

Project Administration Manual

Project Number: 50373-002
Loan Number: LXXXX; TXXXX
September 2017

Democratic Socialist Republic of Sri Lanka: Rooftop
Solar Power Generation Project

ABBREVIATIONS

ADB	–	Asian Development Bank
CEB	–	Ceylon Electricity Board
DFD	–	Development Finance Department
LDH	–	Loan Disbursement Handbook
LECO	–	Lanka Electricity Company Limited
MOFMM	–	Ministry of Finance and Mass Media
MPRE	–	Ministry of Power and Renewable Energy
MW	–	megawatt
PAM	–	project administration manual
PFI	–	participating financial institution
PIU	–	project implementation unit
PMU	–	project management unit
RSPGP	–	Rooftop Solar Power Generation Project
SLR	–	Sri Lanka rupee
SLSEA	–	Sri Lanka Sustainable Energy Authority
SOE	–	statement of expenditure
TA	–	technical assistance

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Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with the policies and procedures of the government and Asian Development Bank (ADB). The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Ministry of Finance and Mass Media is wholly responsible for the implementation of ADB-financed projects, as agreed jointly between the borrower and ADB, and in accordance with the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation including compliance by the Ministry of Finance and Mass Media of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At loan negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the loan agreement. Such agreement shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and the loan agreement, the provisions of the loan agreement shall prevail.

After ADB Board approval of the project's report and recommendations of the President, changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval, they will be subsequently incorporated in the PAM.

I. PROJECT DESCRIPTION

1. Under the Rooftop Solar Power Generation Project (RSPGP), Asian Development Bank (ADB) will provide \$50 million to the Government of Sri Lanka.¹ This fund will be passed on to the Ministry of Finance and Mass Media (MOFMM), which will provide the equivalent Sri Lanka rupee (SLR) through participating financial institutions (PFIs), such as public and private sector banking institutions, for financing qualified rooftop solar systems in Sri Lanka. The RSPGP will help create bankable rooftop solar projects on a pilot basis to catalyze greater private sector finance over the long-term. This will help mainstream renewable energy development, enhance power generation capacity, and improve the environmental conditions in the country. A transaction technical assistance (TA) for Implementation Support to the Rooftop Solar Power Generation Project in the amount of \$1.0 million will be financed on a grant basis by the Asian Clean Energy Fund² under the Clean Energy Financing Partnership Facility to support ADB loan's implementation.

2. The project will be aligned with the following impact: access to clean and reliable power supply in Sri Lanka increased by 2025 (*Sri Lanka Energy Sector Development Plan for a Knowledge Based Economy 2015–2025*).³ The project will have the following outcome: clean power generation enhanced.⁴

3. The project has the following outputs.

4. **Output 1: Debt funding for the rooftop solar power generation increased.** This includes financing of rooftop solar subprojects equivalent to additional 50 megawatts (MW) of capacity utilizing a \$50 million loan and \$9.8 million leveraged from private sector that would result in 55,600 tons of carbon dioxide emissions avoided per year.⁵

5. **Output 2: Rooftop solar market infrastructure and bankable subproject pipeline developed.** This includes (i) selection of PFIs for handling debt funding of commercial and domestic sector rooftop solar systems; (ii) development of pipeline of bankable subprojects for total 50 MW of capacity; and (iii) establishment of project technical guidelines and standards to be followed by borrowers, vendors and accredited engineers.

6. **Output 3: Capacity and awareness of stakeholders, including the Ministry of Finance and Mass Media, PFIs, commercial and domestic sector customers, increased.** This includes (i) capacity training and workshops to the MOFMM, PFIs, and developers, including at least 80 workshop participants (30% of them women), to improve knowledge on rooftop solar systems; (ii) awareness campaigns for stakeholders, including the MOFMM, PFIs, developers and others, and potential customers; and (iii) establishing and maintaining a comprehensive database of all installations including online technical performance information of selected rooftop solar photovoltaic systems by a project implementation unit to be established under the associated TA.

¹ This lending proposal is included in the 2017 program of ADB. 2017. *Country Operations Business Plan: Sri Lanka. 2018–2020*. Manila. The South Asia Department confirmed that such financial assistance can be accommodated for the 2017 resource envelope.

² Established by the Government of Japan.

³ Government of Sri Lanka. 2015. *Sri Lanka Energy Sector Development Plan for a Knowledge-Based Economy 2015–2025*. Colombo.

⁴ The design and monitoring framework is in Part IX. Performance Monitoring, Evaluation, Reporting and Communication.

⁵ The actual amount of equity contribution will depend on subproject credit risk and PFI's requirements.

II. IMPLEMENTATION PLAN

A. Project Readiness Activities

Table 1: Processing Plan (2017)

Indicative Activities	May	Jun	Jul	Aug	Sep	Oct	Nov	Responsible Unit
Technical verification	X	X	X	X				ADB
Subproject preparation	X	X	X	X	X	X	X	CEB, LECO and PFIs
Establish PMU at MOFMM			X					MOFMM
Establish PIU at SLSEA							X	ADB and SLSEA
ADB Board approval					X			ADB
Loan signing						X		ADB and MOFMM
Government legal opinion provided							X	MOFMM
Government budget inclusion							X	MOFMM
Loan effectiveness							X	ADB and MOFMM

ADB = Asian Development Bank, CEB = Ceylon Electricity Board, MOFMM = Ministry of Finance and Mass Media, LECO = Lanka Electricity Company Limited, PFI = participating financial institution, PIU = project implementation unit, PMU = project management unit, SLSEA = Sri Lanka Sustainable Energy Authority.

Sources: Asian Development Bank, Central Bank of Sri Lanka, Ministry of Power and Renewable Energy.

B. Overall Project Implementation Plan

7. The project will be implemented over a period of 4 years. The project is expected to be completed by 31 December 2021, and the loan is expected to be closed by 30 June 2022. The project implementation schedule is provided in Table 2.

Table 2: Project Implementation Plan

Description	2017				2018				2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Project Formulation																				
Loan Preparation and Signing				●																
Loan Effectiveness				●																
A. DMF																				
Output 1: Debt funding for the solar rooftop power generation increased.																				
1.1 Select participating financial institutions (PFIs)																				
1.2 Issue operating guidelines to PFIs																				
1.3 Initiate disbursement for approved connections																				
1.4 Disburse funds																				
Output 2: Solar rooftop market infrastructure and bankable subproject pipeline developed																				
2.1 Complete technical requirements and application templates for connection																				
2.2 Start processing applications and connection approvals																				
2.3 Finalize technical guidelines and standards																				
2.4 Initiate technical verification during pre-installation and post-installation																				
2.5 Initiate compilation and analysis of reports of technical shortcomings and failures																				
Output 3: Capacity and awareness of stakeholders																				
3.1 Conduct hands-on training and workshops to the implementing agency, PFIs																				
3.2 Conduct awareness campaign targeting developers, commercial and domestic customers																				
3.3 Establish and maintain a comprehensive monitoring database																				
B. Management Activities																				
Establish a project management unit in the MOFMM																				
Reviews																				
Project Completion Report																				

- Signing and Effectiveness
- Effectivity for the Entire Component
- Effectivity for the Specific Activity

DMF = design and monitoring framework, MOFMM = Ministry of Finance and Mass Media, PFI – participating financial institution, Q = quarter.
Sources: Asian Development Bank estimates.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations: Roles and Responsibilities

Table 3: Project Implementation Arrangements

Project Implementation Organizations	Management Roles and Responsibilities
Executing agency – MOFMM Implementing agency – DFD	<ul style="list-style-type: none"> • Manage overall project implementation in accordance with the ADB project agreement and this PAM, and in compliance with the applicable national policies, regulations, and guidelines; • Ensure adequate counterpart resources and strong cooperation with the ADB TA to implement the project; • Maintain close coordination with CEB, LECO, MPRE, and other relevant agencies to ensure smooth project implementation; • Establish and directly supervise the PMU to ensure smooth project implementation; and • Conduct diligent monitoring, review, and audit of the project activities to ensure compliances.
Project management unit (PMU) in DFD	<ul style="list-style-type: none"> • Develop any internal MOFMM processes and procedures in accordance with this PAM; • Recruit and/or place MOFMM staff; • Monitor and ensure that a PIU is established by SLSEA, with consultants funded by the ADB TA, to provide project implementation support; • Coordinate with the PIU established under ADB TA and relevant consultants in accordance with the implementation requirements of this PAM; • Establish the necessary bank account(s); • Follow the funds flow; • Work with CBSL Bank Supervision Department to ensure the integrity, financial performance, and other suitability of the candidate PFIs, if necessary; • Select PFIs in accordance with the MOFMM guidelines and in compliance with the ADB project agreement and this PAM; • Review PFIs' request for disbursement, reimbursement, and/or liquidation of ADB funds by ensuring compliance with subproject eligibilities as described in the project agreement and this PAM and the ADB Loan Disbursement Handbook (2017, as may be updated from time to time); • Manage the disbursement and/or reimbursement process through the preparation of ADB withdrawal application, estimate of expenditures, SOE statements, summary sheets, advance account reconciliation statements, and estimation of advance account turnover ratio, in line with the ADB Loan Disbursement Handbook (2017, as may be updated from time to time); • Monitor and encourage PFIs to develop subproject pipeline; • Manage the SLR funds to PFIs, including seeking refund at market interest rate, if such funds provided to PFIs are not otherwise properly utilized (para. 33); • Coordinate with CEB, LECO, SLSEA, and other relevant parties at the working level on any technical matter, including subproject technical review and approvals;

	<ul style="list-style-type: none"> • Provide feedback to ADB in case the implementation arrangements need revisits; • Maintain the PMU and implement the project by ensuring strong compliance and timely disbursement; • Ensure timely audit of the ADB program and funds utilization in using the attached sample audit letter and pro forma progress report; and • Serve as the Steering Committee secretariat to organize meeting and ensure continued communication among all stakeholders.
<p>Project steering committee – CEB, LECO, ERD and DNP of MNPEA, MOFMM (DDF, NBD, PED and TOD), DPMM, MPRE, PUCSL, SLSEA, and PFIs</p> <ul style="list-style-type: none"> • Secretary to the Treasury or Deputy Secretary to the Treasury (chair) • Director-General, Department of Development Finance, MOFMM • Representative(s) from ERD and NPD • Representative(s) from CEB and LECO • Representative from MPRE • Representative from SLSEA • Representative from PUCSL • Representative from key PFIs • Others who may be considered appropriate by GOSL. 	<ul style="list-style-type: none"> • Supervise the project implementation; • Provide any necessary government support on the implementation of project-related activities among the relevant stakeholders including CEB, LECO, MOFMM, MPRE, and SLSEA, among others; • Ensure ADB and any counterpart funds availability for onlending disbursement and general project implementation; • Help coordinate project implementation activities, including seeking feedback from PFIs on the market demand for funds, subproject performances and implementation, market appetite from the borrowers; • Work with ADB to adjust the government support on the project implementation as needed; and • Update ADB on any policy and regulatory changes that might affect the ADB project implementation.
<p>ADB</p>	<ul style="list-style-type: none"> • Manage the overall project and TA implementation; • Conduct regular project review missions to ensure smooth implementation; • Conduct regular subproject technical and financial reviews and safeguards screening to ensure compliances (e.g., through TA consultants); • Regularly review the achievements of the project’s targets in the design and monitoring framework; • Ensure that the executing and/or implementing agency complete the project completion review and report; and • Prepare a project completion report for ADB within 6 months from project closing date.

ADB = Asian Development Bank, CBSL = Central Bank of Sri Lanka, CEB = Ceylon Electricity Board, DFD = Development Finance Department, DNP = Department of National Planning, ERD = External Resources Department, GOSL = Government of Sri Lanka, LECO = Lanka Electricity Company Limited, MNPEA = Ministry of National Policies and Economic Affairs, MOFMM = Ministry of Finance and Mass Media, MPRE = Ministry of Power and Renewable Energy, NBD = National Budget Department, PAM = project administration manual, PFI = participating financial institution, PIU = project implementation unit, DPMM = Department of Project Management and Monitoring, PMU = project management unit, PED = public enterprise department, PUCSL = Public Utilities Commission of Sri Lanka, SLR = Sri Lanka rupee, SLSEA = Sri Lanka Sustainable Energy Authority, SOE = statement of expenditures, TA = technical assistance, TOD = Treasury Operations Department.

Source: Asian Development Bank estimates.

Key Persons Involved in Implementation

Executing Agency

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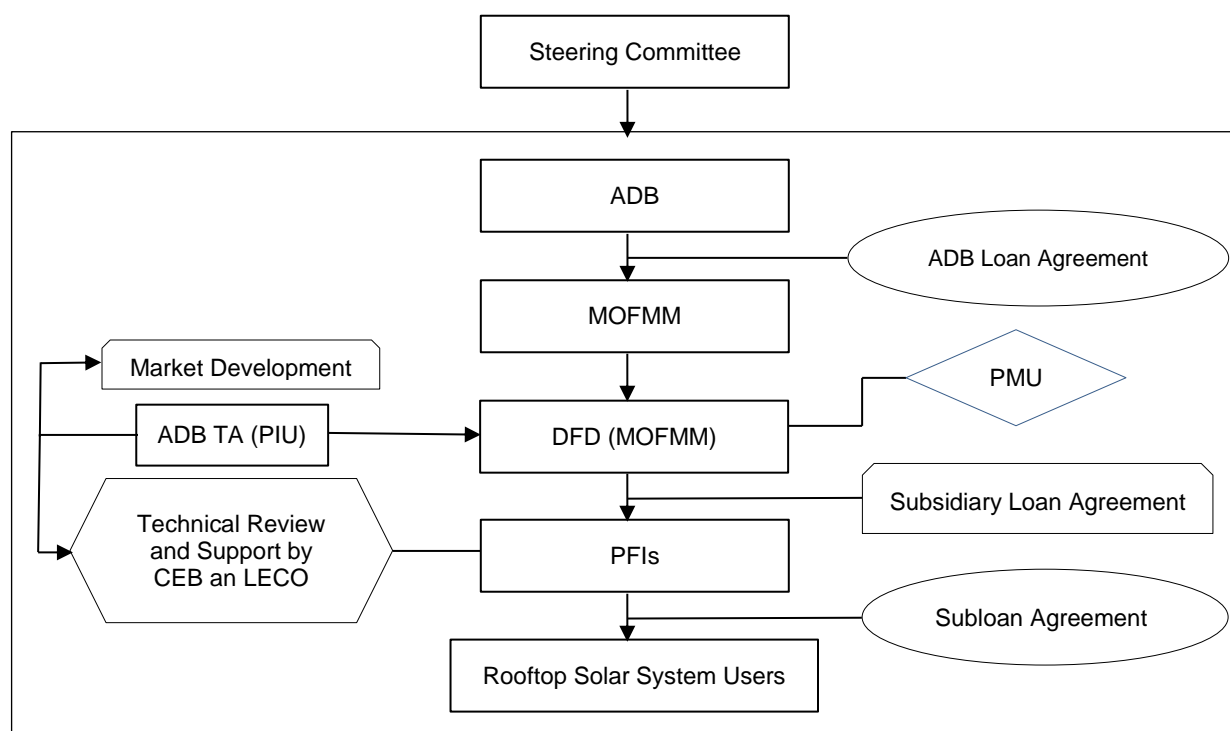
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B. Project Organization Structure

8. The financial intermediation loan project will be implemented over a 4-year period. The MOFMM will be the executing agency and Development Finance Department (DFD) will be the implementing agency for the financial intermediation loan. MOFMM will sign a subsidiary loan agreement, satisfactory to ADB, with the PFIs. MOFMM will convert the ADB's US dollar (USD) funds at market exchange rate and provide the equivalent amount in SLR to PFIs based on the forthcoming six months' disbursement requirement proposed by PFIs. The government will be responsible for foreign exchange risk. The subsidiary loan's terms and conditions to PFIs will be based on the government cost of ADB funds and reflect the commercial market conditions to develop the rooftop solar photovoltaic systems in Sri Lanka. ADB and MOFMM represented by the DFD will ensure that the selected PFIs meet the ADB requirements for integrity assessments, including anti-money laundering, and sound financial management capacity, based on the ADB financial management assessment criteria. The debt funding (through a credit line) to finance rooftop solar facilities could be used on a revolving basis, at the government's discretion, following the ADB loan closure, but maintaining the same project compliance requirements.

9. Based on the time line proposed in Tables 1 and 2, MOFMM will establish a project management unit in the DFD that will include experienced staff and will be headed by a senior officer to administer the credit line. SLSEA will establish a suitable project implementation unit, staffed with consultants funded under the ADB TA, to handle technical and implementation matters (see para. 26). Ceylon Electricity Board (CEB) and Lanka Electricity Company Limited (LECO), the only two utilities in Sri Lanka, will support project implementation by providing technical recommendations to the PFIs regarding technical proposals of the applicants, including review and approval of applications for connection of rooftop solar systems to the distribution network and confirming quality of generated power.

Figure 1: Project Organizational Structure



ADB = Asian Development Bank, CEB = Ceylon Electricity Board, DFD = Development Finance Department, LECO = Lanka Electricity Company Limited, MOFMM = Ministry of Finance and Mass Media, PFI = participating financial institution, PIU = project implementation unit (under SLSEA), PMU = project management unit, TA = technical assistance.

Sources: Asian Development Bank.

IV. COSTS AND FINANCING

10. The proposed project is estimated at \$59.8 million, which will be used to finance the system and installation costs of residential, industrial, commercial, and any other types of qualified rooftop solar systems in Sri Lanka. The ADB funds, after being converted to equivalent SLR amount, could be used to finance up to 100% of the subproject costs for residential rooftop solar systems, and up to the total debt component of the subproject costs for non-residential rooftop

solar systems (e.g., industrial and commercial scale subprojects) with an appropriate amount of equity contribution.⁶ The indicative financing plan is in Table 4.

Table 4: Summary Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (regular loan)	50.0	83.6
Subproject equity contribution ^a	9.8	16.4
Total	59.8	100.0

^a For industrial and commercial rooftop solar system, an equity contribution at about 20% of the total subproject costs may be required by PFIs, assuming 40% of the ADB project or \$20 million is used for industrial and commercial rooftop solar system financing. The remaining amount represents estimate for equity contribution from the residential sector. The government will cover financing charges during implementation.

Source: Asian Development Bank estimates.

A. Cost Estimates Preparation and Revisions

11. The project cost estimates are prepared by ADB, in consultation with the Government of Sri Lanka.

B. Key Assumptions

12. The following key assumptions underpin the cost estimates and financing plan:

- (i) Exchange rate: SLR151 = \$1.00 (as of May 2017);
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are presented in Table 5. Contingencies include provision for potential exchange rate fluctuation under the assumptions of the purchasing power parity exchange rate.

Table 5: Escalation Rates for Price Contingency Calculation

Item	2017	2018	2019	2020	2021	Average
Foreign rate of price inflation	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%
Domestic rate of price inflation	5.5%	5.0%	5.0%	5.0%	5.0%	5%

Source: Asian Development estimates.

- (iii) Interest during implementation for ADB loan has been computed at the 5-year fixed USD swap rate plus a spread of 0.5% as of 5 May 2017. Commitment charges for the ADB ordinary capital resources loan are 0.15% per year to be charged on the undisbursed loan amount.
- (iv) In-kind contributions cannot be easily measured and have not been quantified.

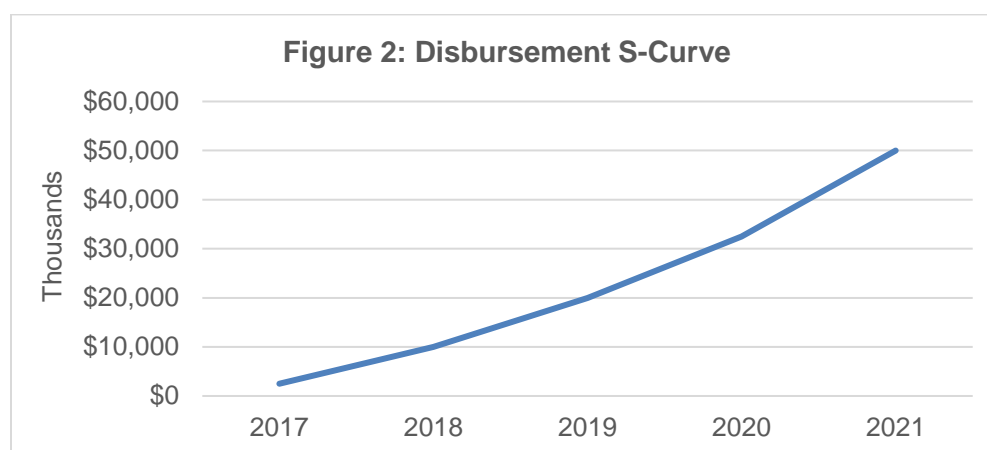
⁶ For residential customers, because the subloans are generally small (e.g., less than \$10,000), resembling consumer lending, subborrowers' equity contribution is not mandatory. For commercial scale rooftop solar systems, or at PFIs' discretion, appropriate amount of equity contribution would likely be required.

C. Allocation and Withdrawal of Loan Proceeds

13. The \$50 million ADB funds will be provided to MOFMM, which will in turn provide the equivalent amount of SLR funds to PFIs for financing qualified rooftop solar systems in the country.

14. The ADB USD funds will be disbursed in accordance with ADB's *Loan Disbursement Handbook or LDH* (2017, as amended from time to time).⁷ MOFMM will open an advance USD account at the Central Bank of Sri Lanka for the purpose of the ADB project. The amount of the USD advance account will be based on the equivalent USD and SLR cost for meeting the forthcoming six months' subproject disbursement requirement, as estimated by PFIs and MOFMM. MOFMM will also open another local currency SLR account to facilitate the currency conversion and disbursement to PFIs in local currency. The disbursement procedures will be in compliance with the ADB *LDH* (2017, as amended from time to time).

D. Contract and Disbursement S-Curve

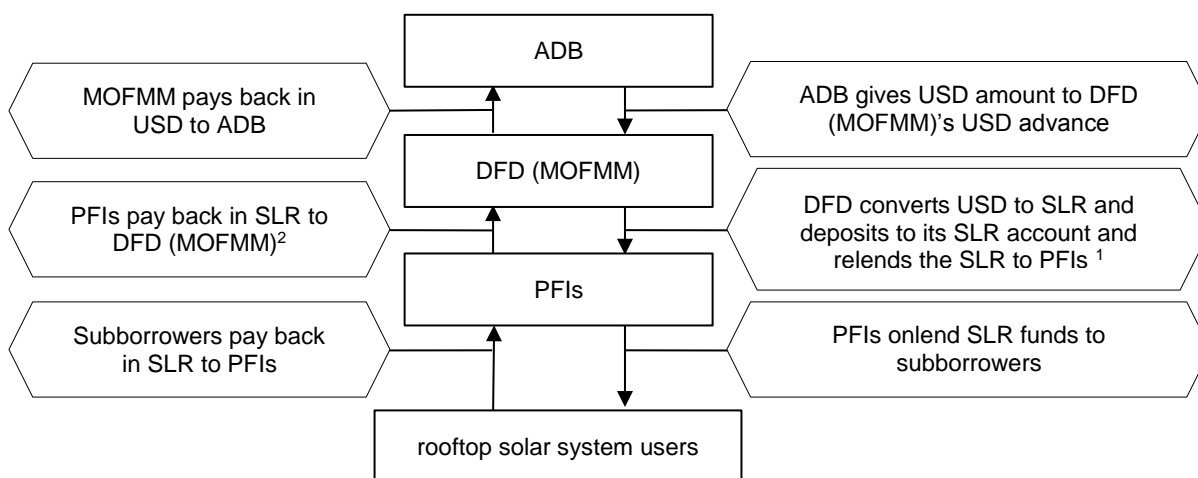


Note: For financial intermediation loans, contract award and disbursement S-curves are effectively the same.

⁷ Asian Development Bank. 2017. *Loan Disbursement Handbook*. <https://www.adb.org/sites/default/files/institutional-document/33606/adb-loan-disbursement-handbook-2017.pdf>.

E. Fund Flow Diagram

Figure 3: Fund Flow Diagram



ADB = Asian Development Bank, DFD = Development Finance Department, MOFMM = Ministry of Finance and Mass Media, PFI = participating financial institution, SLR = Sri Lanka rupee, USD = US dollar.

¹ MOFMM will also open a SLR account for currency conversion and disbursements to or liquidation from PFIs.

² In cases when the SLR funds are not used properly by the PFIs, MOFMM should be responsible for obtaining these funds back at market rate (para. 28).

Source: Asian Development Bank.

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

15. A financial management assessment has been conducted on DFD, MOFMM and 10⁸ potential PFIs in accordance with ADB Guidelines for the Financial Management and Analysis of Projects (2005)⁹ and Financial Management Assessment Technical Guidance Note (2015).¹⁰ The overall financial management risk for the project is assessed as moderate. The PFIs are regulated, have developed financial management systems in place, and have experience in handling credit line facilities from international financial institutions including ADB. An integrity due diligence has been undertaken on selected PFIs in coordination with the Office of Anticorruption and Integrity. No major concern for disclosure has been identified. Key risks identified include (i) macroeconomic condition pertaining to the ongoing balance of payments pressures and tightened market liquidity; (ii) PFIs' ability to properly assess the subproject credit risk; and (iii) PFIs' ability to implement the compliance measures and monitor subproject performance. Mitigating measures have been proposed including (i) a dedicated TA to provide support in funds flow, audit requirement, monitoring and review report; (ii) frequent ADB project review missions and TA consultant support; and (iii) ADB training opportunities to concerned staff from the executing and implementing agencies and PFIs. Accordingly, and with the above measures in place, the overall financial management arrangements are considered adequate. MOFMM is the most appropriate organization to administer the project due to its experience in implementing the

⁸ The due diligence for 8 PFIs has been completed and is ongoing for the 2 remaining PFIs.

⁹ ADB. 2005. *Guidelines for the Financial Management and Analysis of Projects*. Manila.

¹⁰ ADB. 2015. *Financial Management Assessment Technical Guidance Note*. Manila.

ADB small and medium enterprises loan.¹¹ MOFMM has the necessary financial management capacity—including procedures for making payments, accounting of transactions, financial reporting, auditing of financial statements, and internal control procedures—to avoid misuse or misappropriation of funds and assets.

B. Disbursement

1. Disbursement of ADB Funds

16. The loan proceeds will be disbursed in accordance with the ADB *LDH* (2017, as amended from time to time), and detailed arrangements agreed upon between the government and ADB. MOFMM prefers reimbursement arrangement, but other suitable disbursement methods in the ADB *LDH* (e.g., advance fund, direct payment, and commitment) are available when appropriate. All relevant ADB documents and their web links are provided in Appendix 1 of this document.

17. Online training for project staff on disbursement policies and procedures is available.¹² Project staff and those from PFIs are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

18. **Disbursement Arrangement.** The comprehensive procedures of all disbursement arrangements of (i) reimbursement; (ii) advance fund; (iii) direct payment; and (iv) commitment are provided in the ADB *LDH* and the required forms are provided in *LDH* Appendices (and may be downloaded from the LFIS/GFIS website). The web link to the ADB *LDH* 2017 is provided in Appendix 1 of this document.

19. MOFMM shall open, administer, and maintain one USD advance account and one SLR account for local currency conversion to receive and transfer ADB loan converted proceeds in SLRs. ADB maintains the right to reject the selection of the MOFMM and/or commercial banks that hold the advance account. MOFMM will ensure that either the USD and SLR accounts are exclusively for the ADB project purpose or the ADB funds flow can be tracked to avoid improper use of such funds. Both accounts should be maintained without restriction on withdrawing funds at any time (e.g., current account) and are opened in the name of MOFMM.

20. PFIs will request SLR funds from MOFMM based on a concrete subproject pipeline and/or demonstrated (PFIs') disbursement needs over the forthcoming six months, or other indicators acceptable to ADB. PFIs will submit the Summary/Statement of Expenditures (SOE) Sheet for Financial Intermediation Loans to MOFMM.¹³ Based on the total SLR amount requested by the PFIs, MOFMM will prepare a withdrawal application in equivalent USD to ADB for disbursement to the advance account. Detailed procedure is provided in the ADB *LDH* (2017). MOFMM will receive USD funds from ADB and convert them to local currency (SLR) funds based on the spot market exchange rate and deposit the SLR funds at MOFMM's local currency account as indicated above. Any potential foreign exchange loss shall be borne by the Government of Sri Lanka. MOFMM will reimburse the SLR funds to PFIs after the PFIs disburse to the subprojects and provide MOFMM sufficient evidence of compliance with the subproject eligibility criteria, compliance with other requirements indicated in the subsidiary loan agreement, and actual funds disbursement. In rare cases that some rooftop solar subprojects become ineligible, such subloans

¹¹ ADB. 2016. *Report and Recommendation of the President to the Board of Directors: Loan to Democratic Socialist Republic of Sri Lanka for Small and Medium-Sized Enterprises Line of Credit Project*. Manila (Loan 3370-SRI, \$100 million, approved on 15 February).

¹² Asian Development Bank. Disbursement eLearning. http://wpqr4.adb.org/disbursement_elearning.

¹³ Please use form in Appendix 7D of the ADB *LDH* (2017).

would not be reimbursed under the ADB project by MOFMM.

21. **Liquidation.** Thereafter, MOFMM will consolidate eligible expenditures and submit to ADB for liquidation. Liquidation will follow the SOE procedures. The corresponding bank statement and the advance account reconciliation statement are also required to be submitted.

22. **Statement of Expenditure Procedure for Reimbursement and Liquidation of Advance Funds.** The SOE procedure is a simplified procedure requiring no submission of supporting documentation of expenditures. Due to the nature of the financial intermediation loan, in which a large number of small subprojects are funded, a SOE procedure is necessary to reduce the ADB administration burden, after ADB is comfortable with the executing agency's capacity to implement the project. The SOE limit will be initially set at \$50,000 per subloan, which is the free limit, but subject to revision during the project implementation. DFD should maintain all SOE records, which should be made readily available for review by ADB's disbursement and review mission or upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit.¹⁴ The supporting documentation of expenditures shall include, but not limited to the following: (a) evidence of PFIs' internal (management and/or board) approvals of the subprojects, such as subloan approval letter, signed subloan agreement, and attached subloan credit files including loan application and detail project reports/feasibility studies; (b) relevant invoices if requested by ADB, (c) evidence of payment made by PFIs to the subprojects, such as the bank statements for subloan disbursement, and (d) PFIs' letter to MOFMM certifying its compliances with the ADB implementation and eligibility requirements in the PAM.

23. **Other Disbursement Matters.** Before the submission of the first withdrawal application, MOFMM should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the MOFMM, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is stipulated in the ADB *LDH* (2017, as amended from time to time). Individual payments below such amount should be paid (i) by the MOFMM and subsequently claimed to ADB through reimbursement; or (ii) through the advance fund procedure, unless otherwise accepted by ADB. MOFMM should ensure sufficient category and contract balances before requesting disbursements. The use of ADB's Client Portal for Disbursements¹⁵ system is encouraged for submission of withdrawal applications to ADB.

24. If the Government of Sri Lanka chooses to extend the subloan lending by revolving the ADB funds to PFIs, relevant project terms and conditions shall continue apply to sublendings after the ADB project closure. The PFIs must continue to comply with fiduciary and safeguard covenants in the subsidiary loan agreements with the government. PFIs shall maintain separate ledgers to manage the revolving funds.

25. **Retroactive financing.** MOFMM may retroactively finance eligible subprojects in a total amount not exceeding 20% of the ADB loan, if these subprojects are incurred before loan effectiveness, but not earlier than 12 months before the signing of the loan agreement. MOFMM shall ensure that all retroactive financed subprojects comply with the same requirements as applied to all other standard subprojects. The MOFMM has been advised that approval of retroactive financing does not commit ADB to finance the project.

¹⁴ Checklist for SOE procedures and formats are available at relevant sections of the ADB Loan Disbursement Handbook: <http://www.adb.org/sites/default/files/loan-disbursement-handbook.pdf>.

¹⁵ The Client Portal for Disbursements facilitates online submission of withdrawal applications to ADB, resulting in faster disbursement. The forms to be completed by the Borrower are available online at <https://www.adb.org/documents/client-portal-disbursements-guide>.

26. **Maximum ADB financing.** ADB does not impose any maximum subproject or subloan limits but any rooftop solar subloan application from a PFI for the financing of a subproject with a power generation capacity above 1 MW will be brought for consideration of the steering committee established under the project. Based on the recommendation from CEB and LECO on the technical feasibility of the subproject and confirmed compliance with the safeguards screening checklist requirements (see para 45), the proposed subproject financing may be considered approved by the steering committee if no objection is received from its members within a specified period of time. ADB funds can be used to finance up to 100% of the total subproject cost for residential rooftop solar subprojects.¹⁶ For commercial rooftop solar systems with a total subproject cost of \$50,000 and more, an appropriate equity contribution from the sponsor is required—to be set at a level that is commensurate with the risks of the particular subproject (e.g., around 20%). The ADB loan will be disbursed consistent with the expenditure limits stated in the subsidiary loan agreements with the PFIs.

27. **Free limit.** ADB will review at least the first three subprojects submitted by each PFI, regardless of the subproject size, or until ADB is satisfied with that PFI's ability to manage the subproject review and disbursement process. Following ADB's satisfactory approval of the first three subprojects, ADB may permit a \$50,000 free limit per subloan, under which amount no prior ADB approval of the subproject is required. ADB reserves the rights to request any supporting subproject documents and not to reimburse or liquidate any subprojects that do not comply with the ADB project implementation requirements.

C. Accounting

28. The MOFMM will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project following accrual-based accounting following the equivalent national accounting standards. The MOFMM will prepare consolidated statement of expenditure (SOE) in accordance with the government's accounting laws and regulations which are consistent with international accounting principles and practices. All relevant ADB documents and their web links are provided in Appendix 1 of this document.

D. Auditing and Public Disclosure

29. The MOFMM will cause the detailed SOE to be audited on an annual basis in accordance with acceptable financial reporting standards (APFS), audited by an independent auditor acceptable to ADB, and that the audit is conducted in accordance with auditing standards that are acceptable to ADB.¹⁷ The audited SOE together with the auditor's opinion will be presented in the English language to ADB within 6 months from the end of the fiscal year by the Government of Sri Lanka.

30. The audit report for the SOE will include a management letter and auditor's opinions, which cover (i) whether the SOE present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; (ii) whether the proceeds of the loan were used only for the purpose(s) of the project; and (iii) whether the borrower or executing agency was in compliance with the financial covenants contained in the legal agreements (where applicable). Both the MOFMM and PFIs need to have designated USD

¹⁶ The nature of the residential rooftop solar system financing is similar to those of a consumer loans, with a total cost less than the equivalent of \$10,000. Therefore, equity contribution is generally not required but at PFIs' own discretion.

¹⁷ In the case of state-owned banks, auditors appointed by the Auditor General constitute an independent auditor.

and/or SLR accounts for the project, or at least an account where the ADB project's funds flow can be traced accurately and reliably.

31. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

32. The Government of Sri Lanka and PFIs have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited SOE.¹⁸ ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

33. In the case when ADB is funding credit lines for eligible subprojects through PFIs, an audited statement of utilization of funds may also be submitted in lieu of the SOE. The audited statement of utilization of funds will indicate: (i) the opening balance; (ii) the name of financial intermediaries; (iii) details of sub-loans (committed lines of credit and amounts disbursed); (iv) closing balance (gross and net amounts); (v) comparative figures for prior year; and (vi) cumulative amount to date (gross). The audited statement of utilization of funds will be also accompanied by adequate explanatory notes. These notes include the basis of preparation, reporting currency, undrawn external assistance, and details of sub-loans such as amounts committed, disbursed up to the previous year, disbursed during the current reporting period, cumulative disbursement, undisbursed commitments, percentage of loan utilized, etc.¹⁹

34. Public disclosure of the audited SOE, including the auditor's opinion on the SOE, will be guided by ADB's Public Communications Policy 2011.²⁰ After the review, ADB will disclose the audited SOE and the opinion of the auditors on the SOE no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.²¹

¹⁸ ADB's approach and procedures regarding delayed submission of audited SOE:

- (i) When audited SOE are not received by the due date, ADB will write to the executing agency advising that (a) the audit documents are overdue; and (b) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed;
- (ii) When audited SOE are not received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (a) inform the executing agency of ADB's actions; and (b) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited SOE are not received within 12 months after the due date, ADB may suspend the loan.

¹⁹ ADB. 2015. *Financial Management Technical Guidance Note: Project Financial Reporting and Auditing*. Manila. Available: <https://www.adb.org/sites/default/files/institutional-document/33926/tgn-project-financial-reporting-auditing.pdf>.

²⁰ ADB. 2011. *Public Communications Policy 2011*. Manila. Available: <http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications>

²¹ This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. *Public Communications Policy*. Manila, paras. 97(iv) and/or 97(v).

VI. SUBPROJECT SELECTION CRITERIA AND APPROVAL PROCESS

A. Participating Financial Institutions Selection Criteria

35. PFIs shall satisfy and maintain the following eligibility criteria:

- (a) compliance with Sri Lanka's relevant laws, regulations and supervisory framework (including the Banking Act and the Monetary Law Act), and being in good regulatory standing, including with respect to its corporate governance, reputation/integrity, corporate and financial governance and management practices (including, among other things, transparent financial disclosure policies and practices) and compliance with CBSL's combating money laundering and financing of terrorism requirements;
- (b) compliance with ADB's financial and integrity due diligence requirements;
- (c) compliance with CBSL's regulatory capital minimum, capital adequacy and asset quality requirements and prudential regulations as of its most recent audited financial statements;
- (d) having a maximum net nonperforming loan ratio of 5%, or such ratio as determined by the PSC and ADB from time to time, as of its most recent audited financial statements;
- (e) profitability, as of its most recent audited financial statements;
- (f) adequate credit and risk management policies, operating systems, and procedures, including a management information system that can provide quarterly reports on subloan disbursements, repayment performance, lending spreads, and other relevant information;
- (g) financial and institutional capacity satisfactory to ADB to (i) assess subloan applications, including evaluation of suppliers' quotations and system technical specifications, suppliers' technical proposals, equipment quality standards, and information from CEB and LECO, (ii) disburse proceeds of the subloans to borrowers, and (iii) manage the subloans with due diligence and efficiency and in accordance with sound applicable technical, business and development practices, including maintenance of adequate accounts and records, in compliance with the Subsidiary Loan Agreements;
- (h) a sound business objectives and strategy and/or plan;
- (i) autonomy in lending and pricing decisions;
- (j) adequate policies, systems and procedures to assess and monitor the economic, social, and environmental impact of subprojects in accordance with parameters set by ADB for this purpose; and
- (k) consenting that ADB shall publicly disclose disbursements, repayment performance, lending spreads, lending to borrowers, and any other such information on the use of subloans.

B. Subproject Selection Criteria

36. All subproject installations have to be limited to rooftops of the existing structures only. No subprojects with new grid connections that require the right of way will be financed. Any commercial or industrial subproject with the generation capacity above 1 MW must be screened based on a safeguard check list that was developed to ensure that sub-projects financed by the credit line have minimal or no adverse environmental, and no involuntary resettlement, and indigenous peoples impacts.

C. Subproject Approval Process

37. MOFMM and PFIs will cooperate with technical team (PIU) supervised by SLSEA for evaluating complex applications, including large size rooftop solar system proposal (1 MW and above). MOFMM and PFIs shall comply with this PAM for selection of subprojects/borrowers.

38. The borrowers from residential or commercial sector shall work with the solar system developers to identify suitable rooftop spaces. Many factors must be considered: the shade of trees, adjoining buildings, rooftops' sizes, heights, and uses; and ownership (residential, commercial, or public) as well as interconnection arrangement with the public utility. A detailed technical survey is a necessary initial document with the loan application. It is particularly important to determine which rooftop space is structurally sound. The roof must be able to support the weight of the solar photovoltaic system (including the system's racks and structures) and withstand the added load from wind blowing under the modules.

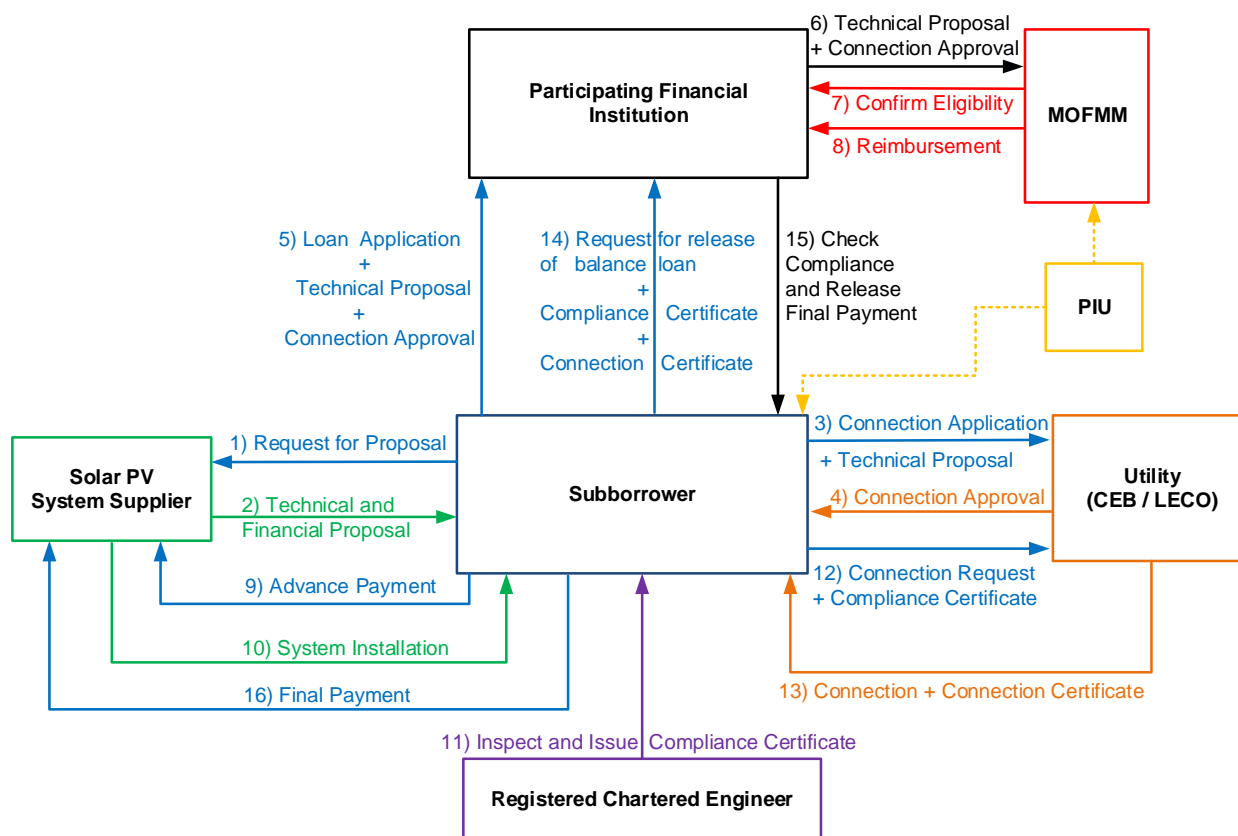
39. PFIs shall share the subloan applications with MOFMM and SLSEA (PIU) to seek assistance from them in the process of loan application. Applications of large system capacity (above 1 MW) shall be checked with the local utility to identify any potential technical issues, such as interconnection prior to commissioning the solar systems. Interconnection refers to both the physical connection of the new solar system to the local utility's power grid as well as the permits application process. After the loan is approved and system installation is completed but the system is not commissioned yet, a technician from the utility shall be sent to the site to install the meters and monitor system commissioning.

40. A transaction TA will complement the financial intermediation loan by addressing technical and implementation matters through: (i) establishing technical guidelines and standards to be followed by borrowers, vendors and accredited engineers; (ii) assisting in the development of a viable subproject pipeline to catalyze market demand for funds; (iii) supporting credit line implementation supervision and monitoring; and (iv) conducting capacity building and awareness training and workshops for stakeholders.²² The MPRE will be the executing agency and SLSEA will be the implementing agency for the TA. The MPRE and SLSEA will work in close coordination with the MOFMM, CEB, LECO and PFIs.

41. In the process of getting a rooftop solar photovoltaic system installed under the proposed loan scheme, the potential solar photovoltaic system users (subborrowers) will be interacting with: (i) solar photovoltaic system suppliers, (ii) PFIs, (iii) chartered engineers registered with utilities and the project, and (iv) distribution utility of the area (CEB or LECO). Each of these entities will perform specific roles in a sequence as listed below, and the process followed in its implementation is depicted in Figure 2.

²² This includes building institutional capacity of and hands-on training to the MOFMM and PFIs.

Figure 4: The Application and Approval Process of the Proposed Rooftop Solar Photovoltaic Loan Scheme



CEB = Ceylon Electricity Board, Eng = engineer, LECO = Lanka Electricity Company Limited, MOFMM = Ministry of Finance and Mass Media, PIU = project implementation unit.

Source: Asian Development Bank.

Step 1: Potential solar photovoltaic subborrower approaches a solar photovoltaic system supplier and gets a financial proposal (quotation).

Step 2: The supplier provides a technical proposal in compliance with utility and ADB loan guidelines (e.g., a subsidiary loan agreement and this PAM).

Step 3: The supplier (or the subborrower at its preference) applies for individual connection approval from CEB or LECO by submitting the technical proposal. The subborrower may obtain technical backstopping from the ADB consultants through PIU under SLSEA.

Step 4: CEB and LECO gives an approval (in principal) based on network absorption capacity and compliance with its technical and commercial guidelines.

Step 5: The subborrower apply for the subloan through the preferred PFI, submitting the loan application, the technical proposal along with the confirmation for connection by CEB or LECO provided by the supplier.

Step 6: Upon subloan evaluation, PFI submits the subloan application, technical proposal, confirmation of CEB or LECO connection approval, and any other related backup documents, if any, to MOFMM to seek reimbursement approval.

Step 7: MOFMM confirms the subproject eligibility by reviewing the submitted documents for the first few subprojects until ADB establishes confidence that MOFMM is able to confirm the eligibility of the subproject. In taking such a decision, MOFMM considers the relevant recommendation provided by SLSEA that is based on subproject due diligence and recommendation of the PIU established under the ADB TA.

Step 8: MOFMM reimburses to the PFI on the eligible costs.

Step 9: The subborrower pays agreed portion of the loan cleared and provided by the PFI to the equipment supplier and/or installer, if not already paid.

Step 10: The equipment supplier and/or installer install the system in accordance with the specifications in the approved technical proposal.

Step 11: A chartered engineer registered with CEB and/or LECO inspects the installed rooftop solar system for compliance with project and utility guidelines and original technical proposal specification. The chartered engineer issues a compliance certificate.

Step 12: The subborrower requests for system connection from CEB or LECO by submitting the compliance certificate issued by the chartered engineer.

Step 13: CEB or LECO checks and connects the system and issues a connection confirmation or certificate.

Step 14: The subborrower submits the compliance certificate (issued by the registered chartered engineer) and the connection certificate (issued by CEB or LECO) to PFI for release of balance loan funds.

Step 15: PFI checks the compliance and connection certificates and issues the remaining loan funds to the subborrower.

Step 16: The subborrower makes the balance payment or request the PFI to make a direct payment to the supplier, and the PFI submits the reimbursement application to the PMU.

42. The TA consultants (PIU) would conduct the subproject screening, review, approval, and monitoring process. Any initial subloan above \$50,000 will be jointly reviewed by CEB and LECO and the TA consultants (PIU).

VII. PROCUREMENT AND CONSULTING SERVICES

A. Procurement of Goods, Works, and Consulting Services

43. MOFMM will monitor and cause the PFIs to monitor the subproject procurement by following ADB's procurement requirements. All procurement to be financed under the project will be carried out in accordance with ADB's Procurement Guidelines (2015, as amended from time to time), as applicable to financial intermediation loans and following stated eligibility criteria. ADB encourages MOFMM to require the PFIs and the sub-borrowers to adopt internationally

competitive bidding procedures to the extent possible when the amount of the investment is large and economy and efficiency can be gained through such procedures. For procurement of goods and services to be financed by subloans from the ADB loan, MOFMM will require the PFIs to ensure that prices are reasonable and that relevant factors—e.g., time of delivery, efficiency, reliability, suitability for the subproject—are considered.

VIII. SAFEGUARDS

44. The safeguard categories for environment, involuntary resettlement, and indigenous peoples are all “FI” treated as “C.” The rooftop solar systems do not require land space, and have no impact on involuntary resettlement and indigenous people. All project installations are limited to rooftops, and no sub-projects with new grid connections that require the right of way will be financed. Rooftop solar projects do not require an environmental clearance in Sri Lanka. The solar panel modules after they reached the end of their economic life will be treated and disposed in accordance with the Sri Lankan laws, guidelines and regulations. As per the occupational, safety and health act and the regulation for the disposal of hazardous waste, health and safety issues will be properly addressed and electronic wastes will be collected, treated or disposed by certified licensees from the Central Environment Authority. The environmental and social impacts associated with the implementation of rooftop solar projects, either commercial-scale or residential-scale, is negligible. Therefore, an environment and social safeguard management system is not required, and an Environmental Assessment Review Framework is not prepared due to the uniform nature of the work carried out on a country-wide basis. However, a safeguards checklist has been developed for subproject selection and subprojects over the power generation capacity of 1 MW will be screened based on the checklists to ensure that subprojects financed by the project have minimal or no adverse environmental, involuntary resettlement, and indigenous peoples impacts. The screening and review will be undertaken by TA consultants and provide necessary capacity building trainings to stakeholders including PFIs. The safeguards screening checklist with sub-project selection criteria is in Appendix 2. ADB will not fund any subproject that is category A or B.

45. **Prohibited investment activities.** Pursuant to ADB’s Safeguard Policy Statement (2009), ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the Safeguard Policy Statement (2009) and attached as Appendix 3 of this document. All financial institutions will ensure that their investments follow applicable national laws and regulations and will apply the prohibited investment activities list to subprojects financed by ADB.

VIII. GENDER AND SOCIAL DIMENSIONS

46. The proposed project incorporates some gender elements. ADB will conduct awareness campaign including workshops for sector customers on subloan application process and technical aspects of solar panel installations and operations. The workshops for the sector customers will target at least 30% women’s participation. ADB would incorporate the gender elements and features in the Subsidiary Loan Agreement to encourage subproject developers to enhance the recruitment of women in system operations and maintenance. Further, there are provisions in the loan agreement that the principles of gender equality aimed at increasing project benefits and impacts on women are followed during implementation of the project.

47. The project supports solar renewable energy development in Sri Lanka. The benefits of rooftop solar energy capacity additions include national benefits in terms of enhanced energy security and additional electricity supply contributing to inclusive and environmentally sustainable

economic growth, and localized benefits of improvement of livelihoods and job creation at the subproject sites. The poverty reduction impact of renewable energy projects can be both direct and indirect. The direct impact is through additional power generation which supports economic activities and improves the livelihoods of individuals such as the provision of lighting, refrigeration, and other household amenities. The investment also creates economic benefits for other business sectors, service providers, and related industries. Indirectly, rooftop solar energy projects minimize the negative environmental impacts and improve health conditions of the general public. Households under the poverty line frequently experience power cuts and fluctuations. Also, educational and employment opportunities is restricted for women due to household poverty, limited transport facilities, and cultural ethos that define the roles of women though there are a considerable number of schools and companies in Sri Lanka. This issue is hard to be addressed by one project, but rather systematic approach at the national level is required such as inclusive energy supply plans, social welfare measures and gender awareness campaigns. The relevant ADB document and web link are provided in Appendix 2 of this document.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

48. The project design and monitoring framework is as follows.

Impact the Project is Aligned with Access to clean and reliable power supply in Sri Lanka increased by 2025 (Sri Lanka Energy Sector Development Plan for a Knowledge-Based Economy, 2015–2025) ^a			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
Outcome Clean power generation enhanced.	By 2022: a. Rooftop solar power generation capacity increased by 50 megawatts. (2016 baseline: 30 megawatts) b. Additional 55,600 tons of carbon dioxide emissions avoided per year. (2016 baseline: 0)	a. CEB annual report (power statistics) b. SLSEA annual report	Potential difficulties in managing the grid because of instability as a result of integrating renewable solar generation. Delays in transmission and distribution investments may affect reliable connection of rooftop solar systems to the network.
Outputs 1. Debt funding for the rooftop solar power generation increased. 2. Rooftop solar market infrastructure and bankable subproject pipeline developed.	By 2021: 1a. About 6,400 rooftop solar subprojects financed utilizing a \$50.0 million loan and \$9.8 million leveraged from private sector. (2016 baseline: 0) By 2018: 2a. 10 PFIs for handling debt funding of rooftop solar systems by commercial and domestic sectors selected. (2016 baseline: 0) 2b. Pipeline of bankable subprojects for 50 megawatts of capacity developed. (2016 baseline: 0) 2c. Project technical guidelines and standards to be followed by borrowers, vendors, and accredited engineers established. (2016 baseline: not applicable)	1a. MOFMM reports, CEB annual report, and LECO annual report 2a. MOFMM reports 2b. MOFMM reports, CEB annual report, LECO annual report 2c-2e. SLSEA annual report	(For all outputs) Untested rooftop solar market demand may affect timely utilization of the credit line.

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
<p>3. Capacity and awareness of stakeholders, including the MOFMM, PFIs, and commercial and domestic sector customers, increased.</p>	<p>2d. Technical verification during pre-installation and post-installation conducted. (2016 baseline: not applicable)</p> <p>2e. An analytical report on identified technical shortcomings and failures prepared. (2016 baseline: not applicable)</p> <p>By 2019:</p> <p>3a. At least 80 workshop participants (30% of them women) from the MOFMM, PFIs, and developers reported improved knowledge on rooftop solar systems. (2016 baseline: not applicable)</p> <p>3b. At least 150 representatives from the MOFMM, PFIs, and developers attended awareness campaigns. (2016 baseline: not applicable)</p> <p>3c. A comprehensive database of all installations including online technical performance information of selected rooftop solar photovoltaic systems established and maintained. (2016 baseline: not applicable)</p>	<p>3a. MOFMM report and statistics</p> <p>3b. MOFMM report and statistics, CEB annual report, LECO annual report</p> <p>3c. SLSEA annual report</p>	
<p>Key Activities with Milestones</p> <p>1. Debt funding for rooftop solar power generation increased</p> <p>1.1 Select participating financial institutions by Q3 2017.</p> <p>1.2 Issue operating guidelines to PFIs by Q3 2017.</p> <p>1.3 Initiate disbursement for approved connections by Q4 2017.</p> <p>1.4 Disburse first round funds by Q4 2020.</p> <p>2. Rooftop solar market infrastructure and bankable subproject pipeline developed</p> <p>2.1 Complete preliminary technical requirements and application templates for connection by Q4 2017.</p> <p>2.2 Start processing applications and connection approvals by Q4 2017.</p> <p>2.3 Finalize technical guidelines and standards by Q3 2018.</p> <p>2.4 Initiate technical verification during pre-installation and post-installation by Q1 2018.</p> <p>2.5. Initiate compilation and analysis of reports of technical shortcomings and failures by Q4 2018.</p> <p>3. Capacity and awareness of stakeholders, including the Ministry of Finance and Mass Media, participating financial institutions, and commercial and domestic sector customers, increased</p> <p>3.1 Conduct hands-on training and workshops to the implementing agency and PFIs by December 2018.</p> <p>3.2 Conduct awareness campaign targeting developers and commercial and domestic customers by Q1 2018.</p> <p>3.3 Establish and maintain a comprehensive database of all rooftop solar installations including on-line technical performance information of selected rooftop solar photovoltaic systems by Q4 2019.</p>			

<p>Project Management Activities Establish a designated project management unit in the MOFMM by July 2017. Conduct review mission twice a year starting Q1 2018 until project physical completion. Prepare project completion report by 2022.</p>
<p>Inputs ADB: \$50.0 million (loan) Subproject equity contribution: \$9.8 million</p>
<p>Assumptions for Partner Financing Not Applicable</p>

ADB = Asian Development Bank, CEB = Ceylon Electricity Board, LECO = Lanka Electricity Company Limited, MOFMM = Ministry of Finance and Mass Media, Q = quarter, PFI = participating financial institution, SLSEA = Sri Lanka Sustainable Energy Authority.

^a Government of Sri Lanka. 2015. *Sri Lanka Energy Sector Development Plan for a Knowledge Based Economy 2015–2025*. Colombo.

B. Monitoring

49. **Project performance monitoring.** To ensure that the project is managed efficiently and its benefits are maximized, MOFMM will implement a project performance management system that is satisfactory to ADB. A sample subproject monitoring report is attached as Appendix 4. The key performance indicators and assumptions in the design and monitoring framework will be the basis for the system. MOFMM will have such information made available to review missions for future impact assessment surveys. MOFMM will submit annual monitoring and evaluation reports to ADB for the duration of the project. The project performance management system will monitor and evaluate the project information and data to ensure that planned interventions achieve the desired results, including key outcome indicators.

50. **Compliance monitoring.** PFIs' compliance with the covenants will be monitored by MOFMM on the basis of the PFIs' semiannual reports, annual audited entity-level financial statements, and audited statement of utilization of funds.

51. **Safeguards monitoring.** Safeguard checklists have been developed for sub-project selection, and sub-projects over 1 MW capacity will be screened based on the checklists. ADB will ensure that the stated subproject eligibility requirements are adhered to and the safeguard categorization is "C" for all subprojects.

52. **Gender and social dimensions monitoring.** ADB will ensure that, through project review missions and reports from MOFMM, PFIs, and consultants of PIU established under the TA, will promote gender inclusive development consistently.

C. Evaluation

53. To ensure responsive and timely implementation, there will be periodic review missions. There will be regular interaction among ADB, MOFMM, and PFIs, as well as MPRE and SLSEA. Annual performance review will be conducted by the MOFMM and ADB. In addition, a comprehensive midterm review will be undertaken by MOFMM and ADB about 12 months after the project's first disbursement that will (i) evaluate the scope, design, and implementation arrangements; (ii) assess implementation performance against project indicators; (iii) review and establish compliance with loan covenants; and (iv) identify problems and constraints and, if necessary, recommend changes in the design or implementation arrangements.

54. Within eight months after the final allocation, the executing agency and implementing

agency will submit a project completion report to ADB in a form acceptable to ADB.²³ Subsequently, ADB will field a mission to finalize the project completion report.

D. Reporting

55. The MOFMM will provide ADB with (i) semiannual progress reports in a format consistent with ADB's project performance reporting system including subproject review report suggested in Appendix 4 of this document; (ii) consolidated annual reports including: progress achieved by output as measured through the indicators in the design and monitoring framework; utilization of funds; compliance measures; and key implementation issues and solutions. To ensure that projects will continue to be both viable and sustainable, project accounts together with the associated auditor's report, should be adequately reviewed. The pro forma project progress report is attached as Appendix 5.

E. Stakeholder Communication Strategy

56. ADB will communicate the information about this project and the outcome of this project through its publications, presentations and on its website. ADB will also communicate with the project's internal stakeholders through written documents.

X. ANTICORRUPTION POLICY

57. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.²⁴ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants, and other service providers. Individuals and/or entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the project.²⁵

58. To support these efforts, relevant provisions are included in the loan agreement and will be reflected in the subsidiary loan agreement (between MOFMM and PFIs) and subloan agreement (between PFIs and subborrowers). ADB's handbooks on Anticorruption Policy and Anticorruption and Integrity were given to the Government of Sri Lanka during loan negotiations.

59. ADB's Office of Anticorruption and Integrity²⁶ is the point of contact to report allegations of fraud and corruption among ADB-financed projects or its staff. Anyone coming across evidence of corruption associated with the project may contact below by telephone, facsimile, e-mail, or by mail:

Office of Anticorruption and Integrity
Asian Development Bank
6 ADB Avenue, Mandaluyong City
1550 Metro Manila, Philippines
Telephone: +63 2 632 5004
Fax: +63 2 636 2152
E-mail: integrity@adb.org or anticorruption@adb.org

²³ Project completion report format is available at <http://www.adb.org/sites/default/files/institutional-document/33431/pai-6-07a.pdf>.

²⁴ Anticorruption Policy: <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>.

²⁵ ADB's Integrity Office web site: <http://www.adb.org/integrity/unit.asp>.

²⁶ ADB's Integrity Office website is available at <http://www.adb.org/integrity/unit.asp>.

XI. ACCOUNTABILITY MECHANISM

60. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make an effort in good faith to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.²⁷

XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL

61. All revisions and/or updates during the course of implementation should be retained in this section to provide a chronological history of changes to implemented arrangements recorded in the PAM, including revision to contract awards and disbursement S-curves.

²⁷ Asian Development Bank. Accountability Mechanism. <http://www.adb.org/Accountability-Mechanism/default.asp>.

APPENDIX 1: LIST OF KEY ADB PROJECT IMPLEMENTATION DOCUMENTS

ADB Loans Disbursement Handbook (2017)

(as may be updated from time to time):

<https://www.adb.org/sites/default/files/institutional-document/33606/adb-loan-disbursement-handbook-2017.pdf>

ADB Safeguard Policy Statement (2009)

<https://www.adb.org/sites/default/files/institutional-document/32056/safeguard-policy-statement-june2009.pdf>

Financial Management Technical Guidance Note: Project Financial Reporting and Auditing (2015)

<https://www.adb.org/sites/default/files/institutional-document/33926/tgn-project-financial-reporting-auditing.pdf>

Guidelines on the Use of Consultants by Asian Development Bank and Its Borrowers (2013)

(as may be updated from time to time):

<http://www.adb.org/sites/default/files/institutional-document/31481/guidelines-use-consultants.pdf>

Procurement Guidelines (2015)

(as may be updated from time to time):

<http://www.adb.org/sites/default/files/institutional-document/31482/procurement-guidelines-april-2015.pdf>

Public Communications Policy 2011

<https://www.adb.org/sites/default/files/institutional-document/32904/files/pcp-2011.pdf>

Technical Assistance Disbursement Handbook (2010)

<http://www.adb.org/sites/default/files/institutional-document/31314/tadisbursement.pdf>

APPENDIX 2: SAFEGUARDS SCREENING CHECKLIST

1. **Sub-project name:**
2. **Location:**
3. **Project description**
 - i) Total capacity: MW
 - ii) Solar panels:
 - Number:
 - Capacity per panel: Wp
 - iii) Connection line length: m
 - iv) Ownership of the land or facility:
 - private government community
 - v) User group:
 - Number of households:
 - Number of business:
 - Number of institutions (schools, hospitals and etc):
 - Number of village/group:
4. **Environmental and social checklist**

(To be completed for any rooftop solar sub-project application over the power generation capacity of 1 MW)

<input type="checkbox"/> The envisaged activities under the sub-project are limited to solar rooftop only without ground installations.			
Screening Questions	Yes	No	Remarks
A. SUB-PROJECT SITING			
Is the Sub-Project area adjacent to or within any of the following environmentally sensitive areas? Only subprojects with 'No' checked against all Siting items can proceed with sub-loan application processing.			
▪ Physical cultural heritage site			
▪ Located in or near to legally protected area or buffer zone			
▪ Located in or near to special habitats for biodiversity (modified or natural habitats)			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Offshore (marine)			
B. POTENTIAL SOCIAL IMPACTS			
Only subprojects with 'NO' checked against all Social items can proceed with sub-loan application processing.			
▪ Will there be land acquisition for the sub-project?			
▪ Will there be residential house demolition causing loss of shelter due to land acquisition or construction activities?			
▪ Will there be any temporary occupation of land that affects the land, housing, assets or livelihoods/business of people?			

Screening Questions	Yes	No	Remarks
<ul style="list-style-type: none"> ▪ Will there be losses of crops, trees, graves and fixed assets during subproject construction? 			
<ul style="list-style-type: none"> ▪ Are there socio-cultural groups present at the subproject site who may be considered "tribes" (hill tribes, schedules tribes, tribal peoples), "minorities" (ethnic or national minorities), or "indigenous communities"? 			
<ul style="list-style-type: none"> ▪ Will the subproject directly or indirectly target, displace or impact ethnic minority or indigenous households? 			
<p>C. POTENTIAL ENVIRONMENTAL IMPACTS Will the Sub-Project cause...</p>			
<ul style="list-style-type: none"> ▪ disturbance due to noise, vibration and dust from construction activities? 			
<ul style="list-style-type: none"> ▪ disturbance due to an increase in local traffic during construction? 			
<ul style="list-style-type: none"> ▪ environmental disturbances such as soil erosion, land contamination, water quality deterioration, air pollution, noise and vibrations during construction phase? 			
<ul style="list-style-type: none"> • aesthetic degradation and property value loss due to establishment of plant and ancillary facilities? 			
<ul style="list-style-type: none"> ▪ changes in flow regimes of the water intake from surface water or underground wells due to abstraction for cooling purposes? 			
<ul style="list-style-type: none"> ▪ pollution of water bodies and aquatic ecosystem from wastewater treatment plant, from cooling towers, and wash-water during operation? 			
<ul style="list-style-type: none"> ▪ a threat to bird or bat life from colliding with the project facilities and/or being burned by concentrated solar rays? 			
<ul style="list-style-type: none"> ▪ industrial liquid (dielectric fluids, cleaning agents, and solvents) and solid wastes (lubricating oils, compressor oils, and hydraulic fluids) generated during construction and operations likely to pollute land and water resources? 			
<ul style="list-style-type: none"> ▪ Soil/water contamination due to use of hazardous materials or disposal of broken or damaged solar cells (photovoltaic technologies contain small amounts of cadmium, selenium and arsenic) during installation, operation and decommissioning? 			
<ul style="list-style-type: none"> ▪ noise disturbance during operation due to the proximity of settlements or other features? 			
<ul style="list-style-type: none"> ▪ visual impacts due to reflection from solar collector arrays resulting in glint or glare? 			
<ul style="list-style-type: none"> ▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)? 			
<ul style="list-style-type: none"> ▪ social conflicts between local laborers and those from outside the area? 			

Screening Questions	Yes	No	Remarks
<ul style="list-style-type: none"> ▪ medium-high risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during construction, installation, operation, and decommissioning? 			
<ul style="list-style-type: none"> ▪ medium-high risks to community health and safety due to the transport, storage, and use and/or disposal of materials and wastes such as explosives, fuel and other chemicals during construction and operation? 			
<ul style="list-style-type: none"> ▪ community safety medium-high risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning? 			

5. Sub-project selection criteria

<p>All subprojects shall meet the following criteria, in particular:</p> <p>(i) All subproject installations are limited to rooftops of the existing structures only. No subprojects with new grid connections that require the right of way will be financed;</p> <p>(ii) The subproject has only minimal or no adverse environmental impacts. The subproject does not involve any land acquisition or housing demolition and cause any adverse impacts on ethnic minorities. The subproject over the power generation capacity of 1MW will be screened through the safeguards screening checklist;</p> <p>(iii) The subproject is not located in any designated environmental protection zone and cultural heritage site;</p> <p>(iv) The subproject does not directly or indirectly result in significant conversion or degradation of natural habitat;</p> <p>(v) The subproject is not located within, that abstract water from, or that discharge to a critical habitat and a legally protected area;</p> <p>(vi) The subproject does not support activities involving physical and/or permanent involuntary resettlement;</p> <p>(vii) The subproject does not support activities involving commercial development of cultural resources of Indigenous Peoples;</p> <p>(viii) Each subproject should be designed, constructed, and operated in accordance with all relevant domestic environmental regulations and must acquire necessary environment permits, if any;</p> <p>(ix) The subborrowers should be in compliance with relevant domestic occupational health and safety standard; and</p> <p>(x) The subprojects should not result in labor retrenchment and labor redundancies.</p>

APPENDIX 3: ADB PROHIBITED INVESTMENT ACTIVITIES LIST

The following do not qualify for Asian Development Bank financing:

- (i) production or activities involving harmful or exploitative forms of forced labor¹ or child labor;²
- (ii) production of or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements or subject to international phaseouts or bans, such as (a) pharmaceuticals,³ pesticides, and herbicides,⁴ (b) ozone-depleting substances,⁵ (c) polychlorinated biphenyls⁶ and other hazardous chemicals,⁷ (d) wildlife or wildlife products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora,⁸ and (e) transboundary trade in waste or waste products;⁹
- (iii) production of or trade in weapons and munitions, including paramilitary materials;
- (iv) production of or trade in alcoholic beverages, excluding beer and wine;¹⁰
- (v) production of or trade in tobacco;¹⁰
- (vi) gambling, casinos, and equivalent enterprises;¹⁰
- (vii) production of or trade in radioactive materials,¹¹ including nuclear reactors and components thereof;
- (viii) production of, trade in, or use of unbonded asbestos fibers;¹²
- (ix) commercial logging operations or the purchase of logging equipment for use in primary tropical moist forests or old-growth forests; and
- (x) marine and coastal fishing practices, such as large-scale pelagic drift net fishing and fine mesh net fishing, harmful to vulnerable and protected species in large numbers and damaging to marine biodiversity and habitats.

¹ Forced labor means all work or services not voluntarily performed, that is, extracted from individuals under threat of force or penalty.

² Child labor means the employment of children whose age is below the host country's statutory minimum age of employment or employment of children in contravention of International Labor Organization Convention No. 138 "Minimum Age Convention" (www.ilo.org).

³ A list of pharmaceutical products subject to phaseouts or bans is available at <http://www.who.int>.

⁴ A list of pesticides and herbicides subject to phaseouts or bans is available at <http://www.pic.int>.

⁵ A list of the chemical compounds that react with and deplete stratospheric ozone resulting in the widely publicized ozone holes is listed in the Montreal Protocol, together with target reduction and phaseout dates. Information is available at <http://www.unep.org/ozone/montreal.shtml>.

⁶ A group of highly toxic chemicals, polychlorinated biphenyls are likely to be found in oil-filled electrical transformers, capacitors, and switchgear dating from 1950 to 1985.

⁷ A list of hazardous chemicals is available at <http://www.pic.int>.

⁸ A list is available at <http://www.cites.org>.

⁹ As defined by the Basel Convention; see <http://www.basel.int>.

¹⁰ This does not apply to project sponsors who are not substantially involved in these activities. Not substantially involved means that the activity concerned is ancillary to a project sponsor's primary operations.

¹¹ This does not apply to the purchase of medical equipment, quality control (measurement) equipment, and any equipment for which ADB considers the radioactive source to be trivial and adequately shielded.

¹² This does not apply to the purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.

**APPENDIX 4: SAMPLE SUBPROJECT MONITORING REPORT TEMPLATE
(For Subloan Amount Above \$50,000)**

Name of the PFIs: _____

ADB Fund Balance: _____

Item No.	Name of Subborrower	Subloan Amount Requested (SLR)	Equity (as % of total subproject cost)	PFI Approval (Subloan Signing Date)	MOF Approval (Yes/No)	ADB Approval (Yes/No)¹	Exchange Rate (SLR - USD)	Total Disbursement (SLR)	USD Amount	Supporting Documents Retained by MOF (Yes/No)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
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¹ ADB Approval requires the procedures outlined in the Project Administration Agreement, and initially supported by the ADB TA.

APPENDIX 5: PRO FORMA PROJECT PROGRESS REPORT

A. Introduction and Basic Date

Provide the following:

1. ADB loan number, project title, borrower, executing agency, implementing agency;
2. Total estimated project cost and financing plan;
3. Status of project financing including availability of counterpart funds;
4. Dates of approval, signing, and effectiveness of ADB loan;
5. Original and revised (if applicable) ADB loan closing date and elapsed loan period based on original and revised (if applicable) loan closing dates; and
6. Date of last ADB review mission.

B. Project Targets

Provide the following:

1. Status of project scope/implementation arrangements compared with those in the report and recommendation of the President (RRP), and whether major changes have occurred or will need to be made;
2. An assessment of the likelihood that the immediate development objectives (project purpose) will be met in part or in full, and whether remedial measures are required based on the current project scope and implementation arrangements;
3. An assessment of changes to the key assumptions and risks that affect attainment of the development objectives; and
4. Other project developments, including monitoring and reporting on environmental and social requirements that might adversely affect the project's viability or accomplishment of immediate objectives.

C. Utilization of Funds (ADB loan, cofinancing, and counterpart funds, if any)

Provide the following:

1. Cumulative disbursement and liquidation/reimbursement by the ADB loan, cofinancing, and counterpart funds (commitment of funds to date), and comparison with time-bound projections (targets);
2. Cumulative disbursements from the ADB loan, cofinancing, and counter funds (expenditure to date), and comparison with time-bound projections (targets); and
3. Re-estimated costs to completion, need for reallocation within ADB loan categories, and whether an overall project cost overrun is likely.

D. Implementation Progress

Provide the following:

1. Assessment of project implementation arrangements such as establishment, staffing, and funding of the rooftop solar unit;
2. Information relating to other aspects of the executing agency's internal operations that may impact on the implementation arrangements or project progress;
3. Progress or achievements in implementation since the last progress report;

4. Assessment of the progress of each project component, such as:
 - a. Recruitment of consultants and their performance;
 - b. Procurement of goods and works (from preparation of detailed designs and bidding documents to contract awards); and
 - c. The performance of suppliers, manufacturers, and contractors for goods and works contracts.
5. Assessment of progress in implementing the overall project to date in comparison with the original implementation schedule—quantifiable and monitorable targets, (include simple charts such as bar or milestone to illustrate progress, a chart showing actual versus planned expenditure, S-curve graph showing the relationship between physical and financial performance, and actual progress in comparison with the original schedules and budgets, the reference framework or guidelines in calculating the project progress; and
6. An assessment of the validity of key assumptions and risks in achieving the quantifiable implementation targets.

E. Compliance with Covenants

Provide the following:

1. The Borrower's compliance with policy loan covenants such as sector reform initiatives and executing agency reforms and the reasons for any noncompliance or delay in compliance;
2. The Borrower's and executing agency's compliance with financial loan covenants including the executing agency's financial management and the provision of audited project financial statements or audited agency financial statements; and
3. The Borrower's and executing agency's compliance with project-specific loan covenants associated with implementation, environment, and social dimensions.

F. Major Project Issues and Problems

Summarize the major problems and issues affecting or likely to affect implementation progress, compliance with covenants, and achievement of immediate development objectives. Recommend actions to overcome these problems and issues (e.g., changes in scope, changes in implementation arrangements, and reallocation of loan proceeds).