

**Environmental and Social
Governance (ESG) Compliance
Study – Assessment Report**

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1 Introduction

1.1 About the project

The grid connected rooftop solar PV (GRPV) market in India is witnessing substantial interest from entrepreneurs, developers, financial institutions, development banks, end-users, as well as government entities. A strategic combination of Top-Down impetus and Bottom-Up execution approach can be attributed to ambitious 40 GW target and subsequent growth of this sector.

The GRPV market is still in nascent stage and there has been a modest uptake of GRPV systems, owing to various barriers such as availability of adequate low-cost finances, skill and knowledge gap, lack of consumer awareness, inter alia. The World Bank-SBI program was envisaged to address these specific issues by increasing the availability of debt financing and improving the capacity of institutions. The program would also bring efficiencies by sharing international knowledge and experience on solar rooftop programs across the globe.

The World Bank's Program-for-Results (PforR) instrument is better suited for implementing aforesaid program as the additional benefits of PforR would be fundamental in achieving the overall objectives and overcome the barriers in the uptake of GRPV. The PforR program will finance the activities in three result areas (i) strengthening institutional capacity for GRPV; (ii) market development of GRPV; (iii) expanding GRPV generation.

The projects that will be implemented under The World Bank's PforR programme will directly meet the ambitious targets. However, enough impetus has been given that all the activities leading to the implementation of the Projects are all environmentally and socially friendly. It is in this regard that The World Bank has undertaken a detailed Environmental and Social Systems Assessment (ESSA) before the credit and grant disbursement. The objectives of the ESSA was (i) to identify and document potential environmental and social effects of the Program; (ii) review the environmental and social management rules and procedures and institutional responsibilities that will be used by the Program (iii) assess SBI's institutional capacity to manage potential adverse environmental and social issues under the Program; and (iv) recommend specific actions for improving the capacity of the SBI with regard to effective management of environmental, health and safety and social issues during implementation.

The ESSA clearly brought out the need for the following actions:

- Strengthening of internal capacity to monitor the implementation of ESG requirements. This will be done by providing training and familiarization with a checklist to at least one staff member in every branch where the GRPV Program will be operated. Specifically, this training will need to be on the use of the screening checklist and capturing and recording the required data
- Checking on the disposal of damaged or discarded panels (possibly through a take-back policy with the manufacturer/ supplier during replacement, and if there is no take-back policy is available or cannot be ensured throughout the life cycle, discarded or damaged panels will have to be disposed as per the applicable local laws for their safe

disposal). Safety of personnel during installation and operation could be ensured through the measures described in ESSA.

- Implement set of recommendations as presented to assess and mitigate any adverse social impacts.
- Strengthening of internal capacity to monitor the implementation of ESG requirements by Program beneficiaries.
- Enabling gender equitable processes so that GRPV opportunities flow down to women workforce
- Establishment of gender related grievance redressal mechanisms

Apart from the above, an operation manual was created under which clear guidelines and processes were laid out. The Environment, Health, Safety and Social (EHSS) sections in the operation manual captures clear and actionable activities right from the stage of assessment of projects, to disbursement, to implementation and monitoring after implementing the projects. The manual also mandates certain clauses/undertakings that need to be provided by the Borrower in relation to environmental and social governance.

The World Bank under the Program for Results (PforR) Grid Connected Solar Rooftop Programme has clearly mandated The State Bank of India (SBI) to provide loans to only those projects that comply with The World Bank's ESG framework. The Programme Appraisal Document (PAD) clearly articulates the areas for action under the ESG framework by the SBI based on the (ESSA). The objective of this assignment is to understand the gaps (if any) and enable SBI officials and Lenders Independent Engineer's (LIE's) the implementation of the proposed actions in relation to the ESG framework.

2 Our approach and Methodology

We have adopted a three work-stream approach to perform the study, namely:

- A. Review and gap assessment
- B. Dissemination of results
- C. Training of officials

WORKSTREAM 1: Detailed Review/ Gap assessment of effectiveness of ESG process and activities developed by the Programme

Step 1: As-is review of all ESG processes and activities at the institution level (SBI, Sub-borrower/ Solar Developer) vis-a-vis the actions/ recommendations provided by The World Bank in the PAD

The first step is to conduct an inception meeting with the concerned personnel at SBI to provide an overview of the objectives of the study, and key support required. The list of persons to be contacted at the unit level was provided by SBI. We conducted the unit level visit to six units spread across Delhi and Mumbai. They are:

- SBI, Overseas Branch, Mumbai
- SBI, SME Backbay Reclamation Branch, Mumbai
- SBI, Nariman Point, Mumbai
- SBI, SME Branch South Extension, Delhi
- SBI, Saheed Bhagat Singh Margh Delhi
- SBI, Golf Course Road Branch

Following receipt of the list from SBI, we performed telephonic consultation activities individually with the respective unit representatives and fixed appointments for visit to respective units to perform the review. Simultaneously, the review questionnaire was developed which aided in conducting the review consultation exercises to identify gaps in all ESG processes and activities at the institution level, branch level against the recommendations provided by The World Bank in the Project Appraisal Document.

Step 2: Review of other systems and processes

This apart, the following review and assessment were also conducted:

- Review of SBI's ESG due diligence
- Review of all prepared loan documentations as per the Operational Manual
- Review of implementation of ESSA compliance (checklists and adequacy of information)
- Review of training material to SBI officials to assess whether ESG related topics are covered or not
- Review of ground mounted systems and if there are any more parameters (e.g. adequacy of the current OM processes) which need to be taken into consideration for the same and provide recommendations. The questionnaire for conducting consultations is attached in the Annexure I.

3 Review of ESG processes at Institutional Level

Financial institutions/Banks play an important and active role in the economic and social development of countries by selecting suitable investment projects, manage risks, and providing adequate access to capital. These institutions set up a comprehensive Environmental, Social and Governance criteria to screen potential investment projects. Environmental criteria consider company/project performance as a steward of nature. Social criteria examine effects of the developmental activity on employees, suppliers, customers, and the communities where it operates. Governance deals with a company’s leadership, executive pay, audits, internal controls, and shareholder rights. An institutional level review of the ESG processes and policies was carried out to understand the ESG performance of SBI. Following section provides a detailed review of ESG performance at institutional level.

3.1 Governance

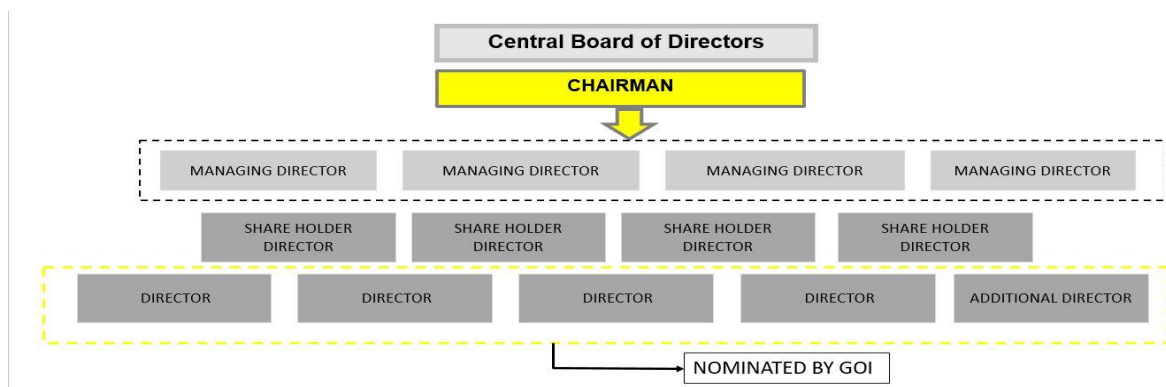
Corporate Governance

The Corporate Governance philosophy of SBI is summarized in the set of declarations featuring in the Bank's Vision, Mission and Values statement. The “Vision” captures the continuing pride in the institution, and positions the Customer at the centre of its being. The “Mission” highlights SBI's commitment to provide uncompromising service to all and emphasizes its intent to reach out to customers from all sections of society as well as adopt state of the art technology to drive excellence. The “Values” further confirm SBI's assurance to conduct business transactions with transparency, to be knowledge driven, share its learnings with key stakeholders and contribute to the community SBI operates in.

Governance Structure

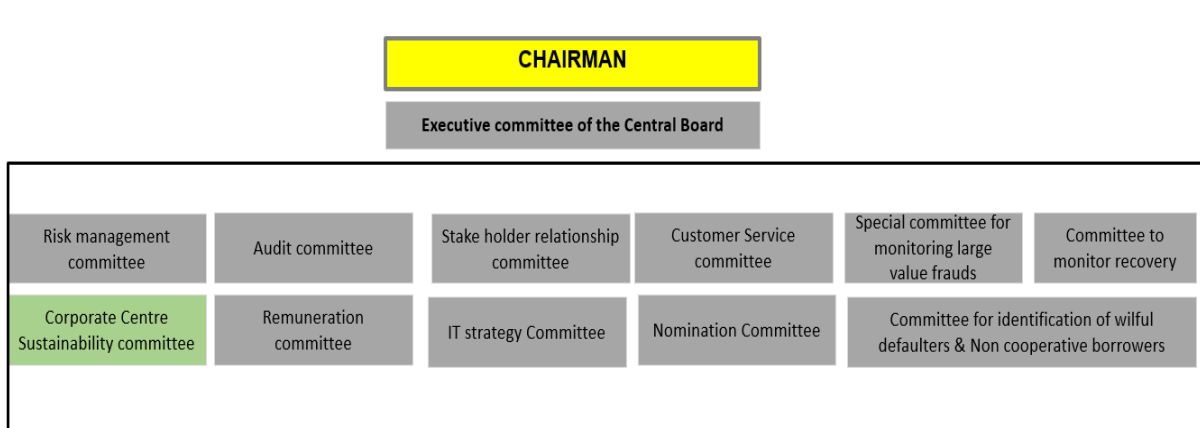
Board of Directors

At the top highest level, SBI is governed by the Central Board of Directors. The Board is headed by the Chairman, and comprises of four Managing Directors, Shareholder Directors who are, in addition, eminent professionals in various fields, and Directors nominated by the Government of India and the Reserve Bank of India. The Managing Directors are also functional heads of different verticals in the bank Viz. Commercial Banking, National Banking, Compliance & Risk, and Associates & Subsidiaries. SBI has laid down a comprehensive Code of Conduct, to which all Directors on the Central Board, the Core Management (Deputy Managing Directors) and Chief General Managers are signatory. The governing board structure is as depicted in the figure below.



There are several Committees of the Central Board, with specific functional responsibilities and the Executive Committee acts as the principal committee. The Executive Committee of the Central Board (ECCB) is headed by the Chairman. SBI has established a Corporate Centre Sustainability Committee which is headed by the Chief Sustainability Officer (CSO), carrying the rank of Deputy Managing Director. The CSO is responsible for sustainability and other related reporting.

Board committee structure:



Board Independence:

SBI on its ESG Disclosure and toward sustainability journey, has acknowledged the need to have a separate committee to implement, manage and monitor. Thus, the Corporate Centre Sustainability Committee (CCSC) was established in FY 2016. It is led by the bank's Deputy Managing Director (HR) & Corporate Development Officer, under whose leadership all sustainability initiatives of the bank are driven. He is also SBI's Chief Sustainability Officer who oversees the bank's reporting on sustainability and other non-financial parameters and reports directly to the Chairman.

3.2 Business Integrity

Ethics and Vision:

SBI's Vision and Mission statement demonstrates its clear intent of becoming the 'Bank of Choice' for a transforming India whilst providing simple, responsive and innovative financial solutions. It guides the bank's overall development strategy and helps communicate its central purpose to all its stakeholders. The systems and controls in place help SBI ensure that its goals, objectives and overall strategy are on track.

Code of conduct:

The professional moral of the organization is outlined by its Code of Conduct which emphasizes on the zero tolerance towards unethical business practices. The cornerstone of the Code of Conduct is the belief that the bank is a trustee and custodian of public money and in order to fulfil its fiduciary obligations and responsibilities, it has to maintain and continue to enjoy the trust and confidence of public at large. The Code of Conduct lays down principles of ethical business practices and prescribes adherence to applicable laws and regulations as a bare minimum requirement. These include regulations around environmental protection, health and welfare of the entire workforce and upholding the rights of all individuals that the

Bank works with. SBI also expects each of its employees to abide by its working culture by behaving professionally, with integrity and in compliance with applicable laws and regulations. The laid down clauses of the policy is a part of the operating philosophy and is supported by a robust governance mechanism in order for it to achieve its objectives.

Equal Opportunity

SBI's recruitment policies include guidelines for recruiting candidates based on their experience and expertise. Employment, remuneration, promotion and termination are based on performance and conducted through fair, transparent, and accountable processes. SBI has adopted a scientific approach towards managing its workforce and the optimal utilisation of their capabilities. To foster expertise and deep domain knowledge, it introduced the 'Job Families' concept that helps in allocating an appropriate job profile to the right candidate. To ensure optimum exposure and delegation of responsibilities, the bank has developed the "SUCCEED" tool for succession planning of critical positions. The performance appraisal of individual employees is conducted in a transparent manner. Further, the system has a provision for capturing the developmental needs of the individual employees by conducting a competency assessment.

3.3 The People

Diversity:

SBI is committed to an inclusive culture that respects and embraces the diversity of its employees, which represent diverse nationalities (at the overseas offices), age groups, cultures and physical ability. SBI also attracts, develops and retains employees from all cultures, ethnicities, races, genders and nationality. Even the bank's global talent pool is amplified through the induction of young and fresh talent, employment of differently-abled individuals and an increase in the ratio of female employees. Gender Sensitivity and Inclusiveness have always been the corner stone of Bank's HR policy. Women represent 24.34% of the total work force. Moreover, women employees are spread across geographies and different levels of hierarchy. In addition to this, more than 2,600 branches are at present headed by women officers. SBI has laid utmost emphasis to ensure a healthy and conducive work environment for women employees.

Health and Safety:

SBI has continuously taken several measures to ensure health and well-being of employees and their family members. In addition to medical assistance in accordance with conditions of service, SBI has taken a Group insurance cover and tie-ups with several hospitals and diagnostic centres across the country for extension of cashless services. The larger establishments at various centres have the bank's own Medical Department and Dispensary, with specialists available for consultation. Doctors are also available at some of the bank's residential complexes for consultation. To ensure the personal safety of employees within their working environment, safety awareness sessions are carried out periodically. Mock fire evacuation drills are also carried out at periodic intervals.

The nature of business of any bank warrants necessary safety precautions to be taken not just for its employees, but also for key stakeholders visiting the banks' office premises. For a bank as large and extensive as SBI, security practices become even more imperative. In order to provide safe and secure business environment to the staff and customers, SBI has undertaken a large-scale mission to upgrade the skills of security staff. The focus is on creating security consciousness amongst all staff members and equipping the branches with better technology, advanced security equipment and weaponry.

Gender empowerment policy and initiatives:

Gender Sensitivity and Inclusiveness have always been the corner stone of Bank's HR policy. Women represent 24.34% of the total work force. Moreover, women employees are spread across geographies and different levels of hierarchy. In addition to this, more than 2,600 branches are at present headed by women officers.

SBI maintains a zero-tolerance policy against sexual harassment at workplace and has put in place a policy for the Prevention of Sexual Harassment (POSH) at work place. Employees have been accorded the freedom to stand up for their fundamental rights and submit any complaint to the appointed committee for further investigation. The policy is circulated to all the employees and is also available online at the banks internal portal. Regular training sessions are conducted to sensitize about the POSH policy. There is a dedicated grievance redressal committee appointed for addressing complaints pertaining to sexual harassment. The appellate committee is also appointed at zonal and regional level, apart from head office level. To ensure fair redressal of grievance, the committee also consist of an external member and an advocate, who guides on the legal aspect of the grievance redressal.

Human rights:

SBI respects internationally proclaimed human rights and strives to prevent any violations at the work place. It has strict checks and balances in relation to aspects such as forced labour and child labour and ensures that there are no exceptions at any of its offices and branches. The bank's guidelines on Human Rights cover its entire value chain comprising employees, suppliers, clients, communities and countries in which it operates. Further, the security personnel are also sensitized about human rights aspects like forced labour, child labour, non – discrimination, equality and respect. SBI's policies on human resource management apply equally to all persons working for the bank. There is no discrimination in the implementation of these policies and all individuals are assigned responsibilities and are entitled to benefits based on individual merit.

Some other management policies:

- Vigilance policy: SBI encourages and respects professional conduct that encapsulates ethical values. The employees are always encouraged to communicate in an open and transparent way and raise concerns about any misconduct observed.
- Whistle Blower Policy: SBI has established a vigilance mechanism which is built on three primary aspects- Preventive, Punitive and Participative behaviour. To further complement the vigilance mechanism, a well-defined whistle blower policy allows any employee to communicate a concern or complaint confidentially and anonymously, guaranteeing a timely response and an assurance that there will be no retribution or negative consequences.

CSR initiatives

SBI Foundation, SBI's CSR arm, was formed with an objective of streamlining CSR activities of the bank by bringing them under a nodal arrangement where the requisite architecture is in place for improved delivery efficiencies. Thus, through the Foundation, a holistic approach has been adopted for the implementation of developmental solutions and key flagship initiatives such as the Youth for India (YFI) program. Aligned to the bank, the Foundation too focuses on similar areas of interest such as Education, Healthcare, Sanitation, Skill Development, Disability, Environment, Sports and Culture. Few of the initiatives implemented by the Foundation under each focus area is as follows:

- **Healthcare:** Poor sanitation conditions and a shortage in primary healthcare facilities have increased vulnerability of the rural population to high mortality rates, susceptibility to disease and has also increased school dropout rates. Making basic healthcare and sanitary amenities available has thus become an important area of intervention for the Foundation and thereby achieve sustainable development goals target.
- **Education:** In India, providing quality education to people who cannot afford private schooling has been a challenge due to a growing population, and lack of available resources. Further, a significant dearth of proper infrastructure, quality teaching staff and social barriers linked with educating girls are also important issues that continue to be obstacles. To counter these issues, the Foundation is working relentlessly to provide education facilities to those who are deprived of it.
- **Environment and sustainability:** SBI plans to ensure environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agro-forestry and conservation of natural resources with the help of community involvement. Further, SBI has also been carrying out independent tree plantation activities across its circles.
- **Women Empowerment and Care for Senior Citizens:** In an effort to contribute to women empowerment, the Foundation has implemented initiatives such as providing micro-credit finance to women centric Self-Help Groups. In reaching out to senior citizens, the organization has partnered with a local NGO in Hapur District, Uttar Pradesh and adopted 130 elderly persons for a period of two years. This institutional program has improved their quality of life by serving nutritious meals, providing a hygienic living environment, providing regular medical care and helping them reunite with their families.

3.4 Environment

Environmental orientation and policies

SBI is a large organization that has an extensive presence in India as well as in countries across the globe. SBI has taken several steps for improving its environmental footprint. In an attempt towards a path to digitization, the bank has developed green platforms through which several banking products and services are delivered to customer. SBI is the first among the public-sector banks to develop a sustainability roadmap for its operations across India. SBI has also committed to minimising the direct and indirect environmental impacts of its operations.

Key environmental responsibilities of the bank:

- Minimising SBI's environmental footprint
- Reducing water consumption
- Managing the quantity of waste generated, especially plastic and e-waste
- Investing in renewable energy
- Creating awareness on the importance of environmental sustainability.

Environmental performance:

Carbon Neutrality: SBI has undertaken this ambitious goal of becoming the first carbon neutral Indian bank in the public sector. SBI is currently working towards the development of an exhaustive, pan-India Carbon Neutrality Strategy. The strategy shall be carried out over the course of three broad phases with the first phase entailing the preparation of a comprehensive Greenhouse Gas (GHG) inventory for SBI's domestic operations encompassing more than 24,000 branches across India.

Energy efficiency: SBI has taken steps to replace regular lights in different establishments with LED lights, and new energy efficient air-conditioners are installed. In an attempt to offset a part of the bank's GHG emissions, tree plantation drives have been periodically undertaken during the monsoon months across all circles. SBI has also acquired an energy conservation software and deployed the power management tool. The deployment of this tool has enabled it to save more than 40% of its direct energy consumption.

Branch Server Consolidation (BSC) project consolidated all physical servers located at SBI's branches to a centralised location in a secured and virtual environment. Currently this consolidation has been completed for 2,798 branches in India. The migration of the physical branch servers to a virtual set has resulted into a reduction of 540 kWh energy consumption per branch per month.

Water management: Currently, SBI is monitoring the total volume of water being consumed and is in the process of developing mechanisms and systems that will help in the conservation and recycling of water. There are several rainwater harvesting projects that have been undertaken at the circle level.

Waste management: SBI took a concerted decision to curtail the procurement of these plastic bottles for internal consumption in order to reduce the quantity of plastic waste generated. Further, this has also helped reduce the quantity of waste water generated. To reduce wastage of food in canteens, a unique awareness drive is being carried out. The wet waste is transferred to a bio-digester for decomposition and the resulting compost is then used at the headquarters and the residential quarters of the bank. The dry waste generated is given to vendors who recycle the waste paper and the e-waste generated is disposed through authorized vendors only.

Certifications:

SBI is a founding member of the Indian Green Building Council (IGBC). The Council was formed in the year 2011 with a vision to usher in the green building movement in India and help facilitate the country to become one of the global leaders in green buildings. IGBC is tasked with the creation of awareness on how green buildings will help to reduce energy and water consumption.

The total volume of energy consumed by SBI is quite significant due to its large infrastructural footprint across the country. Some of the key initiatives are installation of, thermal sensors, LED lights, energy efficient Air Conditioners (ACs), and power management tools across its large offices India. As of 31 March 2018, SBI has received LEED certifications for five of its office buildings across India, including its corporate office at SBI Bhavan.

Observation

The review of SBI's governance structures, environment and social initiatives indicates that the bank has robust policy framework to create a positive environmental and social impact of the business activities. The innovative measures of creating environmental consciousness has enable the bank to not only reduce its carbon footprint but also helped to select projects that are inclined towards environmental stewardship. The CSR activities and other social initiatives have been cornerstone for achieving sustainable development goals of providing good health and well-being of society, promote gender equality by creating job opportunities and providing good quality education.

4 Review of Loan documentation at Branch Level

In this stage, a thorough review of loan documents, including operations and maintenance agreement, installation and commissioning agreement, supplier agreement was undertaken. For the review of individual projects documents, the unit level visit to following six units spread across Delhi and Mumbai was conducted

- SBI, Overseas Branch, Mumbai
- SBI, SME Backbay Reclamation Branch, Mumbai
- SBI, Nariman Point, Mumbai
- SBI, SME Branch, Mayapuri, Delhi
- SBI, Saheed Bhagat Singh Margh Delhi
- SBI, Golf Course Road Branch

4.1 Appraisal Process followed by banker

Pre-Sanction appraisal

A detailed appraisal of project proposal is conducted at first stage by respective branch relationship managers. Following aspects specific to rooftop solar projects are appraised,

- Preliminary appraisal – Banker performs preliminary check of the project proposal as per eligibility criteria mentioned in the operation manual.
- Site selection and infrastructure parameters such as energy requirement of the end user and benefits by implementing solar rooftop project; ownership details including lease deed; new construction requirements for making rooftop shadow free; ease of accessing the rooftop during construction and operation period; availability of water and transportation infrastructure during construction and operations phase.
- Project design including rooftop profiling and site assessment, structural engineering analysis to determine the ability of rooftop to withstand the loading for the life of the project; solar resource assessment/yield study to determine the irradiation levels, CUF, losses etc from power generation; shading analysis/Horizon shadow assessment; PV system design quality check; review of compliance of requirements stipulated by regulatory commission or DISCOM or any statutory body.
- The procurement procedures followed by the borrowers; technical details of PV module, inverter and other assets; detailed credentials of supplier including their financial strength, past performance, copy of supplier contract etc.
- Details of the procurement and implementation plan; details of the EPC contractor including its credentials and performance, copy of EPC contract; implementation schedule and insurance to be procured.
- Detailed project costing and financial returns along with benchmark cost of equipments.
- Review of power procurement arrangement including grid connectivity, sanctioned demand, contracted demand, power factor, transformer capacity, consumption voltage etc.; sanctions form DISCOMs – NOC, letter of approval etc.; PPA details such as tenor, tariff, termination clauses.

- Analysis of market and regulatory aspects that will affect the implementation, operations or financials of the project
- Details of the O&M plan; credential of O&M contractor and its performance; contract details including scope of work, contract values, timelines, performance guarantees, events of default, force majeure, AMC cover.
- Review of compliance of EHSS norms as per the format given in operations manual.
- Sources of funding brought in by project proponent/developer other than bank loan, analysis of incentives by state and centre; project specific financial model.
- Financial assessment of project proponent including financial statements for past three years, shareholding pattern and capital structure, qualification and experience of Board of Director, track record of promoters in setting up of similar projects, financial risk and mitigation analysis.
- Off-taker risk assessment to understand viability of project and determine credit worthiness of the off-taker.

Appraisal during Sanction & Disbursement

In the loan sanctioning stage, the sanctioning authority conducts the appraisal of proposal before sanctioning the credit facility to the project proponent. Following steps are followed for appraisal and subsequent sanction of loan

- Review the draft proposal along with the back-up details/notes/third party consultant report, and the borrower's application, financial statements and other reports/documents examined by the appraiser/banker.
- Perusal of the financials documents of the proponent including balance sheet, operating statement, ratio analysis, fund flow statement, working capital assessment, project cost & sources, break even analysis, debt service/security cover, etc.
- Project documents including PPA agreement, rooftop rent agreement, lease agreement, loan agreements, security trustee agreement, TRA agreement, indenture of mortgage and/ or deed of hypothecation.

Post Sanction appraisal

The post-sanction appraisal process can be broadly classified into three stages viz., follow-up, supervision and monitoring, which together facilitate ensuring an efficient and effective credit management and maintaining high level of assets standard. Following are the processes followed by bankers for post sanction appraisal,

- Bankers ensure the compliance of EHSS requirements for the Program during installation and operation of each individual project as per the checklist provided in the operation manual.
- Undertake supervision activities as per SBI's guidelines by effective follow up and ensure that the asset quality maintained by identify early warning signs and undertake proactive remedial actions.

- Monitoring the asset by conducting periodic appraisal and ensuring standard operating procedures being followed by all the stakeholders

4.2 Review of Loan Documents

As a part of this assignment, a review of the loan documents for the projects was conducted at above mentioned SBI branches. The documents consisted of following, among others,

- Loan agreement (RESCO or CAPEX as applicable)
- Installation and commissioning agreement
- Supplier agreement
- Operations and maintenance agreement
- Power purchase agreement
- Chartered Accountant report
- Lenders Independent Engineers report
- Bank annual inspection report

Observations

- It was observed that the loan documents were prepared as per the guidelines stated in the Project Operations Manual.
- The borrower loan agreement had following undertakings related to EHSS,
 - An undertaking from the proponent that they will ensure that personnel deployed for Installation/O&M has basic knowledge about first aid and fire- fighting instruments
 - An undertaking from the proponent that they will ensure compliance of applicable Minimum Wages Act.
 - An undertaking from proponent they will ensure that all personnel deployed for Installation/O&M personnel will be covered with workmen compensation insurance policy and are provided with benefits of any other applicable acts.
 - An undertaking from the proponent that they will either enter into a take back arrangement for the panels with solar manufacturer or will dispose the panel as per applicable local law for discarding such hazardous waste.
 - An undertaking, if applicable from the proponent that they will ensure compliance of requirement under the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.
 - An undertaking, if applicable from the proponent that they will ensure compliance of requirement under Indian Electricity Act 2003 and Rules 1956 amended to 2000
- The loan agreement was compliant with the World Banks Anti-corruption guidelines and the necessary clauses were also included in the contract.
- The loan agreement had clauses compliant with the law against sexual harassment of women among participating developers/aggregators.
- The borrowers' financial statements were duly audited by an independent auditor, in accordance with consistently applied auditing principles/standards applicable in India, and the auditor's report and certificate were provided at pre-sanction stage, along with other documents.

- The techno-commercial feasibility report submitted by the project proponent during pre-sanctioning stage had following details
 - Details of site including energy requirement, cost-benefit analysis of installing SPV system, details of rooftop including shadow free area, roofing material, structural strength and load bearing capacity, access to the rooftop, availability of water etc.
 - Project design and software simulation of solar resource assessment and energy yield study to determine solar irradiance, potential energy generation, CUF (AC/DC), losses etc.
 - Shadow analysis to determine the effect of future development in the vicinity of the proposed installation.
 - Technical details of components to be used such as PV modules, inverters, earthing, AC/DC combiner boxes, SLD, wiring layout etc.
 - Procurement and implementation plan including detailed timelines of implementation.
 - Project capital cost with cost-breakup for individual components, escalation costs, average cost/watt, Levelized cost of energy generation, other costs, etc.
 - Detailed project specific financial model to assess financial and economic viability of the project.
 - Analysis of regulatory aspects and other risks that may affect project implementation, financials and operation of project.
- The Supplier agreement/contract contained the details of the supplied equipment (PV modules, inverters etc.), supplier credentials, general terms and conditions on equipment condition, performance guarantees, timelines, adequacy of liquidated damages, events of default, force majeure etc.
- The Operations & Maintenance agreement contained the details of O&M plan, contract values, timelines, performance guarantees, events of default, force majeure etc.
- The power purchase agreement detailed out the sanctioned demand, contracted demand, power factor, transformer capacity, consumption voltage etc. of the end user. It also mentioned about the tariff details, billing modalities, payment terms, metering arrangement, contract tenor, tariff escalation, dispute resolution, force-majeure and outage terms, clauses for termination of PPA etc.

4.3 Gaps Identified

- SBI's relationship managers (RM) conduct appraisals and annual inspections of borrowers' plant installation site. The PAD recommends use of generic guidance checklist for addressing EHS requirements for project appraisal and periodic monitoring of the GRPV. But, the inspection report format followed by RMs do not contain EHS related specific checklist and that it lacked on several important EHS aspects.
- There is no procedure of second level verification of the due-diligence processes, followed by RMs, pertaining to EGS clauses and arrangements, followed at individual branches.
- LIEs are not apprised adequately about the EHSS clauses and checklist to be followed during technical due-diligence and site assessment.

- No process and procedures are defined in the Operations manual for bankers to follow for reimbursement mode loans. In reimbursement mode of loan, the borrower avails the loan facility for already commissioned solar plants.

4.4 Recommendations

- Inspection/appraisal report of bankers should be upgraded and the EHSS checklist should be included in the report. A sample format for EHSS checklist is mentioned in Annexure II.
- In some cases, it was observed that the RMs were not aware of the operations manual designed specifically for the GRPV program. Thus, it should be ensured that all RMs, who are managing the rooftop solar portfolio, are aware of the operations manual and have a copy for reference.
- The ESG due-diligence process needs to be strengthened further at each branch level. It is recommended to set up a second level due-diligence process of the prepared documentations, pertaining to EHSS requirements, to be undertaken by branch senior official or branch manager.
- We recommend establishing a central committee for monitoring the EHSS requirements of all the loan documents. This committee can also function in building capacity of individual SBI branches and assist them in evaluating the EHSS clauses in the project documents.
- In case of any gaps identified in the EHSS requirements during the appraisal process, the banker should inform the same to the central committee and seek resolution to mitigate the identified gaps.
- RMs should sensitize LIE, borrower and other stakeholders about the EHSS requirements. This can be undertaken by conducting a short training program and circulating the EHSS training material.
- A detailed EHSS due diligence needs to be defined for reimbursement mode of loan. For this mode of loan, EHSS criteria and checklist for pre-sanction and post sanction should be updated.
- For seamless management of appraisal processes and periodic site visits, we recommend implementation of loan document management system, which is an integrated and comprehensive system to manage all the loan appraisal processes and provides transparency to the higher management and all the stakeholders.

4.5 Digital Intervention

Loan processing is very critical and time intensive process that requires extensive communication with internal teams and external stakeholders. Moreover, the review of loan documentation revealed irregularities while reproducing documents for audit purposes. Thus, to streamline core processes of banks, enable smooth processing of documents, identify warning signs in complying with regulation and guidelines, and maintain transparency in the system, we recommend implementation of loan document management system. This system will not only have financial benefits by reducing the transaction cost but also save resources in manual processing documents, provide better experience to customers by efficiently processing documents and thereby reducing time, scrutinize regulatory and business rules

compliance and documents. Moreover, the electronic audit trail feature of the system enhances and streamlines the auditing of the loan documentation. The escalation protocol makes it easier for the banker to raise concerns over non-compliance of any EHSS and other requirements to concerned higher authorities. Following are the features of a typical loan document management system,

- Borrower information management
- Loan document collection and validation
- Pre-sanction and post sanction compliance check
- Periodic auditing
- Report formatting and generation
- Second and third level Due-diligence
- Fraud detection
- Issue escalation
- Exception handling

The system will be beneficial in maintaining data integrity and confidentiality, ensuring checks on loan terms, rates, and other data as per lending rules and regulations, tracking document maintaining history, and sharing the monitoring reports and apprising the EHSS requirement to a central authority and seek clarification on non-compliance clauses.

5 Review of LIE processes and Training Material

5.1 Review of LIE Assessment process

The Environmental and Social Systems Assessment (ESSA) undertaken by the World Bank states that for projects valued at INR1 billion or above, or individual sub-loans of INR 500 million or above, SBI will engage an external Lender's Independent Engineer, whereas for projects below this level, SBI branch staff will carry out the ESSA screening function. But it was noticed that except for one branch (SBI, SME Branch, Mayapuri, Delhi), all other branches had appointed LIE for technical due diligence of the projects, irrespective of project value or SBI's exposure. It was also observed that all the LIEs followed a similar approach for conducting the technical due diligence. In general, the assessment is carried in two phases,

1. Phase 1: Prior to Loan Disbursement post the Date of Commencement of Commercial Operation (DCCO)
2. Phase – 2: Post Loan Disbursement

LIE due diligence process

- Site assessment – assessment of plant and rooftop area – SBI appointed LIE conducts a thorough site inspection to examine the operational and physical condition of the plant including modules, wiring, components, and rooftop area. LIE also performs technical inspection of electrical parameters of inverters, solar modules battery (if any) etc. The main aim of site assessment is to assess crucial aspects of GRPV system that can have significant impact on the generation and project cost. Following is the list of features that are assessed by LIE,
 - Solar resource
 - Local climate
 - Available area & Land use
 - Topography & Geotechnical
 - Accessibility
 - Grid connection
 - Water availability
 - Temperature Profile
 - Rainfall Profile
 - Rooftop Area
- Solar resource and energy yield analysis – In this step, the solar resources such as irradiation, precipitation etc. are analysed. The irradiation data can be obtained from ground-mounted weather stations or from satellite data. In this analysis, a comparative analysis of Project Proponent's and LIE's irradiation information and assumptions are carried out and mean variations in the values is calculated.
- Analysis of energy generation data – Independent energy yield analysis is conducted by LIE using their proprietary software tools. Energy generation scenarios are modelled and CUF for AC and DC are calculated. Various uncertainty scenarios are factored in the simulation and energy generation at different probabilities are estimated.
- Review of Plant design documents such etc – LIE conducts a review of the as-built drawings of major plant components as array layout, wiring layout, as provided by the project proponent and observations of the LIE post review are recorded.
- Review of ESSA compliances – At this juncture, LIE conduct ESG compliance as per the checklist provided by SBI.

- Review of technical aspects of Grid interconnection – LIE conducts assessment of engagements of grid interconnection such as safety and anti-islanding, CIG approval and other necessary permissions and certifications from DISCOMs
- Review of financial assumptions and risk assessment – LIE undertakes assessment of financial modelling, associated costs and assumptions calculated by project proponent to arrive at project costing. LIE then computes the project costing based on above findings and assumptions and cross verifies both the costings.

5.2 Observations

- The ESSA compliance assessment is as per the checklist provided in the Program Operational Manual (POM). Following compliances are reviewed by LIE in their assessment,
 - Consent to establish from state pollution control board
 - Permissions from competent authority for periodic pruning/cutting of trees
 - Safe access to rooftop
 - Permission and arrangement for water requirement of project
 - Structural consistency and safety
 - Consent to operate from state pollution control board
 - Owner's permission to access the site
 - CEIG certification stating safe installation of the plant
 - Availability of Safety provision like rubber mats, fire extinguisher, first aid box etc.
 - Personal Protective Equipment for workmen available at site
 - Installation and O&M personnel have basic first-aid and fire extinguishing training
 - O&M personnel are covered under workmen compensation insurance policy, EPF Act, Gratuity Act etc
- Out of six, only three SBI branches had appointed LIE for conducting technical and ESG due diligence.
- The PAD recommended that the LIE's scope of work should include monitoring of applicable EHS norms, and the same was observed in all the reviewed LIE reports.

5.3 Gaps Identified

- Only one LIE report included the EHSS checklist as mentioned in the POM, while others had included only few points such as availability of safety provisions, protective equipment for workmen, O&M personnel compensation etc. from the checklist.
- As opposed to the recommendation in PAD, the LIE assessment was not conducted during the construction phase, but only after the installation and commissioning of the plant.
- In various cases, the LIEs were not apprised about the EHSS checklist by bankers and the checklist was not provided to LIE.

5.4 Review of training material to SBI officials

Under SUPRABHA TA program, several training programs were conducted for various stakeholders such as Bankers, Utility engineers, entrepreneurs on the technical, operational and financial topics related to grid connected solar rooftop installation, commissioning and maintenance. The training also covered topics related to Environment, Health, Safety and

Social guidelines for bankers to sensitize them about the environmental and social aspects related to installation of GRPV systems and to apprise them about the procedures and checklist to be followed during pre-sanction and post-sanction stage of loan processing. A thorough review of the training material was undertaken and it was observed that the training material was comprehensive and covered all the topics related to environment, social, health and safety related to the grid connected solar rooftop installations. The training material contained following topics

- Introduction to safeguard policies, objectives of safeguard policies and international institutions that have implemented such policies.
- IFC's sustainability policies emphasizing the importance of sustainable development as an approach to risk mitigation. IFC's sustainability framework and the eight Performance Standards were discussed in detail with the definition and objectives of each performance standard.
- A brief overview of grid connected rooftop solar program including current status and barriers in the implementation of GRPV.
- The World Bank's country partnership strategy and the benefits of WB Program-for-Results instrument for addressing the barriers in the GRPV implementation.
- Best Practices, technical standards & safety specifications in Rooftop Solar Installation along with mechanical and workmanship aspects.
- The need and objectives of environment and social systems assessment as per the requirement of PforR instrument.
- Environment, health, safety clauses and social impact pertaining to the GRPV installations.
- Applicable legal and regulatory framework on social and environmental policies governing the program
- EHSS guidelines and checklist to be followed during pre-sanction and post-sanction stages of loan disbursement.

5.5 Recommendations

- The LIE inspection should also be conducted during the construction phase of the solar plant. In cases where LIE is not appointed, the bank staff should inspect the site during the construction phase, as per ESSA.
- The LIE inspection report covered all the technical aspects of the plant, but a clear mention of EHSS checklist was missing in many reports. Thus, we recommend that the LIE report should include detailed EHSS assessment, including EHSS checklist. The bank personnel should provide the checklist on time and ensure that the LIE report includes detailed EHSS assessment.
- It is also recommended that the RMs should sensitize LIE, borrower and other stakeholders about the EHSS requirements. This can be undertaken by conducting a short training program and circulating the EHSS training material.

6 Review of Ground mounted systems

The utility scale ground mounted solar power plants bear a resemblance with the ground mounted rooftop solar systems that are installed within the premises of the rooftop plant site. Though, the designing and construction phases of utility scale plants are very complex and take significant amount of time when compared to rooftop solar systems, the operations and maintenance aspects of both the systems are similar. Also, the O&M phase is by far the longest in the lifecycle if any solar plant. Thus, the best practices of operations and maintenance of a utility scale ground mounted systems were analysed with the view of implement the same in ground mounted rooftop solar systems.

Operation & Maintenance activities increases the efficiency of system and ensures that it will maintain high levels of technical and economic performance over its lifetime. O&M services mitigates the potential risks, improve the levelized cost of electricity (LCOE) and positively impact the return on investments. A detailed desk based review of best practices in operations & maintenance of ground mounted solar plants was conducted. Following are the current best practices followed globally,

- Periodic monitoring of plant by O&M contractor and setting KPI's for plant, equipment etc. in the contract. A periodic report generated should include information on raw data parameters such as total energy produced, PV power plant KPIs such as Performance ratio or availability, O&M Contractor KPIs such as the response time, Equipment KPIs and incidents.
- The operation of the PV plant should comply with national and local regulations and contracts. Countries with strict legal requirements for security services, PV power plant security should be ensured by specialised security service providers.
- The PV plant maintenance should be carried out by a team of specialized technicians. Annual maintenance plan with activities and specific timelines are set well in advance. Preventive Maintenance that involves regular site inspections, as well as verification activities necessary to comply with the operating manuals are undertaken. Corrective maintenance activities are aimed at restoring a faulty PV plant, equipment or component to desired performance level.
- Revamping and repowering of plant plays a significant role in delivering consistent output throughout the life of the power plant. It is done by replacing old and worn out power production related components within a power plant by new components to enhance the overall performance of the installation.
- Spare part management ensures the availability of components in a timely manner for Corrective Maintenance to minimise the downtime of a solar PV plant. As a best practice, the owner/developer should own the spare parts and the cost of replenishment should not be included in the O&M contractor fee.
- Effective data monitoring frameworks should be in place, which includes data loggers that can collect, aggregate and store the data such as energy generated, irradiance, module temperature, etc. of all relevant components such as inverters, energy meters, pyranometers, temperature sensors etc, It should be able to store at least one month of data with a granularity of up to 15 minutes or less depending on the requirement. A visualization of the collected data will enable in monitoring the KPIs of the plant.
- The KPIs for O&M should also include acknowledgement time of an incident (the time between the alarm and the acknowledgement), intervention time (the time between

acknowledgement and technician reaching plant) and resolution time (the time to resolve the fault starting from the moment of reaching the PV plant).

- The Global Solar Energy Standardisation initiative recommends use of availability and response time guarantee along with performance ratio guarantees. A best practice is a minimum guaranteed availability of 98% over a year.
- Innovative techniques such as Smart PV power plant monitoring and data-driven O&M, retrofit coatings for PV modules, and O&M for PV power plants with storage are setting new trends in the PV market.

Recommendations

Though the ground mounted utility scale and rooftop solar systems have different scale and work environment and conditions, and design considerations, one can draw various attributes from the best practices of installations and O&M of a utility scale ground mounted system. We recommend adoption of following practices for the ground mounted rooftop plant,

- Installation of wire mesh fence to protect solar installation within the premises from unauthorized access.
- To avoid disruptions to the business processes, it is imperative to exercise caution during to the designing of the plant. Also, the design should ensure spacing between modules and provide access to the O&M personnel for module servicing and cleaning.
- The cables should be buried at a suitable depth (generally between 50cm and 100cm) with warning tape or tiles placed above and marking posts at suitable intervals on the surface for O&M personnel to locate.
- Qualified personnel should always work in teams of two people when working on live equipment, and there should always be at least two qualified persons trained in cardiopulmonary resuscitation on the site while carrying maintenance activities.
- Performance data monitoring of the systems should be mandatory task for the O&M contractor and related clauses to be amended in the O&M contract as well.
- The KPIs for O&M contractor should be explicitly defined in the O&M contract.
- Availability and response time guarantee clauses, along with performance ratio guarantees should be included in the contract/agreement.
- To facilitate a rapid response, a suitable quantity of spare parts should be stocked at site in a secure location.

Assessment of implementation of recommendations provided in ESSA

Recommendation in PAD	Compliance Assessment	Remarks
Land, if any is required, (e.g. for constructing overhead mounted panels such as in a covered parking lot etc.) should already be in possession, with clear title at loan approval or pre-disbursement stage. Also, screening will be undertaken on such lands to assess adverse impacts, if any, and in case the land is encroached or encumbered, the site will not be considered for the sub-project.	Compliant	Land ownership is verified during pre-disbursement or approval stage
Loan approval conditions should stipulate that verification of the title deed and execution of a rooftop lease/rent agreement, wherever applicable, should be a pre-condition to disbursement.	Compliant	Condition mentioned in the Loan approval agreement
It should be confirmed that the roofing material does not include carcinogenic material such as asbestos.	Compliant	Verified during Bankers annual assessment and LIE assessment
A generic guidance checklist for addressing the EHS requirements of the GRPV Program will be used for appraisal and periodic monitoring during installation and operation. An additional guidance checklist for compliance will also be used, to enable GRPV developers to understand the EHS requirements of the GRPV Program and comply accordingly.	Partly Compliant	Checklist used during appraisal but not during periodic monitoring
The Lender's Independent Engineer's scope of work should include monitoring of applicable EHS norms including fire safety clearance on the project site during construction and post-commissioning, until three months after the commissioning and operations date.	Partly Compliant	LIE's scope includes monitoring EHS norms, but complete EHSS checklist not provided
In case of default on EHS requirements, SBI would need to agree on a time-bound risk mitigation and "restoration of compliance" plan with the sub-borrower, and if the non-compliance status is not reversed, it may lead to a huge penalty or need for prepayment of the facility.	Compliant	EHS requirements were met by sub-borrower
Facilitate operationalizing compliance with the law against sexual harassment of women among participating aggregators.	Compliant	SBI has put in place a policy for the Prevention of Sexual Harassment (POSH) at work place

7 Conclusion

SBI has in place a rigorous environment and social management framework to manage and mitigate the environmental and social risks of investment projects. The framework helps in selecting suitable investment projects that are environmentally friendly and have minimum social impact. The Bank also has stringent governance structure that strengthens relations with external stakeholders as well as internal stakeholders, and ensure overall accountability. The internal governance policies and procedures help in providing equal opportunities to its employees, ensure diversity and provide healthy and safe working environment. SBI maintains a zero-tolerance policy against sexual harassment at workplace and has put in place a policy for the Prevention of Sexual Harassment (POSH) at work place. SBI is committed towards reducing environmental footprints of its operational activities and has taken various steps to be carbon neutral, energy efficient bank. The CSR initiatives are focused in the areas such as Education, Healthcare, Sanitation, Skill Development, Disability, Environment, Sports and Culture.

From the review of loan documentation, it can be concluded that the loan documents were prepared as per the guidelines stated in the Project Operation Manual. As recommended in the Project Appraisal Document by the World Bank, the clauses related to Anti-corruption and law against sexual harassment were included in the loan agreement. The inspection by the bank staff ensured compliances for takeback arrangement of panels after end of use and that the roofing material does not include any carcinogenic material such as asbestos. The inspection/appraisal report of bankers should be upgraded to include EHSS checklist in the report.

As recommended in the PAD, the LIE's scope of work included monitoring of applicable EHS norms, but as opposed to the recommendation, the LIE inspection is conducted only after installation and commissioning of the plant. Moreover, the inspection report did not clearly mention the EHSS checklist. Thus, as recommended, the LIE report should include detailed EHSS assessment, including EHSS checklist. Some of the best practices of ground mounted system, such as inclusion of availability and response time guarantee clauses in the O&M contract, mandatory installation of data monitoring system for performance management, defining KPIs for O&M contractor, can be adopted in the rooftop solar systems.

Annexure I

SBI Environmental and Social Governance (ESG) review				
SR. NO.	QUESTIONS	YES/ NO	DISCLOSURE	DETAILS
1	Governance			
1.1	Governing Structure			
a.	Is there a governing structure in place to manage Environmental and Social issues across your unit and its operations? If Yes, Please Elaborate			
b.	How is diversity taken into consideration in unit operations? (Gender/ Regions/ Backgrounds)			
c.	Is there a grievance redressal mechanism in place? If yes, please elaborate.			
d.	What other committees are in place eg: Risk, Audit, ESG, sustainability?			
1.2	Ethics and vision			
a.	Does your unit have vision document taking into account environmental aspects?			
b.	If yes, how does it get reported?			
c.	A code of ethics that the unit follows or parent company ethics?			
d.	How does the code of ethics get communicated to employees? Is it covered in the Employee handbook?			
1.3	Code of conduct -			
a.	Does the code of conduct have any aspects of ESG? If yes, how is it implemented and monitored?			
2	ESG -Governance:			
a.	Does the SBI unit have separate standalone ESG policy? How is it in line with the project ESSA?			
b.	Has the SBI unit developed an ESG improvement programme/plans?			
c.	Does the SBI unit have details of ESG standards and applied certifications? EHS guidelines, ILO standards, G4 sustainability reporting?			
d.	Are ESG systems reviewed or audited either internally or externally? If yes please mention the frequency			
e.	Are these results reported back to the board and addressed?			
3	ESG - Environment			
a.	Does SBI have an environmental policy which sets out clear commitments and targets?			
b.	Does these also cover sustainability issues relevant to the unit?			

SBI Environmental and Social Governance (ESG) review				
SR. NO.	QUESTIONS	YES/ NO	DISCLOSURE	DETAILS
c.	Does the SBI unit have an environmental risk and opportunity assessment? if yes please provide key details			
d.	Provide details of key environmental permits /licence/clearances/consents?			
e.	Disclosure of EIA Reports of your operational site?			
3.1	Hazardous waste disposal			
a.	Describe any hazardous chemical or product used on site?			
b.	Describe its management initiative taken for disposal?			
c.	Is the unit considering use of safer raw materials and elimination of hazardous material /			
3.2	Other Environmental initiatives reported			
a.	Any other environmental protection activity taken care within the unit or for locals support?			
b.	Any environmental initiative taken under CSR?			
4	ESG - Social			
4.1	Gender			
a.				
b.	Does the unit have a gender grievance redressal system consistent with Gol's Vishakha guidelines?			
c.	If yes, how was the awareness created and guidelines communicated?			
d.	If yes, was a Complaint committee constituted at the workplace?			
e.	How did the unit ensure that the Complaints Committee has both the skill and capacity to carry out their functions?			
f.	How did the unit widely publicize names and contact details of Complaints Committee members?			
4.2	Health and Safety			
a.	Does the unit have H&S policy signed by CEO or equivalent?			
b.	Disclosure of H&S risk register and its review on regular basis?			
c.	Disclosure of organizational structure and management responsibilities for implementing the H&S policy?			
d.	Has the management certified by third party? Disclose overview			
e.	Does the unit have formal process for undertaking workplace risk assessment,			

SBI Environmental and Social Governance (ESG) review				
SR. NO.	QUESTIONS	YES/ NO	DISCLOSURE	DETAILS
	providing training and communication to employees, and conducting audits?			
4.3	Stakeholder relationship			
a.	Does the unit have stakeholder (Customer /suppliers) management and relationship ethics policy? if yes please provide details and key feature			
4.4	Social responsibility initiatives			
a.	Does the unit have any social wellbeing association with any NGO or association that works for social well-being?			
b.	Any CSR involvement?			
4.5	Enforcement			
a.	Has the SBI unit been subject to enforcement action by regulators for breaches of relevant EH&S legislation in the last three years? Provide detail of enforcement actions taken			
4.6	Incidents/Accidents			
a.	Does the unit monitor Incident/accident?			
b.	If yes please provide the breakdown statistics for last three years, including near misses, no. of lost days, frequency etc. and response mechanism.			
4.7	Anti-discriminatory policy			
a.	Do you have a policy that supports anti-discrimination? if so please specify key feature of the policy			
4.8	Diversity policy			
a.	Does SBI have a policy that supports diversity and equal opportunity?			
b.	Do you have breakthrough statistics of employee diversity and new recruitments for last three years supporting the policy?			
4.8	Certificate and standards			
a.	Has SBI implemented ESG related systems OHSAS 18001			
	Review of ESSA and Operational Manual			
	Review of ESSA compliance checklists			
	Review of loan documentations			

SBI Environmental and Social Governance (ESG) review				
SR. NO.	QUESTIONS	YES/ NO	DISCLOSURE	DETAILS
SANCTION STAGE				
1.	Whether the validity of Consent to Establish from SPCB checked?			
2.	Whether the validity of permissions obtained from competent authorities for periodic lopping/pruning of trees checked?			
3.	Whether the lease agreement/draft lease agreement /title deed/right to use for establishing clear rights over the roof for installation and operations verified?			
4.	In case of Rented roof, whether the details of alternative safe access along with the permission from owner sought?			
5.	Whether the details of water requirements and its sources along with required permissions from competent authorities sought from borrower?			
6.	Whether a structural safety and roof condition certificate from a certified/approved Chartered Engineer / Architect/ Competent person along with an action plan for rectifications and responsibilities sought form borrower?			
7.	Whether the details of valid certifications/ recognitions/ accreditation(s) that give an indication of institutional capacity of the applicant to meet EHS requirements sought from borrower?			
8.	Whether the details of arrangements made for safe lifting of the materials to roof top through existing staircase or temporary/ permanent external access sought?			
9.	Whether the details of safety measures/ provisions such as rubber mats, electric shock chart, first aid box, fire extinguishers to handle all types of fire sought?			
10	Whether an undertaking from the applicant that they will ensure that O & M personnel has basic knowledge about first aid and fire- fighting instruments obtained?			
11	Whether an undertaking from the applicant that they will ensure compliance of applicable Minimum Wages Act obtained?			
12	Whether an undertaking from the applicant, that they will ensure that all O & M personnel will be covered by the workmen compensation insurance policy and are provided with the benefits of any other applicant, obtained?			

SBI Environmental and Social Governance (ESG) review				
SR. NO.	QUESTIONS	YES/ NO	DISCLOSURE	DETAILS
POST SANCTION STAGE				
1.	Whether compliance with CTE conditions by borrower through periodic monitoring (till COD) reviewed?			
2.	Whether compliance to permissions for looping and pruning of trees, if any, by proponent through site inspections by Independent Engineer or Bank's staff reviewed?			
3.	Whether the safety of the alternate access to roof assessed through site inspections by Independent Engineer or Bank's staff reviewed?			
4.	Whether the adequacy of water arrangements through monitoring by Independent Engineer or Bank's staff reviewed?			
5.	Whether the adequacy of structural safety of the building, through monitoring by Independent Engineer or Bank's staff reviewed?			
6.	Whether the validity of Consent to Operate reviewed?			
7.	Whether an undertaking from the proponent for compliance of take back arrangement obtained?			
8.	Whether the details of DG set funded under the project, confirm installed and precautions considered for avoiding backflow of current to DG set from solar panels/grid supply sought?			
9.	Whether the certification from Chief Electrical Inspector to Government, obtained?			
10	Whether adequacy of the safety provisions including exit routes provided and procedures followed during site inspections and monitoring by Independent Engineer or Bank's staff, reviewed?			
11	Whether the compliance of basic training in first aid and fire-fighting to all O&M personnel reviewed?			
12	Whether the compliance of minimum wages, as per applicable Minimum Wages Act, to all O&M personnel reviewed?			
13	Whether adequacy of insurances to be checked by LIA or Bank's staff reviewed?			
14	Whether the Standard Operating Procedures (SOPs) are followed and regulatory permissions obtained for recycling and /or disposal under Hazardous Substances?			

Annexure II - EHSS implementation Guide

1. Process to be followed during Pre-sanction stage

At this stage, the RMs should take following undertakings from the project proponent/applicant on the loan documents

- An undertaking from the proponent that they will ensure that the land shall be acquired, for installation of plant or other equipment, through bilateral negotiation.
- An undertaking, if applicable, from the proponent that they will acquire the right to access roof through existing staircase/external staircase on a 24X365 basis.
- An undertaking from the proponent that they will ensure all safety provisions like provision of rubber mats, electric shock chart, first aid box, fire extinguishers to handle all types of fire (ABC type of required capacity), sand buckets will be installed at site.
- An undertaking from the proponent that they will ensure that personnel deployed for Installation/O&M has basic knowledge about first aid and fire-fighting instruments
- An undertaking from the proponent that they will ensure compliance of applicable Minimum Wages Act.
- An undertaking from proponent they will ensure that all personnel deployed for Installation/O&M personnel will be covered with workmen compensation insurance policy and are provided with benefits of any other applicable acts.
- An undertaking from the proponent that they will either enter into a take back arrangement for the panels with solar manufacturer or will dispose the panel as per applicable local law for discarding such hazardous waste.
- An undertaking, if applicable, from the proponent that they will ensure compliance of requirement under the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.
- An undertaking, if applicable, from the proponent that they will ensure compliance of requirement under Indian Electricity Act 2003 and Rules 1956 amended to 2000.
- An undertaking, if applicable, from the proponent that they will obtain an authorization from the State Pollution Control Board for, lube and or transformer oils etc during installation and operation phases
- An undertaking, if applicable, from the proponent that they will obtain permission of local self-government bodies for disposal of construction spoil and debris.
- An undertaking, if applicable, from the proponent that they will ensure that Standard Operating Procedures (SOPs) are followed and regulatory permissions for recycling and /or disposal under Hazardous Substances Rules complied.

Following document should be collected from the project proponent

- A lease agreement/rent agreement with the property owner clearly detailing roof rights with the developer for the entire life of the project.
- PPA with DISCOMs, Letter of Approval from DISOCM, CEIG approval etc.
- A copy of the insurances taken for the personnel.
- A copy of letter of Consent to Establish (CTE) form State pollution control board, if required.

- A copy of the permissions from competent authority for lopping/pruning of trees, if required.
- A copy of the certificate for structural safety of the building issued by a competent.
- A copy of accreditation of ISO 14000, OHSAS 18001, if available.

2. Process to be followed during Post-sanction stage

The banker/LIE should adhere to following checklist during periodic monitoring of the installation site

POST SANCTION STAGE CHECKLIST			
Sr. No		Document Verified (Yes /No)	Remarks
1.	Whether proposal require Consent to Establish? If Yes, verify the CTE from State Pollution Control Board.		
2.	Whether looping and pruning of trees required? If yes, verify the permissions obtained from component authority.		
3.	Whether roof rights have been secured? If yes, verify the compliance document		
4.	Whether the safe access or alternate access to roof provided?		
5.	Whether the water arrangements adequate for servicing/cleaning the modules?		
6.	Whether the structural safety of the building, present condition of roof drainage adequate?		
7.	Whether proposal require Consent to Operate? If Yes, verify the CTO from State Pollution Control Board.		
8.	Whether an undertaking from the proponent for compliance of take back arrangement obtained?		
9.	Whether the certification from Chief Electrical Inspector to Government, obtained? If yes, verify the certificate.		
10	Whether the safety provisions including safety wear like boots, hard hats(helmets), gloves, safety belts exit routes adequate?		

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11	Whether basic training in first aid and fire-fighting to all O&M personnel provided?		
12	Whether minimum wages, as per applicable Minimum Wages Act, to all O&M personnel are paid?		
13	Whether all personnel deployed for Installation / O & M are covered under workmen compensation insurance policy, EPF Act, Gratuity Act etc.? If yes, verify the relevant documents.		
14	Whether the Standard Operating Procedures (SOPs) are followed and regulatory permissions obtained for recycling and /or disposal under Hazardous Substances?		

