁴ and Nashik Municipal Corporation⁵ in leading News Paper on 21st Jun 2018 and 20th Nov 2019. To address grievances of community, Toll free number and mobile based services have been initiated by borrower. Information of these services are available on Noida Authority website and also communicated to public through News article. However, details of Grievance Redressal Officer (GRO) of TCCL is not disclosed. **Condition Open.**

General E&S Terms (to be monitored annually throughout the loan period)

- (i) Borrower to ensure that the workforce engaged for Project besides being competent to undertake the Project activities (including

⁴ <https://timesofindia.indiatimes.com/city/noida/noida-to-replace-74k-streetlights-with-leds/articleshow/64672561.cms>

⁵ <https://timesofindia.indiatimes.com/city/nashik/remote-controlled-led-lights-to-brighten-city/articleshow/72133002.cms>

	<p>transport of materials and workforce) effectively, can also do so safely, avoiding any workplace safety incidents and/or avoid impact to safety of host facility users;</p> <p>(ii) Borrower to ensure that the workforce engaged, are regularly paid with wages and provided with committed benefits, in compliance with laws on labour welfare – to avoid any resentment of workforce for the Project, or the principal employer receiving fines / penalties;</p> <p>(iii) Borrower to ensure that any damages to any third party due to activities related to Project shall be restored and/or compensated for at the earliest;</p> <p>(iv) Borrower shall provide (prior to end of financial year throughout the loan tenure) sufficient details to the Lenders to evaluate annual environmental & social performance of the Project. The details will primarily include (but not limited to):</p> <ul style="list-style-type: none"> (a) status of compliance to any environmental and social terms/ covenants proposed by the Lenders as part of environmental and social due diligence or loan monitoring; (b) Compliance status of ESAP and Project Affected Peoples Mechanism (PPM) (c) employment details including but not limited to number of employees, details to local employment etc; (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 and/or its contractor. Submission of grievances records and resolution status to TCCL; (f) health & safety incidents recorded during Project implementation. (g) Evidence of continuous implementation of the ESAP and compliance of all other applicable E&S requirements (h) Submission of Annual E&S monitoring Report <p>(v) The Borrower shall promptly intimate the Lenders of any and all the major events resulting in fatalities/serious injuries to the workers or nearby communities, asset damage, due to any act or omission related to the construction, operation and maintenance of the Project</p>
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2. Basic Project Details

a. Borrower

The borrower TP Luminaire Private Limited (TPLPL) is a 100% subsidiary of Tata Projects Limited (TPL) and was incorporated on December 12, 2018 to develop Smart LED Projects in India. Tata Projects Limited (TPL), Promoter/Sponsor, was created as a construction wing of Tata Group in February 1979 and successfully completed many infrastructural and environmental projects.

b. Project

- Project is development, operation and maintenance of Smart LED projects within Municipal area of NOIDA and Nashik. Replacement of old lighting fixture will help to achieve significant energy saving (50%-60%). Both environmental and social benefits are being expected due to
 - Installation of ~70,000 LED fixtures and control systems in NOIDA
 - Installation of 92,014 light fixtures with new LED fixtures and control systems
- Post commissioning, borrower (Concessionaire) is required to operate and maintain the LED lights and their associated infrastructure during the concession period and handover the same to the respective authorities at the end of concession period.
- Borrower has engaged various contractors to supply and implement LED fixture and Control system (CCMS).
- Project has been disclosed to community by NOIDA authority⁶ and Nashik Municipal Corporation⁷.

c. Project location

Project is located in Nashik and NOIDA area of Maharashtra and Uttar Pradesh respectively and is being owned by Noida Development Authority and Nashik Municipal Corporation.

d. Land

No land is required for this project, as project involves replacement of old street light with LED lighting fixture and CCMS panel.

e. Project Need and E&S Benefits

- Will help to achieve energy savings in range of 50% - 60% (5142319 kWh energy saving/month). This energy saving will also help to protect environment through GHG reduction (2181 tCO₂/month).

⁶ <https://timesofindia.indiatimes.com/city/noida/noida-to-replace-74k-streetlights-with-leds/articleshow/64672561.cms>

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- Created employment opportunities for the skilled labor 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 borrower and its promoters has been satisfactory and does not pose reputational risks to TCCL.

b. E&S Permits and Related Risks

Relevant Permit	Status and Risk
Labor license to engage workforce	Available
Consent to Operate from Pollution Control Board	Not required.
Local Panchayat consents	Not required.
Environmental Clearance	Not required

c. Location Related Risks

- Project sites are not a part of any ecological sensitivity. No location related risk exist.

d. Critical natural resources and social infrastructure related risks

- The project does not use any natural resources (land, water). Project has been designed to achieve energy efficiency without using natural resources and causing pollution. On contrary, project will help to reduce GHG emission and social benefits.

e. Risks from other unaddressed E&S factors

i. Applicability of IFC Performance Standards

- 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 4 – Community Health, Safety and Security

ii. IFC Performance Standards not applicable and reasoning:

- PS 3: Resource Efficiency and Pollution Prevention is not applicable as project technology is to achieve energy efficiency without using any natural resources and causing pollution.

- PS5: Land Acquisition and Involuntary Resettlement is not applicable as no land acquisition and procurement involved in this project
- PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources is not applicable as project site is within Municipal Area and not a part of any ecological sensitive area, naturally protected area or area of biological significance.
- PS7: Indigenous Peoples is not applicable as no it is an energy efficiency project without involvement of land and any other natural resources.
- PS8: Cultural Heritage is not applicable as project location is restricted only to street light only. No impact on areas of known historical or cultural significance.

ii. Employment and working condition related risks

- Maximum 100 workers from project area (i.e. NOIDA and Nashik) are engaged through contractors for replacement of old lighting fixture with LED light to achieve energy efficiency. Labor license to engage maximum 100 labor is in place. In NOIDA project, installation phase is already completed and project is in O&M phase therefore labor requirement is significantly reduced from 100 to ~20 Nos. Project in Nashik area is still within installation/construction phase therefore labor requirement is high. Since, all workforce is being hired by contractors from Nashik only therefore labor camp is not required. Labor commute on daily basis from their respective homes.
- Compliances of labor welfare rules and regulations (Minimum wages, Provident fund, Employee Insurance) are being ensured through contractors and supervised by HR and Account team.

iii. Community related risks

- Accidents due to shifting of material to project site and traffic diversion during installation phase and vehicular accidents due to inadequate illumination level or dark spots during O&M phase are the key safety risk to community.
- Working at height, electrocution or electric shock, accident due to traffic plying on the road are the key risks to workforce.
- Company has EHS plan and Standard Operating Procedure to ensure safety of community and workforce by controlling risk associated with traffic diversion, handling of material, electrical and physical hazards.
- Safety performance record is being maintained by company and it is used for the purpose of root cause analysis to update and further improve safety practices.
- A detailed Grievance Redressal system exist. Toll free No. and mobile based app have been provided to record and resolve community grievances. Anyone from community can contact on this toll free No to register complaints/grievances.

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:

- Presence of OHS risks during construction or operations affecting project workers or the local community
- Presence of EHS plan and necessary SOPs to control OHS risk in project
- Project location is free of any recognized and legally protected environmental/ecological sensitivities.

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

i. Specific E&S Conditions (prior to disbursement): All specific E&S terms are in compliance.

1. Borrower to share plans and their implementation status to address the risk related to workers safety, traffic management, electrical safety, transportation, handling, installation, storage of materials, and emergency preparedness
2. Borrower to share details on specific safeguards and their implementation effectiveness, to avoid or minimize any incidents relating to vehicular traffic during day & night – due to installation activities, movement of vehicles deployed for the project, operation & maintenance activities, including due to lighting issues such as inadequate / excess / glare
3. Borrower to share permits (their compliance status) and buy arrangements to store, transport and dispose electronic and hazardous waste generated from the project activities, and cutting or pruning of trees required for installation and maintenance
4. Borrower's understanding and safeguards with regard to key environmental vulnerabilities such as floods, storms, earthquakes, fog that can impact the project performance and its operation controls applicable for each of the project locations.
5. Borrower to share details about labor numbers, labor license, accommodation arrangement and safety arrangement/safeguards (related to COVID-19) at worksite and labor camp area
6. Borrower to share details and implementation effectiveness of grievance redressal mechanism for the project with regard to:
 - a. Community grievances / incidents during installation phase and operation & maintenance phase – directly or through the Municipal Corporation / Traffic Police / Utility operators / heritage trusts
 - b. Grievances from Workers & sub-contractors engaged during the installation phase, and operation & maintenance phase
7. Borrower shall disclose project details and GRM details (grievance redressal officer of borrower and contact details of TCCL) at website, if required.

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

- i. Borrower to ensure that the workforce engaged for Project besides being competent to undertake the Project activities (including transport of materials and workforce) effectively, can also do so safely, avoiding any workplace safety incidents and/or avoid impact to safety of host facility users;
- ii. Borrower to ensure that the workforce engaged, are regularly paid with wages and provided

- with committed benefits, in compliance with laws on labour welfare – to avoid any resentment of workforce for the Project, or the principal employer receiving fines / penalties;
- iii. Borrower to ensure that any damages to any third party due to activities related to Project shall be restored and/or compensated for at the earliest;
 - iv. Borrower shall provide (prior to end of financial year throughout the loan tenure) sufficient details to the Lenders to evaluate annual environmental & social performance of the Project. The details will primarily include (but not limited to):
 - a) status of compliance to any environmental and social terms/ covenants proposed by the Lenders as part of environmental and social due diligence or loan monitoring;
 - b) Compliance status of ESAP and Project Affected Peoples Mechanism (PPM)
 - c) employment details including but not limited to number of employees, details to local employment etc;
 - 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 and/or its contractor. Submission of grievances records and resolution status to TCCL;
 - f) health & safety incidents recorded during Project implementation.
 - g) Evidence of continuous implementation of the ESAP and compliance of all other applicable E&S requirements
 - h) Submission of Annual E&S monitoring Report
 - v. The Borrower shall promptly intimate the Lenders of any and all the major events resulting in fatalities/serious injuries to the workers or nearby communities, asset damage, due to any act or omission related to the construction, operation and maintenance of the Project

6. Conclusion

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